**Al-Ishlah: Jurnal Pendidikan**
Vol.17, 4 (December, 2025), pp. 5773-5786
ISSN: 2087-9490 EISSN: 2597-940X, DOI: 10.35445/alishlah.v17i4.8762

# Empowering the Educational Ecosystem: A Humanistic Approach to Principal Supervision in Vocational Schools

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**ARTICLE INFO**

***Keywords:***

educational ecosystem;
humanistic education;
principal supervision;
teacher empowerment;
vocational education

***Article history:***

Received 2025-10-19
Revised 2025-11-07
Accepted 2025-12-10

**ABSTRACT**

Principal supervision in Indonesian vocational high schools (SMKs) often remains administrative and compliance-oriented, limiting teacher development and fostering a disempowering educational environment. This study reconceptualizes supervision through a humanistic lens, emphasizing empowerment over control, based on Carl Rogers' person-centered philosophy. A mixed-methods approach was employed, combining quantitative and qualitative techniques. The study surveyed 160 certified principals from vocational schools in Bogor Regency, Indonesia, using validated instruments measuring servant leadership, principal personality (Big Five traits), organizational climate, and organizational culture. Quantitative data were analyzed using path analysis within a structural equation modeling (SEM) framework. Subsequently, the SITOREM (Scientific Identification Theory for Conducting Operations Research on Education Management) technique was used to prioritize areas for supervisory improvement through expert judgment. All four variables showed significant positive effects on supervision effectiveness. Principal personality had the strongest direct effect ($\beta = 0.363$), followed by organizational climate ($\beta = 0.300$), servant leadership ($\beta = 0.273$), and organizational culture ($\beta = 0.181$). SITOREM analysis identified key areas for improvement, including enhancing collaborative supervision practices and strengthening principals' emotional stability and social engagement. Findings highlight the centrality of principal personality and a supportive school climate in empowering teachers. The study introduces the POP-SDM model—a humanistic, data-driven framework for optimizing supervision practices. This model offers a scalable solution for fostering professional autonomy, psychological safety, and self-actualization among educators, ultimately enhancing student outcomes and the broader educational ecosystem.



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## 1. INTRODUCTION

The quality of vocational education depends not only on technical instruction aligned with industry standards but also on the holistic development of educators who deliver that instruction. In this context, the principal plays a crucial role—not only as an administrative leader but also as a supervisor and professional development facilitator. However, in Indonesian vocational high schools (Sekolah Menengah Kejuruan or SMKs), principal supervision is often limited to administrative oversight, emphasizing procedural compliance and documentation rather than teacher growth and empowerment (Rogers, 1969). This compliance-based supervision model may inadvertently suppress teacher creativity, autonomy, and adaptive capacity, ultimately undermining the cultivation of a dynamic, learner-centered school environment (Cansoy, Gümüş, & Walker, 2025).

This study addresses a critical gap in the literature: the absence of an empirically validated, humanistic framework for principal supervision within the unique context of vocational education. While the principles of humanistic psychology, particularly those proposed by Carl Rogers and Abraham Maslow, have long promoted environments characterized by empathy, unconditional positive regard, and self-actualization (Maslow, 1971; Rogers, 1969), these values have rarely been systematically integrated into school supervision models—particularly in vocational settings (Gan & Peng, 2024). Much of the existing research isolates variables such as leadership style or organizational climate, failing to capture their interconnected, ecosystemic impact on teacher development.

To bridge this gap, this study reconceptualizes schools as educational ecosystems in which principals function not as enforcers of policy, but as facilitators of human growth. The central aim is to introduce and empirically validate the POP-SDM (Pemodelan dan Optimasi Penguatan Sumber Daya Manusia) framework—Modeling and Optimization of Human Resource Strengthening—which integrates four key factors: servant leadership, principal personality, organizational climate, and organizational culture. By examining the interaction among these variables using both statistical and operational research methods, this study provides a comprehensive, actionable model of humanistic supervision tailored for vocational education settings.

The need for this shift is particularly urgent in contexts like Bogor Regency, West Java, where supervision often remains hierarchical and evaluative in nature. Traditional models that focus on teacher monitoring, correction, and assessment tend to create anxiety, inhibit innovation, and limit professional agency (Zepeda, 2013). In contrast, a humanistic approach views supervision as a collaborative, developmental journey, where the principal supports teachers in identifying their strengths, overcoming challenges, and engaging in continuous personal and professional growth (Maslow, 1971; Rogers, 1969).

The POP-SDM model is grounded in humanistic educational theory and reframes supervision as a means of empowerment rather than control. The first key component of the model is servant leadership, a concept popularized by Greenleaf and extended to education by Crippen (2004). Servant leaders prioritize the needs of others, particularly their growth and well-being. In education, this means that principals act as stewards who listen, empathize, and remove barriers to teacher development (Edwards & Magill, 2023; Hayatullisma & Hardhienata, 2025).

The second component is the personality of the principal, particularly traits from the Big Five model—emotional stability, openness to experience, agreeableness, extraversion, and conscientiousness. These traits influence not only how principals lead but also how they relate to others. Research shows that emotionally stable and open principals are more likely to foster psychological safety and innovation, while agreeable and conscientious principals build trust and follow through on commitments (Colquitt & Wesson, 2009; Özgenel, 2020).

Third, the model incorporates organizational climate, which reflects the shared perceptions and experiences of teachers regarding communication, trust, collegiality, and safety within the school environment. A positive climate encourages professional risk-taking, collaboration, and reflection—all of which are essential for meaningful professional learning (Hoy, 1990; Javornik & Klemenčič Mirazchiyski, 2023).

The fourth factor is organizational culture, which encompasses the underlying values, assumptions, and belief systems that guide daily practice. A humanistic culture fosters growth over perfection, cooperation over competition, and learning over judgment. It supports the notion that mistakes are opportunities for learning, not grounds for punishment (Crippen, 2004; Agustin-Silvestre, Villar-Guevara, García-Salirrosas, & Fernández-Mallma, 2024).

Through a mixed-methods approach, this study utilizes quantitative path analysis to examine the causal relationships among the four variables and their impact on supervision effectiveness. Additionally, it employs the SITOREM (Scientific Identification Theory for Conducting Operations Research on Education Management) technique (Hardhienata, 2017) to identify priority areas for intervention. SITOREM bridges the humanistic and operational dimensions of the framework by combining expert judgment with quantitative prioritization, enabling a practical, data-informed model of school leadership.

This integrated approach aims to move beyond the narrow construct of "effectiveness" toward a more holistic view of teacher empowerment and self-actualization—core tenets of humanistic education. According to Rogers (1969), meaningful learning occurs when learners are free to explore and express their authentic selves in an environment of psychological safety. In this context, the principal is not a supervisor in the traditional sense, but a facilitator of personal growth, creating the conditions for teachers to realize their potential as professionals and as individuals (Maslow, 1971; Rogers, 1969).

Empirical studies increasingly show that when teachers feel empowered—experiencing autonomy, competence, and relatedness—they exhibit higher motivation, creativity, and professional commitment (Cansoy et al., 2025; Martinez-Garcia, Resilla, & Combs, 2025). However, empowerment does not emerge in isolation. It requires a school ecosystem where leadership, personality, climate, and culture are mutually reinforcing, and where human development is prioritized alongside academic outcomes.

In vocational high schools, this human-centered model is particularly relevant. Given the rapid pace of technological change and the necessity for alignment with industry demands, teachers must continuously adapt and engage in lifelong learning (Permana, Hanafiah, Sauri, & Mastiani, 2025; Matsumoto-Royo, Ramírez-Montoya, & Conget, 2021). A humanistic supervision approach helps build this adaptive capacity by treating teachers as active agents of their own professional trajectories rather than passive recipients of top-down directives (Kostas, 2023).

To summarize, this study is guided by the following objectives:

1. To determine the extent to which servant leadership, principal personality, organizational climate, and organizational culture predict the effectiveness of humanistic supervision in vocational schools.
2. To identify the most critical factors and causal pathways that contribute to teacher empowerment.
3. To develop and validate a replicable, data-driven framework (POP-SDM) that principals can use to implement a humanistic approach to supervision.

The theoretical and methodological contributions of this research aim to inform both educational leadership practice and policy development, offering a sustainable and empowering alternative to the status quo in vocational education.

## 2. METHODS

### *2.1. Research Design and Philosophical Assumptions*

This study employed a mixed-method research design, specifically an explanatory sequential design, to achieve a comprehensive understanding of the educational ecosystem. This approach is philosophically grounded in pragmatism, which allows for the integration of quantitative and

qualitative data to address the research questions most effectively. The initial quantitative phase involved a correlational study using path analysis to identify the causal relationships and predictive strength of the independent variables on principal supervision effectiveness. The subsequent qualitative phase utilized the SITOREM analysis, which, while quantitative in its calculation, relies on qualitative expert judgment to prioritize areas for intervention. This integration is particularly suited to the study's humanistic framework; the quantitative data provides the "what" (the statistical relationships), while the qualitative prioritization provides the "how" (the actionable, context-sensitive strategies for improvement), aligning with the humanistic goal of fostering practical, real-world growth.

### *2.2. Population and Sampling*

The research was conducted in the vocational high schools (SMKs) of Bogor Regency, West Java, Indonesia. The target population (N) consisted of all 250 certified principals in the regency. To obtain a representative sample, a proportional random sampling technique was employed. The required sample size (n) was calculated using the Slovin formula with a 5% margin of error:

$$n = N / (1 + Ne^2) = 250 / (1 + 250 * 0.05^2) = 154 \quad [1]$$

A total of 180 questionnaires were distributed, and 160 were returned fully completed, resulting in a final sample of n=160 principals and a response rate of 88.9%. This sample size is statistically robust for the subsequent path analysis.

### *2.3. Instrumentation and Data Collection*

Data were collected using a structured questionnaire designed to measure the five core variables of the study. The instrument was developed based on established theoretical frameworks and validated through a rigorous process. A pilot study was conducted with 30 principals outside the target sample to ensure the clarity, relevance, and reliability of the items. The results of the pilot study were used to refine the final instrument.

Instrument Validity and Reliability: Construct validity was established using Confirmatory Factor Analysis (CFA), which confirmed that the measurement model fit the data well. Internal consistency and reliability were assessed using Cronbach's alpha. The alpha coefficients for all scales exceeded the recommended threshold of 0.70, indicating high reliability. The specific values were: Servant Leadership ($\alpha$ = 0.88), Personality ($\alpha$ = 0.85), Organizational Climate ($\alpha$ = 0.91), Organizational Culture ($\alpha$ = 0.87), and Supervision Effectiveness ($\alpha$ = 0.92).

To ensure the validity and reliability of the study, each variable was measured using indicators derived from well-established theoretical frameworks and previously validated instruments. The constructs were selected to reflect both the conceptual underpinnings of humanistic education and the empirical requirements of educational leadership research. The measurement instruments were adapted and refined to suit the vocational school context, incorporating key dimensions such as empathy, trust, psychological safety, and teacher empowerment. Table 1 below outlines the key variables used in the study, their operational indicators, and the theoretical or instrumental sources upon which each construct is based.

**Table 1.** The variables, their indicators, and theoretical sources

| Variable (Code) | Key Indicators | Theoretical Source / Instrument Basis |
|---|---|---|
| Servant Leadership (X1) | Empathy, Stewardship, Commitment to Growth, Community Building | Adapted from Greenleaf (1977) and van Dierendonck & Nuijten (2011) |
| Personality (X2) | Conscientiousness, Agreeableness, Emotional Stability, Openness | Based on the Big Five Inventory (BFI) by John & Srivastava (1999) |
| Organizational Climate (X3) | Psychological Safety, Trust, Collegial Support, Open Communication | Adapted from Hoy's Organizational Climate Description Questionnaire (OCDQ) |
| Organizational Culture (X4) | Shared Values, Beliefs, Norms, Support for Innovation | Based on Schein's (2010) model of organizational culture |
| Supervision Effectiveness (Y) | Teacher Empowerment, Autonomy Support, Facilitative Feedback | Reconceptualized for this study based on Rogers (1969) and Zepeda (2013) |

### *2.4. Ethical Considerations*

This research adhered to the highest ethical standards. Approval was obtained from the Institutional Review Board (IRB) of the supervising university prior to data collection. All participants were provided with a detailed information sheet explaining the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without penalty. Informed consent was obtained in writing from each principal before they completed the questionnaire. To ensure confidentiality, all data were anonymized, and any personally identifiable information was removed. The collected data were stored securely on an encrypted server accessible only to the research team.

### *2.5. Data Analysis*

The data were analyzed using a two-stage process.

1. Path Analysis: The quantitative data were first analyzed using path analysis within a Structural Equation Modeling (SEM) framework. This technique was used to test the hypothesized model and determine the direct and indirect effects of the four independent variables (Servant Leadership, Personality, Organizational Climate, and Organizational Culture) on the dependent variable (Supervision Effectiveness). The structural equation tested was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \qquad [2]$$

2. SITOREM Analysis: Following the path analysis, the SITOREM (Scientific Identification Theory for Conducting Operations Research on Education Management) method was employed to identify and prioritize specific indicators for improvement. This process involved a panel of 10 educational experts (including experienced principals, academic supervisors, and policy consultants) who were asked to rate each indicator from the questionnaire on two scales:
   - Current Condition: The perceived current performance of that indicator in the school system (on a scale of 1 to 5).
   - Ideal Condition: The perceived importance or ideal state of that indicator (on a scale of 1 to 5).

The gap between the ideal and current scores was used to calculate a priority score for each indicator. This data-driven, expert-informed method allowed for the identification of the most critical areas requiring intervention, thus forming the basis for the "optimal solution" for strengthening principal supervision effectiveness.

## 3. FINDINGS AND DISCUSSION

The analysis of the data yielded significant quantitative findings regarding the factors influencing the effectiveness of principal supervision. This section presents the results of the path analysis and the SITOREM analysis without interpretation.

### *3.1. Path Analysis of the Educational Ecosystem Model*

The correlational analysis confirmed that all four independent variables—Servant Leadership (X1), Personality (X2), Organizational Climate (X3), and Organizational Culture (X4)—have a direct, positive, and statistically significant influence on Supervision Effectiveness (Y). The path analysis results, which quantify the strength and direction of these relationships, are summarized in Table 2.

**Table 2.** Summary of Path Analysis Results

| Path | From | To | Path Coefficient (β) | p-value |
|---|---|---|---|---|
| 1 | Servant Leadership (X1) | Supervision Effectiveness (Y) | 0.273 | <0.01 |
| 2 | Personality (X2) | Supervision Effectiveness (Y) | 0.363 | <0.01 |
| 3 | Organizational Climate (X3) | Supervision Effectiveness (Y) | 0.300 | <0.01 |
| 4 | Organizational Culture (X4) | Supervision Effectiveness (Y) | 0.181 | <0.05 |
| 5 | Servant Leadership (X1) | Organizational Climate (X3) | 0.300 | <0.01 |
| 6 | Servant Leadership (X1) | Organizational Culture (X4) | 0.181 | <0.05 |
| 7 | Personality (X2) | Organizational Climate (X3) | 0.526 | <0.01 |

As shown in Table 2, all hypothesized paths were statistically significant. The strongest direct predictor of Supervision Effectiveness was the principal's Personality (β = 0.363), followed by Organizational Climate (β = 0.300), Servant Leadership (β = 0.273), and Organizational Culture (β = 0.181). The model also revealed significant indirect effects. Both Servant Leadership and Personality demonstrated a strong influence on Organizational Climate, which in turn had a substantial effect on Supervision Effectiveness.

### *3.2. SITOREM Analysis for Priority Interventions*

The SITOREM analysis was conducted to identify the specific indicators within each variable that represent the most critical areas for improvement. The analysis, based on expert ratings of current

versus ideal conditions, yielded a prioritized list of actionable recommendations. The top-ranked indicators for improvement are summarized in Table 3.

**Table 3**. SITOREM Analysis Results: Priority Indicators for Improvement

| Rank | Variable | Indicator for Improvement | Priority Score |
|---|---|---|---|
| 1 | Supervision Effectiveness | Implementation of cooperative practices | 4.85 |
| 2 | Supervision Effectiveness | Provision of robust training opportunities | 4.72 |
| 3 | Personality | Strengthening Extraversion (social engagement) | 4.65 |
| 4 | Organizational Climate | Improving clarity of work mechanisms | 4.58 |
| 5 | Personality | Enhancing Emotional Stability | 4.51 |
| 6 | Organizational Climate | Improving communication with colleagues | 4.45 |

The results indicate that the most pressing needs are related to fostering cooperative practices among teachers and providing better training. In terms of principal development, enhancing social engagement skills (Extraversion) and emotional regulation (Emotional Stability) were identified as key priorities.

### *Discussion*

#### The Influence of Humanistic Variables on Teacher Empowerment

The findings of this study reveal that servant leadership, principal personality, organizational climate, and organizational culture all exert a direct and statistically significant influence on the effectiveness of principal supervision, which in this study is reconceptualized as teacher empowerment. These results align closely with the humanistic education paradigm, which emphasizes the importance of empathy, autonomy, trust, and psychological safety in fostering personal and professional growth (Rogers, 1969; Colquitt & Wesson, 2009; Özgenel, 2020).

Among the four variables, principal personality emerged as the most influential predictor ($\beta$ = 0.363), explaining a substantial portion of the variance in supervision effectiveness. This supports the view that who a principal is matters more than the techniques they use. Traits such as emotional stability, openness to experience, and agreeableness enable principals to cultivate environments characterized by authenticity, empathy, and unconditional positive regard, which are foundational to teacher self-actualization (Rogers, 1969). This finding underscores the critical role of internal, personal attributes in leadership effectiveness within humanistic educational ecosystems.

Servant leadership ($\beta$ = 0.273) also demonstrated a strong impact, reinforcing the humanistic conception of leadership as service-oriented rather than control-based. Servant leaders prioritize the growth and well-being of teachers, fostering autonomy and facilitating self-directed learning (Crippen, 2004; Agustin-Silvestre et al., 2024). When principals adopt this facilitative stance, they contribute to a culture where teachers feel empowered to innovate and grow.

The organizational climate (β = 0.300) was another significant predictor, highlighting the importance of psychological safety in educational environments. As Hoy (1990) and Rogers (1969) argue, teachers must feel secure to take risks, make mistakes, and express their authentic selves. A school climate marked by trust, openness, and collegial support is therefore essential for enabling meaningful teacher development.

Although organizational culture had a smaller yet significant effect (β = 0.181), its influence should not be understated. A values-driven culture, when enacted through daily practices and leadership behaviors, supports empowerment by reinforcing shared beliefs about growth, learning, and collaboration (Javornik & Klemenčič Mirazchiyski, 2023). Together, these findings validate the interconnected nature of leadership, personality, and organizational context in promoting teacher empowerment through humanistic supervision.

**Structural Equation Modelling (SEM) Results: Mapping the Ecosystem**

To provide a comprehensive visualization of the relationships between the variables, a Structural Equation Modeling (SEM) analysis was conducted. The SEM model, presented in Figure 1, illustrates both the direct and indirect effects of the independent variables on teacher empowerment, revealing the complex, interconnected nature of the educational ecosystem.

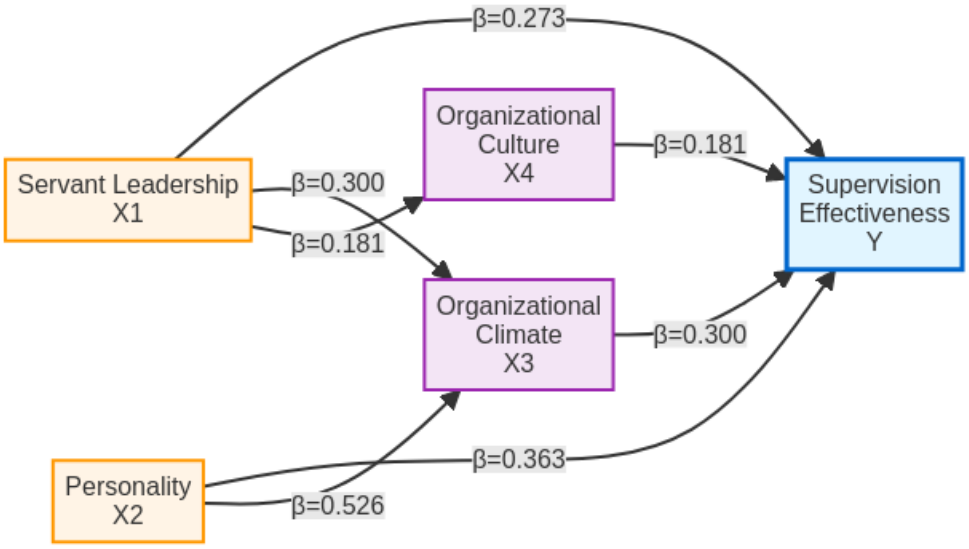


**Figure 1.** The POP-SDM Model for Strengthening Supervision Effectiveness

Figure 1 presents the complete structural equation model that emerged from the path analysis. The model reveals several important findings that illuminate the dynamics of the educational ecosystem. First, all four independent variables have direct positive effects on teacher empowerment, as indicated by the path coefficients (β). The strongest direct effect comes from Personality (X2) with a path coefficient of 0.363, followed by Organizational Climate (X3) at 0.300, Servant Leadership (X1) at 0.273, and Organizational Culture (X4) at 0.181. Second, and perhaps more importantly from a humanistic perspective, the model reveals significant indirect effects that demonstrate the interconnectedness of the ecosystem. Servant Leadership (X1) influences teacher empowerment not only directly but also indirectly through its effects on Organizational Climate (X3) (β = 0.300) and Organizational Culture (X4) (β = 0.181). This finding suggests that when principals embody servant leadership, they create ripple effects throughout the ecosystem, shaping the climate and culture in ways that further support teacher empowerment.

Similarly, Personality (X2) has a strong indirect effect on teacher empowerment through its influence on Organizational Climate (X3) (β = 0.526). This is a particularly striking finding, as it suggests that the principal's personal qualities—their emotional stability, openness, and capacity for authentic

relationship—have a profound impact on the psychological atmosphere of the school. A principal who is emotionally stable and open creates a climate of safety and trust, which in turn empowers teachers to take risks and grow.

This result provides strong empirical validation for the core tenets of humanistic psychology, suggesting that who the principal is as a person is the most critical factor in creating an empowering educational ecosystem. While leadership skills and organizational structures are important, it is the principal's inherent traits—their emotional stability, agreeableness, and openness—that appear to be the primary catalyst for building the trust and psychological safety necessary for genuine teacher growth. This finding challenges the overemphasis on managerial competencies in many principal training programs and aligns with Rogers' assertion that the facilitator's congruence and authenticity are paramount (Rogers, 1969).

The significant influence of Servant Leadership ($\beta = 0.273$) further reinforces this humanistic perspective. By acting as servants first, principals who prioritize their teachers' needs create a culture of mutual respect and support. This finding is consistent with research in other contexts demonstrating the positive impact of servant leadership on teacher morale and organizational commitment (Agustin-Silvestre, et al., 2024) (Hayatullisma & Hardhienata, 2025). The model also reveals that the impact of servant leadership is not just direct; it is amplified through its positive effect on the school's climate and culture, creating a ripple effect of empowerment.

The study's findings highlight the crucial mediating role of Organizational Climate ($\beta = 0.300$). A principal's positive personality traits and servant leadership behaviors are translated into effective supervision largely through the creation of a supportive and trusting climate. This aligns with Hoy's research on the importance of a healthy school environment for teacher efficacy and student achievement (Javornik & Klemenčič Mirazchiyski, 2023). When teachers feel psychologically safe, they are more willing to engage in the reflective practice and collaborative inquiry that are at the heart of humanistic supervision. The slightly weaker, though still significant, influence of Organizational Culture ($\beta = 0.181$) suggests that while deep-seated values are important, the immediate, palpable climate of day-to-day interactions has a more direct impact on teachers' experience of supervision.

**The Educational Ecosystem Model: A Humanistic Vision**

Building on the SEM results, Figure 2 presents a conceptual model of the educational ecosystem, illustrating the interconnected relationships between principals, teachers, students, and the broader community, all grounded in humanistic core values.

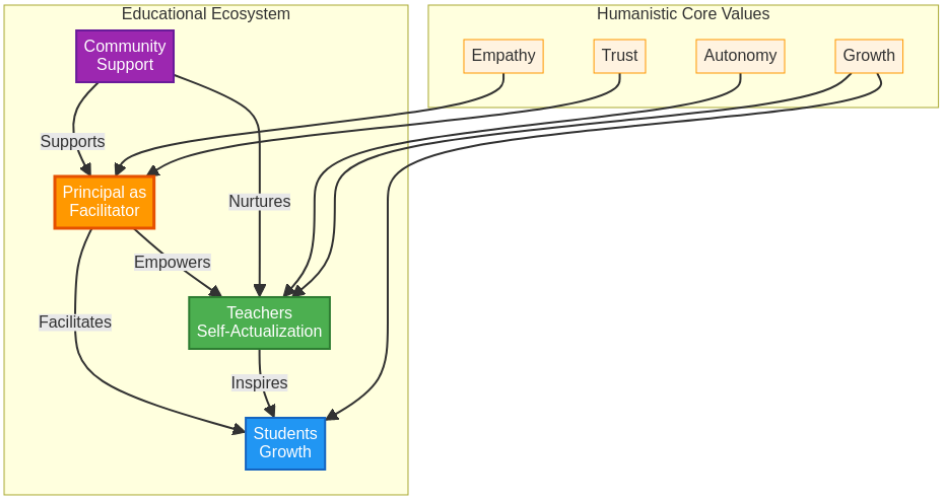


**Figure 2.** The Educational Ecosystem Model

Figure 2 depicts the school as a living ecosystem in which all stakeholders are interconnected and mutually influential. At the center of this ecosystem is the principal as facilitator, whose role is to create

the conditions for teacher and student flourishing. The principal empowers teachers, who in turn inspire students. The community supports both the principal and teachers, creating a web of relationships that sustains the entire ecosystem.

Underlying this ecosystem are the humanistic core values of empathy, trust, autonomy, and growth. These values are not abstract ideals but lived realities that are enacted in the daily interactions and practices of the school. When these values are present, the ecosystem thrives; when they are absent, the ecosystem withers. This model challenges the traditional hierarchical view of schools as bureaucratic organizations and offers an alternative vision of schools as organic, self-organizing systems in which empowerment flows from the quality of relationships and the presence of humanistic values.

**The Humanistic Supervision Cycle: From Empathy to Self-Actualization**

To further illuminate the process of empowering supervision, Figure 3 presents a cyclical model that traces the journey from empathetic listening to teacher self-actualization and enhanced student learning.

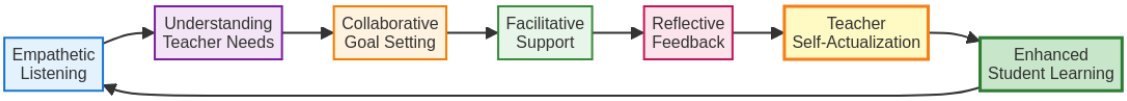


**Figure 3.** The Humanistic Supervision Cycle

Figure 3 illustrates the iterative, cyclical nature of humanistic supervision. The cycle begins with empathetic listening, in which the principal seeks to understand the teacher's perspective, concerns, and aspirations without judgment. This leads to a deeper understanding of teacher needs, which forms the basis for collaborative goal setting. Importantly, in a humanistic approach, goals are not imposed by the principal but are co-created with the teacher, ensuring that they are meaningful and aligned with the teacher's own sense of purpose.

The next phase is facilitative support, in which the principal provides resources, removes obstacles, and creates opportunities for the teacher to pursue their goals. This is followed by reflective feedback, which is not evaluative or judgmental but rather invites the teacher to reflect on their own experience and learning. This reflective process supports teacher self-actualization, as teachers develop greater self-awareness, confidence, and competence. Finally, teacher self-actualization leads to enhanced student learning, as empowered teachers are more motivated, creative, and effective in their teaching.

Crucially, the cycle does not end with student learning but returns to empathetic listening, as the principal continues to engage with teachers in an ongoing dialogue about their growth and development. This cyclical model reflects the humanistic understanding that growth is not a linear process with a fixed endpoint but an ongoing journey of becoming.

**SITOREM Analysis: Identifying Priorities for Action**

To translate these findings into actionable strategies, the SITOREM analysis was used to identify the specific indicators within each variable that are most in need of improvement. From a humanistic perspective, the SITOREM analysis is not about identifying deficits or failures but about recognizing opportunities for growth and development. The results of the SITOREM analysis are summarized in Table 2.

**Table 4.** SITOREM Analysis Results

| Variable | Weak Indicators to Improve | Strong Indicators to Maintain/Develop |
|---|---|---|
| **Supervision Effectiveness** | Cooperation implementation, Training | Mentoring, Providing security, Assistance, Motivation |
| **Personality** | Extraversion, Emotional stability | Agreeableness, Openness to experience, Conscientiousness |
| **Organizational Climate** | Work mechanism, Communication with colleagues | Physical environment, Work standards, Non-physical environment |
| **Organizational Culture** | Behavior and Work Results, Methods/Art/Technology in work, Actual behavior patterns | - |

The SITOREM analysis (Table 4) provides a clear and prioritized roadmap for empowering the educational ecosystem. For example, to enhance teacher empowerment, principals should focus on improving the implementation of cooperative practices and providing more robust training opportunities. From a humanistic perspective, cooperation is not merely a technique but an expression of the values of community and mutual support. By creating more opportunities for teachers to collaborate and learn from one another, principals can foster a sense of collective growth and shared purpose.

In terms of their own development, principals should focus on strengthening their extraversion and emotional stability. Extraversion, in this context, refers not to being outgoing or gregarious but to the capacity for social engagement and relationship-building. Emotional stability is essential for creating a climate of trust and safety, as teachers need to know that their principal will respond to challenges with equanimity rather than anxiety or reactivity (Özgenel, 2020).

The SITOREM analysis also highlights the importance of improving work mechanism clarity and communication with colleagues. From a humanistic perspective, clarity and communication are not merely matters of efficiency but are essential for creating a sense of autonomy and agency. When teachers understand the systems and processes of the school and can communicate openly with their colleagues, they experience greater control over their work and are better able to direct their own professional development (Hoy, 1990).

**Comparison with Existing Literature and Critical Perspectives**

These findings contribute to a growing body of literature advocating for more human-centered approaches to educational leadership. While many studies in Indonesia and Southeast Asia have focused on transformational or instructional leadership, this study provides a unique contribution by empirically modeling a supervision framework grounded in humanistic psychology and servant leadership. The results are broadly consistent with international research that links positive leadership behaviors to improved school outcomes, but this study's specific focus on a synergistic, multi-variable ecosystem offers a more nuanced understanding.

However, it is important to engage with critical perspectives. A potential limitation of a purely humanistic approach is that it could, if misapplied, lead to a lack of accountability or a reluctance to address underperformance. The proposed POP-SDM model mitigates this risk by integrating the humanistic framework with the data-driven SITOREM analysis. This ensures that the focus on empowerment is balanced with a clear, evidence-based strategy for improvement, addressing specific,

identified needs rather than relying on vague notions of support. The model does not advocate for abandoning standards, but rather for achieving them through empowerment instead of compliance.

**Integrating Humanistic Theory with Empirical Findings**

The findings of this study provide strong empirical support for the application of humanistic principles to educational leadership and supervision. Carl Rogers argued that the core conditions for facilitating growth—empathy, unconditional positive regard, and congruence—are universal and apply across all contexts of human development (Rogers, 1969)]. This study demonstrates that these principles are not merely idealistic aspirations but have measurable effects on teacher empowerment and, by extension, on the quality of education.

The finding that personality has the strongest direct effect on teacher empowerment is particularly significant from a humanistic perspective. It suggests that the principal's capacity for authentic, empathetic relationship is the most powerful lever for creating an empowering educational ecosystem. This finding challenges the prevailing emphasis on technical skills and managerial competencies in principal preparation programs and argues for a greater focus on personal development, self-awareness, and the cultivation of humanistic values (Maslow, 1971).

The significant indirect effects of servant leadership and personality on teacher empowerment, mediated by organizational climate and culture, demonstrate the systemic nature of empowerment. Empowerment is not something that the principal does to teachers but rather emerges from the quality of relationships and the presence of supportive structures and values. This finding aligns with the ecological perspective in humanistic psychology, which views human development as embedded in and shaped by multiple layers of context (Maslow, 1971).

Finally, the SITOREM analysis demonstrates that humanistic principles can be operationalized and translated into concrete, actionable strategies. By identifying specific areas for growth and prioritizing interventions based on their potential impact, the SITOREM method provides a bridge between the ideals of humanistic education and the practical realities of school improvement. This integration of humanistic values with data-driven decision-making represents a promising direction for educational leadership and reform.

## 4. CONCLUSION

This study successfully developed and validated the POP-SDM model, a humanistic framework for principal supervision in vocational schools, demonstrating that shifting from administrative compliance to empowerment-oriented leadership is both feasible and empirically effective. The findings highlight that a principal's personality and servant leadership style, when supported by a positive organizational climate and culture, significantly contribute to teacher empowerment and self-actualization. However, the study has several limitations: it was geographically limited to Bogor Regency, relied solely on self-reported data from principals—raising the possibility of social desirability bias—and used a cross-sectional design, which restricts the ability to assess changes over time. Future research should consider longitudinal studies to evaluate the long-term impact of the POP-SDM model on teacher performance and student outcomes, as well as incorporate multi-perspective feedback from teachers and students for a more comprehensive analysis. Additionally, cross-cultural studies and the inclusion of other contextual variables—such as technology integration or community involvement—could further refine and expand the applicability of the model in diverse educational settings.

**Conflicts of Interest:** The authors, hereby declare that this research, titled "Empowering the Educational Ecosystem: A Humanistic Approach to Principal Supervision in Vocational Schools," was conducted in the absence of any financial or personal relationships that could be construed as a potential conflict of interest; the study

received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors, and the authors affirm that their personal circumstances and academic affiliations have not inappropriately influenced the design, analysis, interpretation of data, or the conclusions presented in this work.

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