# Investigating the Interplay of RAAT Leadership Qualities in Shaping School Leadership Competence in the Bani Landscape

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## Abstract

This study delves into leadership strategies tailored to navigate the intricate challenges defined by Brittle, Anxious, Nonlinear, and Incomprehensible (BANI) nature, amidst dynamic disruptions such as the COVID-19 pandemic, climate fluctuations, economic inflation, and geopolitical conflicts. Employing a General Linear Model (GLM) analysis, this research reveals key findings; the total effects analysis demonstrates that the model's predictors account for approximately 15.4% of the variance in school leadership competence (SLC), with notable correlations between "prior leadership experiences" and "school leadership competence," as well as "RAAT leadership qualities" and "school leadership competence."; the mediator model 1 (m1) unveils distinctive leadership competencies in individuals with "prior leadership experiences," influenced by age, gender, and educational attainment; mediator model 2 (m2) shows no significant relationship with organizational climate; mediator model 3 (m3) highlights the positive impact of "RAAT leadership qualities" on leadership style, influenced by educational background; the full model reveals positive relationships between leadership behavior, organizational climate, and leadership style, all associated with school leadership competence. Fifteen indirect effects are examined, emphasizing the significance of RAAT leadership qualities and perceived leadership success in shaping leadership style. These findings hold practical implications for leadership development in the ever-evolving BANI world, extending to educational institutions and leadership programs, urging the nurturing of leadership qualities, support for prior leadership experiences, and the promotion of conducive organizational climates.

**Keywords:** *BANI landscape, educational leadership, GLM analysis, RAAT leadership qualities, school leadership competence*

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## 1. Introduction

The contemporary view of unprecedented challenges, and traditional leadership paradigms, as articulated by the VUCA model (Volatility, Uncertainty, Complexity, and Ambiguity), find themselves facing an imperative for profound transformation in the educational context. The concept of VUCA, historically insightful, may no longer encapsulate the intricate nature of the rapidly evolving global environment, prompting a critical examination of its limitations and signaling the need for a paradigm shift (Stöttinger, 2020). The introduction of the BANI (Brittle, Anxious, Nonlinear, Incomprehensible) model as a transformative successor suggests that the challenges presented by the BANI world may be more representative of the current reality (Alvarez, 2022; Baskoro, 2023).

In the wake of the pandemic, a compelling narrative questions the efficacy of VUCA in capturing the chaotic dynamics of the *"new normal."* This perspective suggests that the BANI model may offer a more distinct and accurate depiction of contemporary reality, marking a significant departure from the established VUCA framework (Martins, 2021). As educational institutions grapple with unprecedented disruptions and societal shifts, these insights underscore the urgency of embracing the BANI paradigm. This imperative for change forms a crucial backdrop for research endeavors seeking to delve into the implications and applications of the BANI model in navigating the complexities of the evolving world (Stöttinger, 2020).

Prompted by these reflections, an essential question arises concerning the dynamics of leadership within the evolving BANI landscape. Both VUCA and BANI models aim to elucidate the challenges associated with navigating a swiftly changing global environment (Martins, 2021; Baskoro, 2023). Historically, the VUCA framework has been employed to delineate the inherent volatility within the business domain. However, the BANI model extends this concept to the necessity for organizations to confront and navigate disruptive, highly uncertain influences that can significantly impact their operations (Stöttinger, 2020). Effectively managing unforeseen crises is paramount, especially in the face of disruptions caused by the COVID-19 pandemic, climate change, inflation, and armed conflicts. Amidst uncertainty, school organizations can benefit by acknowledging and preparing for the evolving landscape. The growing significance of models like BANI for forward-thinking organizations

is emphasized as they navigate disruptions and societal shifts (Alvarez, 2022). Effective leadership behaviors, crucial for organizational transformation, include fostering exploration, learning, risk-taking, and establishing a climate of trust and openness (Jiskra, 2023).

The BANI model offers a fresh perspective on organizational growth, departing from the conventional linear paradigm and proving valuable in navigating the complexities of the contemporary global landscape. As suggested, RAAT (Resilience, Attentiveness, Adaptation and Transparency) in contrast to BANI, has the potential to address these challenges, justifying its exploration in the education sector (Cascio, 2016). The strategic alignment between RAAT principles and the demands of the BANI landscape presents a promising avenue for educational institutions to effectively navigate uncertainties and instabilities (Martins, 2021). In the face of such uncertainty, school organizations stand to benefit by recognizing and preparing for this new reality. Moreover, effective leadership behaviors conducive to successful organizational transformation include fostering exploration, learning, risk-taking, and establishing an environment characterized by trust and openness to address vulnerabilities and construct adaptable frameworks (Jiskra, 2023).

The exploration of the educational landscape within the BANI world remains limited, as highlighted by Martins (2021). In fact, there are only few studies on this topic as applied in the educational setting (i.e. Ratanapitakdhada & Trirat, 2023; Mullooly, 2022; Bushuyev et al., 2023; Zachosova, 2023; Baskoro, 2023) while others explored business organizations (Bushuyev et al., 2023; Evseeva et al., 2022; Bushuev et al., 2023; Hrynchak & Olena, 2023) and VUCA in educational leadership (Panthalookaran, 2022). Addressing this gap, the research investigates crucial dynamics through a General Linear Model (GLM) analysis, focusing on factors identified by Jiskra (2023), including RAAT Leadership Qualities.

The study seeks to make a substantial contribution to leadership strategies within the dynamic BANI landscape by elucidating implications for school leadership competency. Specifically, it investigates the nuanced relationship between RAAT leadership qualities and school leadership competence, exploring variations based on leaders' prior experiences and perceived success. Furthermore, the study delves into potential mediating factors, including leadership behavior, style, and organizational climate, aiming to enhance the understanding of effective leadership in the distinct challenges presented by the BANI world. In addressing these objectives, the research poses the following question: to what extent does the relationship

between RAAT leadership qualities and school leadership competence vary based on school leaders' prior leadership experiences and perceived leadership success, considering whether factors such as leadership behavior, style, and organizational climate mediate this relationship within the educational context?

## 2. Literature Review

### 2.1. Leadership qualities and school leadership competence

In the exploration of school leadership competencies in a BANI world, Ratanapitakdhada (2023) focused on the inherent challenges identifying ten pivotal competencies crucial for success such as problem-solving, emotional intelligence, leadership acumen, and technological proficiency. This comprehensive framework is tailored to meet the unique demands of educational leaders. Additionally, the study introduced eleven guidelines emphasizing coaching, intercultural training, and leadership development programs—all encapsulating the RAAT leadership qualities. Serving as a foundational guide, this research offers a nuanced understanding of competencies essential for effective educational leadership within the BANI framework, thereby establishing a pertinent context for the current study.

Examining the evolving skills landscape within the BANI environment, Gowri Kusuma and Sarma (2023) shed light on critical skills like problem-solving, self-management, and technology use for organizational success. The study delves into the changing nature of work, posing essential questions about how, when, and where work is conducted. Significantly, the research underscores the pivotal role of Higher Educational Institutions (HEIs) in imparting these skills, recommending measures such as curriculum redesign, interdisciplinary courses, industry partnerships, and experiential learning. This study provides valuable insights into skills essential for thriving in the BANI environment, effectively bridging the gap between educational preparation and the evolving demands of the workplace (Gowri Kusuma & Sarma, 2023). Together, these studies form a cohesive foundation, shaping a comprehensive understanding of the competencies and skills crucial for navigating the challenges of educational leadership in the dynamic BANI landscape.

### 2.2. Leadership behavior, style, and organizational climate

Exploring factors that influence organizational climate in Slovak vocational schools, Barnová et al. (2022) discovered the connection between leadership styles and school climate.

The findings suggest that supportive leadership positively correlates with engaged teachers, while directive leadership is associated with teacher frustration. This highlights the significant influence of leadership behavior and style on school climate openness, emphasizing their pivotal role in shaping positive educational environments. Furthermore, an investigation into AVB Parochial Schools uncovered the effects of organizational climate and leadership styles on teacher performance (Pulumbarit, 2023). Despite the lack of conclusive evidence regarding direct impacts on performance, the research underscored the significance of predictors like gender and educational degree. This comprehensive exploration provides valuable insights into the intricate interplay of organizational factors and leadership styles influencing teacher performance (Barnová et al., 2022; Pulumbarit, 2023). Within the context of the current research, these variables emerge as crucial focal points, shedding light on their collective impact on educational dynamics.

### 2.3. Prior leadership experiences and perceived leadership success

Research on school leaders' prior professional experiences in Oregon reveals diverse pathways, including "skipping" the assistant principal role, offering nuanced insights into the career trajectories of educational leaders (Liebowitz & Porter, 2022). Notably, the study identified that teachers transitioning into leadership roles exhibit modestly higher instructional effectiveness, emphasizing the relevance of prior experiences in instructional roles when considering leadership transitions. These findings align with the current study's focus on "prior leadership experiences and perceived leadership success," providing valuable context and highlighting the potential impact of educators' instructional backgrounds on their effectiveness as school leaders.

Building upon this foundation, an exploration of leadership practices and teacher motivation by Collie (2023) further enriches understanding. The study underscored the significance of autonomy-supportive leadership in fostering teachers' self-determined motivation, offering insights that resonate with our investigation into how leaders' past experiences contribute to their perceived success. By emphasizing the importance of autonomy-supportive practices, Collie's findings offer actionable strategies for school leaders, particularly those with diverse backgrounds, seeking to enhance teacher motivation and overall positive outcomes in the educational context.

In the views of the BANI world, where educational institutions face unprecedented challenges, the four pillars of Resilience, Attentiveness, Adaptation, and Transparency (RAAT) emerge as indispensable allies in fortifying school competence. RAAT becomes paramount for educational leaders, providing a structured framework to swiftly evaluate and enhance adaptation strategies (Jiskra, 2023). It stands as a strategic imperative, empowering leaders to chart a course toward sustained educational success in the face of dynamic and unpredictable challenges.

### 2.4. Theoretical and conceptual framework

The theoretical framework for this study draws on several key theories and concepts that are relevant to understanding the relationship between RAAT leadership qualities and school leadership competence in the context of school leaders' prior leadership experiences and perceived leadership success. Additionally, this framework incorporates the mediating roles of leadership behavior, leadership style, and organizational climate in shaping this relationship.

The BANI model, developed by Jamais Cascio (2016), introduces a novel perspective on leadership qualities that align with the attributes of Resilience, Attentiveness, Adaptation, and Transparency (RAAT). These qualities are at the core of the study and are integral to understanding how school leaders can navigate the challenges of the BANI world.

The study involved two key moderating variables, namely prior leadership experiences and perceived leadership success, each of which contributes to the comprehensive theoretical framework. These moderating variables are critical components, as they have the potential to influence the relationship between, RAAT leadership qualities, and school leadership competence, within the educational context. The first moderating variable is grounded in the Leadership Identity Development Model by Komives et al. (2009), which examines school leaders' prior leadership experiences. It encompasses indicators such as leadership stage, exposure to diverse leadership roles, leadership learning opportunities, challenges faced, impact on values and beliefs, collaborative leadership, and mentorship and guidance. On the other hand, the second moderating variable is based on the Path-Goal Theory of Leadership by Robert J. House (1971), which delves into the extent of school leaders' perceived leadership

success, including subordinate satisfaction, subordinate motivation, clarity of path, goal achievement, reduction of obstacles, and subordinate feedback.

In this study, three mediating variables were considered: leadership behavior, leadership style, and organizational climate. Leadership behavior, informed by the concept of Transformational Leadership as proposed by James MacGregor Burns in 1978, encompasses various indicators like charisma and inspiration, intellectual stimulation, individualized consideration, idealized influence, inspirational communication, empowerment, and change facilitation. These components reflect the leadership behaviors demonstrated by school leaders in the educational context and are essential for understanding their potential impact on school leadership competence. Meanwhile, leadership style, rooted in the Authentic Leadership Theory by Bill George (2003), includes dimensions such as self-awareness, balanced processing, relational transparency, internalized moral perspective, self-regulation, adaptive leadership style, and high moral ethical standards. This variable explores the leadership style exhibited by school leaders and how it may shape their competence in leading educational institutions effectively. Finally, organizational climate is another key mediating variable, drawing from the Cultural Web Model by Gerry Johnson and Kevan Scholes (1992). It comprises indicators such as rituals and routines, stories, symbols, control systems, power structures, organizational structures, and paradigms. Organizational climate captures the collective perceptions and shared values within educational institutions, offering insights into how the broader organizational context may impact school leadership competence. These mediating variables within the theoretical framework elucidate the potential mechanisms and interactions at play, enabling a comprehensive examination of the complex relationship between RAAT leadership qualities and school leadership competence in the context of education. It provided a structured approach to understanding how leadership behaviors, styles, and the organizational climate may influence the development of school leadership competence in the dynamic and ever-changing educational landscape.

Lastly, school leadership competence is a pivotal component of this study, reflecting the effectiveness of school leaders in fulfilling their roles within educational institutions. Informed by the Leadership Competency Framework developed by Ruben in 2006, this variable comprises several key indicators that are essential for evaluating the competence of school leaders.

Instructional Leadership is a crucial dimension encompassing multiple facets that influence educational leadership. These indicators include data-informed decision-making, community engagement, equity and inclusion, communication skills, problem-solving and adaptability, and team building and collaboration. This focus on school leadership competence is crucial to gaining insights into how the educational landscape can be optimized and how school leaders can adapt to the ever-evolving challenges posed by the BANI world. The Leadership Competency Framework provides a well-defined structure for evaluating the competence of school leaders in various aspects of their leadership roles, furthering the understanding of how their competence aligns with the BANI model's demands and influences their ability to lead effectively in a rapidly changing environment.

As shown in figure 1, the framework has been constructed to elucidate the complex relationships and interactions between various pivotal variables in the realm of educational leadership. This framework adheres to a moderated mediation analysis approach, offering a comprehensive comprehension of how these variables interact and mutually influence one another.

*Mediator models (m1, m2, m3).* The mediator models, designated as m1, m2, and m3, delve into the mediating roles of leadership behavior, organizational climate, and leadership style, respectively. These variables serve as the pathways through which the qualities associated with RAAT leadership qualities (X) shape school leadership competence (Y). Within these models, an examination is carried out to ascertain how other factors, such as perceived leadership success, prior leadership experiences, demographic variables (age, gender, rank/position, educational attainment), and interactions among these variables, impact the mediating roles of leadership behavior, organizational climate, and leadership style. These mediating mechanisms shed light on the ways in which specific behaviors, organizational climates, and leadership styles contribute to the development of effective leadership.

*Full model (m4)*: The full model, denoted as m4, encapsulates the central relationship between RAAT leadership qualities and school leadership competence. This represents the primary pathway in the model and explores how the qualities of resilience, agility, adaptability, and transparency directly influence a leader's competence in a school context. Expanding on this central relationship, the model introduces moderating factors, perceived leadership success and prior leadership experiences (Z). These moderating factors investigate how individual

experiences and the perception of leadership success shape the strength and nature of the connection between RAAT Leadership Qualities and School Leadership Competence. In their role as moderators, they provide insights into how these personal experiences mold the relationship between leadership qualities and competence.

*Indirect effects*: The indirect effects (IE) in the model depict various paths through which demographic variables (age, gender, rank/position, educational attainment) influence school leadership competence by way of leadership behavior, organizational climate, and leadership style. These indirect effects allow an assessment of how demographic characteristics indirectly contribute to leadership competence through specific mediating mechanisms.

**Figure 1**

*Conceptual diagram of a moderated mediation analysis*
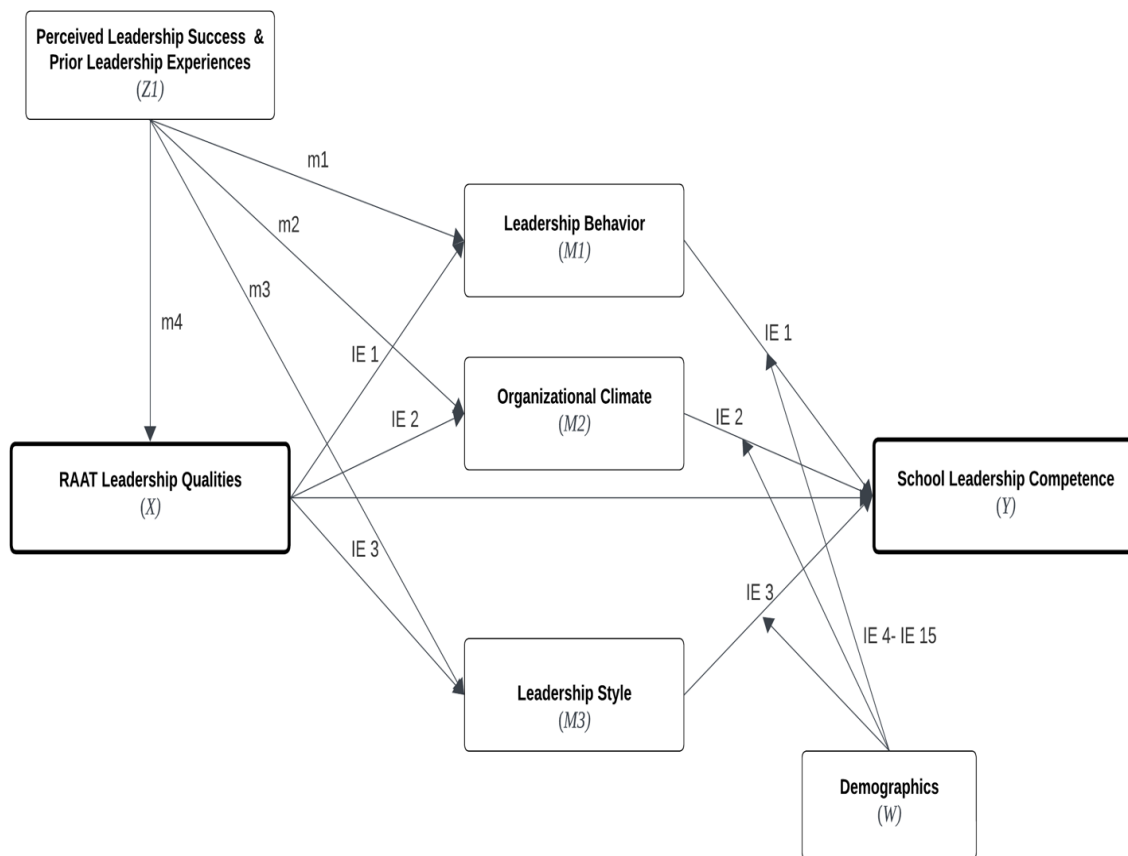
# 3. Methodology

### 3.1. Research design

This study used quantitative research methodology, driven by its systematic and structured characteristics, which enable the examination of patterns, associations, and causal relationships in the research setting (Creswell & Creswell, 2022).

This study employed Hayes's (2018) method for conducting moderated mediation analysis using the General Linear Model (GLM) to investigate the potential mediating role of prior leadership experiences and perceived leadership success in the relationship between RAAT leadership qualities and school leadership competence. In addition, this examined the potential moderating effects of leadership behavior, leadership style, organizational climate, and demographic characteristics. The GLM is appropriate for situations where moderating variables can influence different aspects of the mediation process, such as the indirect effect, direct effect, and overall effect. This study sought to gain a thorough understanding of the underlying mechanisms and the influencing factors by employing this method (Hayes & Rockwood, 2020).

### 3.2. Participants

The participants of this study were the basic education school principals in the Philippines with emphasis on their experiences, qualifications, and leadership qualities as critical factors describing their competence. A total sample size of 1350 was determined through power analysis (Fritz & MacKinnon, 2007). Similarly, volunteer participation was employed through online platforms wherein eligible respondents with plantilla positions as basic education school principals, Master's or Doctorate holder and minimum of five years of experience were selected to ensure the inclusion of qualified and experienced individuals.

### 3.2. Research instrument

The study employed a researcher-developed online survey questionnaire utilizing a 5-point Likert scale where participants responded to statements ranging from "strongly disagree" to "strongly agree." The questionnaire underwent content validity checks and expert review for face validity. The survey instrument accurately measured the intended theoretical constructs based on the construct validity. On the other hand, split-half testing suitable for extensive questionnaires assessing the same construct was employed with internal consistency assessed through the alpha coefficient.

### 3.3. Data collection procedure

The study targeted eligible basic education school principals through a volunteer sampling method. Recruitment of volunteer participants was through online platforms such as social media, forums, and email lists. The electronic invitations contain a clearly explained research purpose, emphasizing voluntary participation. The informed consent form was obtained upon login, highlighting the right to withdraw at any time. The participants were given ample time to complete the questionnaire. However, reminders were sent to get maximum retrieval.

### 3.4. Data analysis

The data analysis comprises sequential steps to derive insights from collected survey data. Initial review removes unqualified data, ensuring alignment with inclusion criteria. Subsequent processing involves preparation and cleaning for statistical analysis. The Generalized Linear Model (GLM) mediation analysis utilizes the bootstrap normal method for confidence intervals. Analytical procedures employ Jamovi software, including the advanced JAMM (Jamovi's Advanced Mediation Module), enhancing the reliability of the mediation analysis (R Core Team, 2021; Soetaert, 2019; Rosseel, 2019; The jamovi project, 2022).

### 3.5. Ethical considerations

This study adheres to rigorous ethical standards outlined by the American Association of Public Opinion Research (AAPOR) in Fisher (2020). In order to ensure the confidentiality and informed consent, gathered data were securely stored; personal information is kept separate from responses. Similarly, the voluntary nature of participation without coercion was highly emphasized where participants were treated ethically, and well-informed about the study's voluntary nature and their right to withdraw.

## 4. Results and Discussion

The subsequent sections detail specific findings and implications, offering a comprehensive view of the relationships between RAAT leadership qualities and school leadership competence in education.

*Total effects.* The analysis explores the direct pathways connecting key predictors to the outcome variable, shedding light on the primary influences within the research framework. Table 1 focuses on the variance in school leadership competence explained by various factors.

**Table 1**

*Total effects predicting school leadership competence*

| R-squared | F | df1 | df2 | p |
|-----------|------|------|------|---------|
| 0.154 | 6.26 | 38.0 | 1311 | < .001 |

The R-squared value of 0.154 indicates that the predictors in the model explain approximately 15.4% of the variance in school leadership competence. This is a substantial proportion, suggesting that the variables included in the model have a noteworthy impact on school leadership competence. The F-statistic, with a value of 6.26, is associated with a significant p-value of less than 0.001. This result implies that the overall model, considering all the predictor variables, is statistically significant. It suggests that the combined influence of the predictors has a meaningful effect on school leadership competence.

Table 2 presents the results of a regression analysis examining the total effects of predicting school leadership competence. The analysis aims to uncover the influence of various factors on school leadership competence in an educational context.

The findings of this study indicated a significant and positive correlation between prior leadership experiences ($\beta = 0.34448$, $p < 0.001$) and school leadership competence. These results show that persons who have had previous leadership exposure are more likely to demonstrate more competence in school leadership roles. This underscores the significant impact of previous leadership experiences on the development of school leadership competency. Educational institutions and policymakers must deliberate the establishment of avenues that facilitate the acquisition of practical leadership experience by educators and leaders, equipping them adequately for future school leadership positions (Al-Dhuwaihi & Almohaisin, 2021). Furthermore, a positive correlation between the construct of RAAT leadership qualities and the outcome variable of school leadership competence ($\beta = 0.0848$, $p = 0.001$) was revealed. This suggests that persons who possess elevated levels of leadership characteristics are more likely to exhibit enhanced competence in the domain of school leadership. The importance of leadership skills implies that the identification and cultivation of these qualities are crucial for the development of effective school leaders (Koh et al., 2019).

**Table 2**

*Regression analysis of the total effects predicting school leadership competence*

| Effect | β | df | t | p |
|---|---|---|---|---|
| Perceived Leadership Success | 0.02737 | 1311 | 1.1324 | 0.258 |
| **Prior Leadership Experiences** | **0.34448** | **1311** | **13.3866** | **< .001** |
| **RAAT Leadership Qualities** | **0.0848** | **1311** | **3.2929** | **0.001** |
| RAAT Leadership Qualities: Perceived Leadership Success | 0.05446 | 1311 | 1.7265 | 0.084 |
| RAAT Leadership Qualities: Prior Leadership Experiences | -0.01848 | 1311 | -0.5878 | 0.557 |
| 36-45 years old - Below 36 year old | 0.04048 | 1311 | 1.2815 | 0.2 |
| 46-55 years old - Below 36 year old | 0.00451 | 1311 | 0.1494 | 0.881 |
| Above 55 years old - Below 36 year old | 0.01225 | 1311 | 0.4054 | 0.685 |
| Female - Male | -4.38e−6 | 1311 | -1.44e−4 | 1 |
| Non-binary - Male | -0.00573 | 1311 | -0.1872 | 0.852 |
| Principal 2 - Principal 1 | -0.02429 | 1311 | -0.7887 | 0.43 |
| Principal 3 - Principal 1 | 0.0043 | 1311 | 0.1381 | 0.89 |
| Principal 4 - Principal 1 | -0.00302 | 1311 | -0.0974 | 0.922 |
| MA Degree Holder - MA Undergraduate | -0.01282 | 1311 | -0.4148 | 0.678 |
| Doctorate Undergraduate - MA Undergraduate | 0.04276 | 1311 | 1.6056 | 0.109 |
| Doctorate Degree Holder - MA Undergraduate | -0.04586 | 1311 | -1.7281 | 0.084 |
| Perceived Leadership Success:36-45 years old - Below 36 year old | 0.0049 | 1311 | 0.1562 | 0.876 |
| Perceived Leadership Success:46-55 years old - Below 36 year old | 0.0129 | 1311 | 0.4168 | 0.677 |
| Perceived Leadership Success: Above 55 years old - Below 36 year old | -0.00733 | 1311 | -0.2325 | 0.816 |
| Perceived Leadership Success: Female - Male | -0.01575 | 1311 | -0.5127 | 0.608 |
| Perceived Leadership Success: Non-binary - Male | -0.04696 | 1311 | -1.5307 | 0.126 |
| Perceived Leadership Success: Principal 2 - Principal 1 | 0.02534 | 1311 | 0.8327 | 0.405 |
| Perceived Leadership Success: Principal 3 - Principal 1 | -0.00462 | 1311 | -0.151 | 0.88 |
| **Perceived Leadership Success: Principal 4 - Principal 1** | **0.06698** | **1311** | **2.1222** | **0.034** |
| Perceived Leadership Success: MA Degree Holder - MA Undergraduate | 0.01465 | 1311 | 0.4609 | 0.645 |
| Perceived Leadership Success: Doctorate Undergraduate - MA Under | 0.02531 | 1311 | 0.7798 | 0.436 |
| Perceived Leadership Success: Doctorate Degree Holder - MA Under | -0.02578 | 1311 | -0.8191 | 0.413 |
| Prior Leadership Experiences:36-45 years old - Below 36 year old | 0.01433 | 1311 | 0.4595 | 0.646 |
| Prior Leadership Experiences:46-55 years old - Below 36 year old | -0.01873 | 1311 | -0.5895 | 0.556 |
| Prior Leadership Experiences: Above 55 years old - Below 36 year old | -0.00909 | 1311 | -0.2936 | 0.769 |
| Prior Leadership Experiences: Female - Male | 0.02894 | 1311 | 0.9495 | 0.343 |
| Prior Leadership Experiences: Non-binary - Male | 0.00428 | 1311 | 0.1387 | 0.89 |
| Prior Leadership Experiences: Principal 2 - Principal 1 | 0.04446 | 1311 | 1.406 | 0.16 |
| Prior Leadership Experiences: Principal 3 - Principal 1 | -0.00622 | 1311 | -0.2051 | 0.838 |
| Prior Leadership Experiences: Principal 4 - Principal 1 | -0.04849 | 1311 | -1.5734 | 0.116 |
| Prior Leadership Experiences: MA Degree Holder - MA Undergraduate | -0.05936 | 1311 | -1.8104 | 0.07 |
| Prior Leadership Experiences: Doctorate Undergraduate - MA Under | 0.00117 | 1311 | 0.0373 | 0.97 |
| Prior Leadership Experiences: Doctorate Degree Holder - MA Under | -0.01903 | 1311 | -0.6347 | 0.526 |

The results further indicate a significant positive interaction effect of perceived leadership success on individuals in "principal 4" when compared to "principal 1" ($\beta = 0.06698$, $p = 0.034$). The perceptions of leadership success hold considerable influence in shaping the competency of senior educational leaders, specifically those in the post of principal 4. This underscores the necessity of offering assistance and growth prospects to augment the leadership abilities and perceived achievements of senior executives.

*Mediators models.* This section outlines the models that provide valuable insights into the roles of leadership behavior, organizational climate, and leadership style as mediators. It encompasses a range of predictors, including perceived leadership success, prior leadership experiences, and RAAT leadership qualities, as well as demographic factors such as age, gender, rank/position, and educational attainment. Table 3 presents the analysis for the m1 leadership behavior mediation model.

**Table 3**

*Leadership behavior mediation model (m1)*

| R-squared | F | df1 | df2 | p |
|:---:|:---:|:---:|:---:|:---:|
| 0.425 | 25.5 | 38.0 | 1311 | < .001 |

The result shows an R-squared value of 0.425, which is evident that approximately 42.5% of the variability in school leadership competence can be attributed to the factors considered in this model with an F-statistic that proves highly significant ($p < 0.001$), affirming the model's suitability for the data. The F-statistic (df1 = 25.5 and df2 = 38.0) serves as a tool to assess the overall significance of the model. In this instance, the F-statistic proves highly significant ($p < 0.001$), affirming the model's suitability for the data. This underscores that the combined influence of the predictors, namely perceived leadership success, prior leadership experiences, RAAT leadership qualities, age, gender, rank/position, and educational attainment, significantly impact school leadership competence by shaping leadership behavior.

Table 4 presents the results of the regression analysis for the leadership behavior mediation model (m1). This model aims to examine the mediating effect of leadership behavior on the relationship between RAAT leadership qualities and school leadership competence, taking into account various predictors and interaction terms. The analysis provides insights into the strength and significance of these relationships.

**Table 4**

*Regression analysis of leadership behavior mediation model (m1)*

| Effect | β | df | t | p |
|---|---|---|---|---|
| Perceived Leadership Success | 0.01779 | 1311 | 0.9228 | 0.356 |
| **Prior Leadership Experiences** | **0.63202** | **1311** | **29.5491** | **< .001** |
| RAAT Leadership Qualities | 0.03275 | 1311 | 1.5428 | 0.123 |
| RAAT Leadership Qualities: Perceived Leadership Success | 0.02976 | 1311 | 1.1447 | 0.253 |
| RAAT Leadership Qualities: Prior Leadership Experiences | 0.04919 | 1311 | 1.8983 | 0.058 |
| **36-45 years old - Below 36 year old** | **0.05701** | **1311** | **2.1898** | **0.029** |
| 46-55 years old - Below 36 year old | 0.00782 | 1311 | 0.3142 | 0.753 |
| Above 55 years old - Below 36 year old | 3.48e−4 | 1311 | 0.014 | 0.989 |
| **Female - Male** | **0.06514** | **1311** | **2.5879** | **0.01** |
| Non-binary - Male | 0.04188 | 1311 | 1.661 | 0.097 |
| Principal 2 - Principal 1 | 0.02551 | 1311 | 1.0047 | 0.315 |
| Principal 3 - Principal 1 | 0.00899 | 1311 | 0.3505 | 0.726 |
| Principal 4 - Principal 1 | 0.03405 | 1311 | 1.3338 | 0.182 |
| MA Degree Holder - MA Undergraduate | 0.03065 | 1311 | 1.2032 | 0.229 |
| Doctorate Undergraduate - MA Undergraduate | 0.01697 | 1311 | 0.7731 | 0.44 |
| **Doctorate Degree Holder - MA Undergraduate** | **0.08223** | **1311** | **3.7596** | **< .001** |
| Perceived Leadership Success:36-45 years old - Below 36 year old | 0.02234 | 1311 | 0.8639 | 0.388 |
| Perceived Leadership Success:46-55 years old - Below 36 year old | 0.01308 | 1311 | 0.5127 | 0.608 |
| Perceived Leadership Success: Above 55 years old - Below 36 year old | 0.01227 | 1311 | 0.472 | 0.637 |
| Perceived Leadership Success: Female - Male | 0.00884 | 1311 | 0.349 | 0.727 |
| Perceived Leadership Success: Non-binary - Male | 0.00915 | 1311 | 0.362 | 0.717 |
| Perceived Leadership Success: Principal 2 - Principal 1 | 0.02554 | 1311 | 1.0185 | 0.309 |
| Perceived Leadership Success: Principal 3 - Principal 1 | 0.00842 | 1311 | 0.334 | 0.738 |
| Perceived Leadership Success: Principal 4 - Principal 1 | 0.01242 | 1311 | 0.4775 | 0.633 |
| Perceived Leadership Success: MA Degree Holder - MA Undergraduate | 0.01692 | 1311 | 0.6462 | 0.518 |
| Perceived Leadership Success: Doctorate Undergraduate - MA Undergraduate | 0.01805 | 1311 | 0.6747 | 0.5 |
| Perceived Leadership Success: Doctorate Degree Holder - MA Undergraduate | 0.02698 | 1311 | 1.04 | 0.299 |
| Prior Leadership Experiences:36-45 years old - Below 36 year old | 0.02982 | 1311 | 1.1598 | 0.246 |
| **Prior Leadership Experiences:46-55 years old - Below 36 year old** | **0.05396** | **1311** | **2.0608** | **0.04** |
| Prior Leadership Experiences: Above 55 years old - Below 36 year old | 0.01963 | 1311 | 0.7691 | 0.442 |
| Prior Leadership Experiences: Female - Male | 0.02472 | 1311 | 0.9841 | 0.325 |
| Prior Leadership Experiences: Non-binary - Male | 0.02612 | 1311 | 1.0271 | 0.305 |
| Prior Leadership Experiences: Principal 2 - Principal 1 | 0.01676 | 1311 | 0.6429 | 0.52 |
| Prior Leadership Experiences: Principal 3 - Principal 1 | 0.03491 | 1311 | 1.3968 | 0.163 |
| **Prior Leadership Experiences: Principal 4 - Principal 1** | **0.06472** | **1311** | **2.5481** | **0.011** |
| **Prior Leadership Experiences: MA Degree Holder - MA Undergraduate** | **0.05391** | **1311** | **1.9949** | **0.046** |
| Prior Leadership Experiences: Doctorate Undergraduate - MA Undergraduate | 0.00943 | 1311 | 0.3644 | 0.716 |
| Prior Leadership Experiences: Doctorate Degree Holder - MA Undergraduate | 0.01015 | 1311 | 0.4108 | 0.681 |

The model shows a strong positive association between prior leadership experiences and leadership behavior ($\beta = 0.63202$, $p < 0.001$), suggesting that educators with previous leadership roles exhibit distinct leadership competencies. This finding underscores the importance of recognizing and nurturing leadership potential in individuals with prior leadership experience (Zhao, 2021). Moreover, a $\beta$ coefficient of 0.05701 indicates that individuals from 36 to 45 years old have higher values on leadership behavior compared to individuals below 36 years old. The t-statistic of 2.1898 is associated with a p-value of 0.029, indicating that this difference is statistically significant. This implies that age, specifically being between 36 and 45 years old, is associated with better leadership competence. Organizations may consider focusing their leadership development efforts on individuals within this age group to harness their leadership potential.

The significant effect of gender (female - male) ($\beta = 0.06514$, $p = 0.010$) suggests that female educators tend to have higher leadership competence compared to male educators. This result highlights the importance of promoting gender diversity in educational leadership positions. It is crucial to address gender-related challenges and biases and create an inclusive environment that supports the leadership potential of all genders (Koh et al., 2019). In addition, the significant effect of education level (doctorate degree holder - ma undergraduate) ($\beta = 0.08223$, $p < 0.001$) suggests that individuals with a doctorate degree tend to exhibit a more favorable leadership behavior compared to individuals with an MA undergraduate degree. This difference is statistically significant, and the positive $\beta$ coefficient indicates that the relationship is in the direction of higher leadership competence for those with doctorate degrees. This aligns with the findings of Wang (2019) that suggests advanced academic qualifications are associated with more effective leadership behavior or competence.

**Table 5**

*ANOVA of organizational climate model (m2)*

| R-squared | F | df1 | df2 | p |
|---|---|---|---|---|
| 0.0228 | 0.803 | 38.0 | 1311 | 0.798 |

Table 5 presents the results of the organizational climate model (m2). The low R-squared value of 0.0228 suggests that the predictors included in this model have limited

explanatory power about organizational climate. The F-statistic of 0.803 and the associated p-value of 0.798 indicate that the model as a whole is not statistically significant.

Table 6 presents the results of the leadership style model (m3), examining the mediation effect of leadership style. The R-squared value of 0.0506 suggests that the predictors included in this model collectively explain a small portion of the variance in leadership style. The F-statistic is 1.84, and the associated p-value is 0.002, indicating that the model is statistically significant. The statistical significance of the model indicates that, while the predictors collectively explain a limited amount of variance in leadership style, at least one of the predictor variables has a significant impact. This underscores the complexity of leadership style within the educational context and highlights the need for further research to explore additional factors that may have a more significant influence (Wilson Heenan et al., 2023).

**Table 6**

*Leadership style model (m3)*

| R-squared | F | df1 | df2 | p |
|-----------|------|------|------|-------|
| 0.0506 | 1.84 | 38.0 | 1311 | 0.002 |

Table 7 presents the results of the leadership style model (m3) through regression analysis, which explores the mediation effect of leadership style. The table contains the beta coefficients, degrees of freedom (df), t-values, and p-values for various predictor variables. The analysis revealed that there is a positive β coefficient of 0.15909 implying that higher values of RAAT leadership qualities are associated with a more favorable or effective leadership style. The t-statistic of 5.8329 is highly significant ($p < 0.001$), indicating a strong positive relationship between these variables. This suggests that individuals with higher scores in RAAT leadership qualities tend to exhibit a more effective and desirable leadership style. Leadership training programs should incorporate components that nurture and enhance these qualities to improve leadership effectiveness (Wilson Heenan et al., 2023).

As shown in the result, the β coefficient of 0.15909 represents the relationship between RAAT leadership qualities and the outcome variable related to leadership style. A positive β coefficient implies that higher values of RAAT leadership qualities are associated with a more favorable or effective leadership style.

**Table 7**

*Regression analysis of leadership style model (m3)*

| Effect | β | df | t | p |
|---|---|---|---|---|
| Perceived Leadership Success | 0.00935 | 1311 | 0.3234 | 0.746 |
| Prior Leadership Experiences | 0.02913 | 1311 | 1.2377 | 0.216 |
| **RAAT Leadership Qualities** | **0.15909** | **1311** | **5.8329** | **<.001** |
| RAAT Leadership Qualities: Perceived Leadership Success | 0.01134 | 1311 | 0.3396 | 0.734 |
| RAAT Leadership Qualities: Prior Leadership Experiences | 0.02499 | 1311 | 0.7506 | 0.453 |
| 36-45 years old - Below 36 year old | 0.05813 | 1311 | 1.7377 | 0.082 |
| 46-55 years old - Below 36 year old | 0.02679 | 1311 | 0.8375 | 0.402 |
| Above 55 years old - Below 36 year old | 0.01563 | 1311 | 0.4883 | 0.625 |
| Female - Male | 0.02397 | 1311 | 0.741 | 0.459 |
| Non-binary - Male | 0.0168 | 1311 | 0.5186 | 0.604 |
| Principal 2 - Principal 1 | 0.00136 | 1311 | 0.0418 | 0.967 |
| Principal 3 - Principal 1 | 0.03018 | 1311 | 0.9159 | 0.36 |
| Principal 4 - Principal 1 | 0.02117 | 1311 | 0.6453 | 0.519 |
| MA Degree Holder - MA Undergraduate | 0.01388 | 1311 | 0.4239 | 0.672 |
| **Doctorate Undergraduate - MA Undergraduate** | **0.0612** | **1311** | **2.1695** | **0.03** |
| Doctorate Degree Holder - MA Undergraduate | 0.01547 | 1311 | 0.5506 | 0.582 |
| Perceived Leadership Success:36-45 years old - Below 36 year old | 0.01633 | 1311 | 0.4916 | 0.623 |
| Perceived Leadership Success:46-55 years old - Below 36 year old | 0.04128 | 1311 | 1.2593 | 0.208 |
| Perceived Leadership Success: Above 55 years old - Below 36 year old | 0.04705 | 1311 | 1.4086 | 0.159 |
| Perceived Leadership Success: Female - Male | 0.00968 | 1311 | 0.2976 | 0.766 |
| Perceived Leadership Success: Non-binary - Male | 0.0025 | 1311 | 0.0769 | 0.939 |
| Perceived Leadership Success: Principal 2 - Principal 1 | 0.00958 | 1311 | 0.2972 | 0.766 |
| Perceived Leadership Success: Principal 3 - Principal 1 | 0.01228 | 1311 | 0.3791 | 0.705 |
| Perceived Leadership Success: Principal 4 - Principal 1 | 0.06058 | 1311 | 1.8124 | 0.07 |
| Perceived Leadership Success: MA Degree Holder - MA Undergraduate | 0.0126 | 1311 | 0.3743 | 0.708 |
| Perceived Leadership Success: Doctorate Undergraduate - MA Undergrad | 0.00679 | 1311 | 0.1975 | 0.843 |
| Perceived Leadership Success: Doctorate Degree Holder - MA Undergrad | 4.84E-04 | 1311 | 0.0145 | 0.988 |
| Prior Leadership Experiences:36-45 years old - Below 36 year old | 0.03885 | 1311 | 1.1757 | 0.24 |
| Prior Leadership Experiences:46-55 years old - Below 36 year old | 0.03255 | 1311 | 0.9675 | 0.333 |
| Prior Leadership Experiences: Above 55 years old - Below 36 year old | 0.02952 | 1311 | 0.8999 | 0.368 |
| Prior Leadership Experiences: Female - Male | 0.05274 | 1311 | 1.6342 | 0.102 |
| Prior Leadership Experiences: Non-binary - Male | 0.0016 | 1311 | 0.0489 | 0.961 |
| **Prior Leadership Experiences: Principal 2 - Principal 1** | **0.06505** | **1311** | **1.9422** | **0.05** |
| **Prior Leadership Experiences: Principal 3 - Principal 1** | **0.06648** | **1311** | **2.0702** | **0.039** |
| **Prior Leadership Experiences: Principal 4 - Principal 1** | **0.0712** | **1311** | **2.1817** | **0.029** |
| Prior Leadership Experiences: MA Degree Holder - MA Undergraduate | 0.04584 | 1311 | 1.3203 | 0.187 |
| Prior Leadership Experiences: Doctorate Undergraduate - MA Undergrad | 0.04075 | 1311 | 1.2258 | 0.221 |
| Prior Leadership Experiences: Doctorate Degree Holder - MA Undergrad | 0.01418 | 1311 | 0.4464 | 0.655 |

The t-statistic of 5.8329 is highly significant ($p < 0.001$), indicating a strong positive relationship between these variables. The results indicate that RAAT leadership qualities have a significant positive impact on leadership style. This suggests that individuals with higher scores in RAAT leadership qualities tend to exhibit a more effective and desirable leadership style. Organizations and institutions may consider focusing on developing or recognizing these qualities when identifying potential leaders. This would imply that educational institutions should prioritize the development and recognition of RAAT leadership qualities in individuals, as they are strongly associated with a favorable leadership style. Subsequently, a positive β coefficient indicates that individuals with doctorate undergraduate education levels have a more favorable leadership style compared to those with MA undergraduate education levels. The t-statistic of 2.1695 suggests a significant relationship, with a p-value of 0.030. The analysis reveals that individuals with a doctorate undergraduate educational background tend to demonstrate a more effective leadership style compared to those with an MA undergraduate background. This suggests that advanced education may be associated with enhanced leadership skills (Al-Dhuwaihi & Almohaisin, 2021).

On the other hand, the β coefficient of 0.06505 suggests a positive relationship between prior leadership experiences and leadership style for individuals at the principal 2 level compared to principal 1. The t-statistic of 1.9422 indicates a moderately significant relationship with a p-value of 0.050. Similarly, the β coefficient of 0.06648 indicates a positive relationship between prior leadership experiences and leadership style for individuals at the principal 3 level compared to principal 1. The t-statistic of 2.0702 reflects a moderately significant relationship with a p-value of 0.039. Lastly, the positive β coefficient of 0.07120 suggests a positive relationship between prior leadership experiences and leadership style for individuals at the principal 4 level compared to principal 1. The t-statistic of 2.1817 indicates a significant relationship with a p-value of 0.029. The results suggest that the role of prior leadership experiences in shaping leadership style is particularly pronounced for leaders at higher levels (principal 2, principal 3, and principal 4) in the educational context.

The positive relationships identified in these interactions underscore the significance of providing opportunities for leadership development and the cultivation of prior leadership experiences, especially for leaders in these higher roles. These findings contribute to a deeper understanding of the dynamics of leadership style in educational institutions, which can inform leadership development programs and strategies for enhancing leadership effectiveness (Koh et

al., 2019). The results could imply that educational institutions should recognize the value of leadership development programs tailored to leaders at various levels. The positive associations between prior leadership experiences and leadership style for individuals at the principal 2, principal 3, and principal 4 levels indicate that investing in leadership development initiatives for these leaders can yield positive outcomes in terms of leadership style. These programs can focus on enhancing leadership competencies, decision-making skills, and interpersonal effectiveness. Moreover, the findings emphasize the importance of succession planning in educational institutions. As leaders progress to higher levels, their leadership style becomes more critical. Therefore, institutions should actively identify and prepare potential leaders to ensure a smooth transition from one leadership level to the next. This includes recognizing the value of their prior leadership experiences and how they influence their leadership style. Furthermore, institutions should encourage mentorship programs and knowledge transfer mechanisms that allow leaders with extensive prior leadership experiences to mentor and share their insights with junior leaders. This can help in transferring valuable leadership skills, approaches, and strategies that contribute to a positive leadership style.

*Full model effects.* The full model offers a holistic perspective on the multifaceted nature of school leadership, shedding light on the key factors that contribute to leadership competence within the educational landscape. Table 8 presents the ANOVA results for the full model (m4) examining school leadership competence.

**Table 8**

*Full model predicting school leadership competence (m4)*

| R-squared | F | df1 | df2 | p |
|-----------|------|------|------|--------|
| 0.181 | 6.14 | 47.0 | 1302 | < .001 |

The findings demonstrate a noteworthy model fit, as evidenced by an R-squared value of 0.181 and a corresponding F-statistic of 6.14. The aforementioned observation suggests that the predictors encompassed within the full model collectively account for a significant portion of the variability observed in school leadership competence. The p-value, which is found to be less than 0.001, serves to reaffirm the robust statistical significance of the model under investigation.

**Table 9**

*Regression analysis of the full model predicting school leadership competence (m4)*

| Effect | β | df | t | p |
|---|---|---|---|---|
| **Leadership Behavior** | **0.15324** | **1302** | **4.5752** | **< .001** |
| **Organizational Climate** | **0.06858** | **1302** | **2.6767** | **0.008** |
| **Leadership Style** | **0.09179** | **1302** | **3.5443** | **< .001** |
| Perceived Leadership Success | 0.02609 | 1302 | 0.8748 | 0.382 |
| Prior Leadership Experiences | 0.25862 | 1302 | 0.5739 | 0.566 |
| **RAAT Leadership Qualities** | **0.06944** | **1302** | **2.6848** | **0.007** |
| RAAT Leadership Qualities: Perceived Leadership Success | 0.05433 | 1302 | 1.7404 | 0.082 |
| RAAT Leadership Qualities: Prior Leadership Experiences | 0.00961 | 1302 | 0.3088 | 0.757 |
| 36-45 years old - Below 36 year old | 0.05324 | 1302 | 1.6987 | 0.09 |
| 46-55 years old - Below 36 year old | 0.00557 | 1302 | 0.1862 | 0.852 |
| Above 55 years old - Below 36 year old | 0.0143 | 1302 | 0.4791 | 0.632 |
| Female - Male | 0.0118 | 1302 | 0.3892 | 0.697 |
| Non-binary - Male | 0.01291 | 1302 | 0.426 | 0.67 |
| Principal 2 - Principal 1 | 0.03338 | 1302 | 1.0924 | 0.275 |
| Principal 3 - Principal 1 | 0.00724 | 1302 | 0.2349 | 0.814 |
| Principal 4 - Principal 1 | 0.00418 | 1302 | 0.1364 | 0.891 |
| MA Degree Holder - MA Undergraduate | 0.01999 | 1302 | 0.6535 | 0.514 |
| Doctorate Undergraduate - MA Undergraduate | 0.0399 | 1302 | 1.4809 | 0.139 |
| Doctorate Degree Holder - MA Undergraduate | 0.02986 | 1302 | 1.1209 | 0.263 |
| Perceived Leadership Success:36-45 years old - Below 36 year old | 0.00804 | 1302 | 0.2578 | 0.797 |
| Perceived Leadership Success:46-55 years old - Below 36 year old | 0.01599 | 1302 | 0.5214 | 0.602 |
| Perceived Leadership Success: Above 55 years old - Below 36 year old | 0.00506 | 1302 | 0.1616 | 0.872 |
| Perceived Leadership Success: Female - Male | 0.01115 | 1302 | 0.3671 | 0.714 |
| Perceived Leadership Success: Non-binary - Male | 0.04511 | 1302 | 1.4861 | 0.138 |
| Perceived Leadership Success: Principal 2 - Principal 1 | 0.02816 | 1302 | 0.9337 | 0.351 |
| Perceived Leadership Success: Principal 3 - Principal 1 | 0.01082 | 1302 | 0.3566 | 0.721 |
| Perceived Leadership Success: MA Degree Holder - MA Undergraduate | 0.01961 | 1302 | 0.6242 | 0.533 |
| Perceived Leadership Success: Doctorate Undergraduate - MA Under | 0.02278 | 1302 | 0.7087 | 0.479 |
| Perceived Leadership Success: Doctorate Degree Holder - MA Under | 0.02186 | 1302 | 0.7024 | 0.483 |
| Prior Leadership Experiences:36-45 years old - Below 36 year old | 0.0159 | 1302 | 0.5104 | 0.61 |
| Prior Leadership Experiences:46-55 years old - Below 36 year old | 0.02242 | 1302 | 0.7056 | 0.481 |
| Prior Leadership Experiences: Above 55 years old - Below 36 year old | 0.01234 | 1302 | 0.3996 | 0.69 |
| Prior Leadership Experiences: Female - Male | 0.03421 | 1302 | 1.1333 | 0.257 |
| Prior Leadership Experiences: Non-binary - Male | 0.00851 | 1302 | 0.2785 | 0.781 |
| Prior Leadership Experiences: Principal 2 - Principal 1 | 0.05206 | 1302 | 1.6534 | 0.098 |
| Prior Leadership Experiences: Principal 3 - Principal 1 | 0.00971 | 1302 | 0.3225 | 0.747 |
| Prior Leadership Experiences: MA Degree Holder - MA Undergraduate | 0.05884 | 1302 | 1.8074 | 0.071 |
| Prior Leadership Experiences: Doctorate Undergraduate - MA Undergrad | 4.14e−4 | 1302 | 0.0133 | 0.989 |
| Prior Leadership Experiences: Doctorate Degree Holder - MA Undergrad | 0.0147 | 1302 | 0.4959 | 0.62 |
| Perceived Leadership Success: Leadership Behavior | 0.01623 | 1302 | 0.5933 | 0.553 |
| Prior Leadership Experiences: Leadership Behavior | 0.02376 | 1302 | 1.3087 | 0.191 |
| Perceived Leadership Success: Organizational Climate | 0.01542 | 1302 | 0.6015 | 0.548 |
| Prior Leadership Experiences: Organizational Climate | 7.17E-04 | 1302 | 0.0281 | 0.978 |
| Perceived Leadership Success: Leadership Style | 0.01 | 1302 | 0.3844 | 0.701 |
| Prior Leadership Experiences: Leadership Style | 0.04119 | 1302 | 1.5547 | 0.12 |

Table 9 provides a comprehensive overview of the regression analysis for the full model (m4), investigating the predictors of school leadership competence. This analysis aims to shed light on the significance and impact of various factors on school leadership competence within the educational context.

The full model analysis revealed a significant positive relationship between leadership behavior and the outcome variable ($\beta = 0.15324$, $t = 4.5752$, $p < 0.001$). This implies that possessing robust leadership attributes, as evaluated by the RAAT assessment, might potentially motivate school leaders to demonstrate more efficient leadership behaviors. Hence, educational institutions should focus on developing and enhancing leadership behaviors as part of their leadership training and development programs (Chang et al., 2020). This would help school leaders translate their inherent leadership qualities into practical and effective leadership actions, ultimately improving leadership competence (Zhao, 2021). On the other hand, there is a statistically significant positive relationship between organizational climate and school leadership competence ($\beta = 0.06858$, $t = 2.6767$, $p = 0.008$). This finding suggests that a favorable climate within the organization serves as a mediator in the association between RAAT leadership qualities and leadership competence.

Moreover, the results indicate a significant positive link between leadership style and school leadership competence ($\beta = 0.09179$, $t = 3.5443$, $p < 0.001$). This finding suggests that leadership style plays a mediating role in the association between RAAT leadership qualities and competency. The proposition posits that leadership effectiveness is impacted by one's innate leadership traits, hence resulting in a favorable impact on leadership competency. School leaders should receive training and guidance to develop leadership styles that complement their inherent qualities assessed by RAAT (Zhao, 2021).

Furthermore, this study also examined the relationship between leadership qualities in the RAAT context. The presence of a positive $\beta$ coefficient of 0.06944; $t = 2.6848$) and p-value of 0.007 indicates a statistically significant positive correlation between RAAT leadership qualities and school leadership competence. Leaders who possess robust leadership characteristics, as assessed by the RAAT, are more likely to demonstrate elevated levels of leadership competence (Koh et al., 2019).

Meanwhile, the moderating variables in the regression analysis of the full model predicting school leadership competence (m4) play an essential role in determining how the relationships between the predictor variables and the outcome variable are influenced. The

results of the analysis indicate that there is no significant relationship between perceived leadership success and the predictor variable, as seen by the non-significant beta coefficient ($\beta$ = 0.02609, t = 0.8748, p = 0.382). This suggests that the competence of school leadership is not just dependent on leaders' subjective perception of their accomplishments (Al-Dhuwaihi & Almohaisin, 2021). Finally, the variables that comprise the demographic profile, age, gender, rank/position, and educational attainments suggest that there is no substantial effect of these factors on school leadership competence within the current model.

*Indirect Effects.* The study sought to examine a total of fifteen distinct indirect effects, each characterized by its unique combination of variables. Presented in table 10 is the indirect effects of the mediator variables.

**Table 10**

*Indirect effects of the mediator variables*

|  | β | z | p |
|---|---|---|---|
| **Prior Leadership Experiences** | | | |
| RAAT → Leadership Behavior→SLC | 0.05927 | 2.5392 | 0.028 |
| RAAT → Organizational Climate → SLC | 0.00151 | 0.7626 | 0.446 |
| RAAT→ Leadership Style → SLC | 0.00103 | 0.2592 | 0.796 |
| | | | |
| Perceived Leadership Success | 0.00304 | 0.78 | 0.435 |
| RAAT → Leadership Behavior → SLC | 0.00134 | 0.3488 | 0.727 |
| RAAT → Organizational Climate → SLC | 0.00735 | 2.0563 | 0.114 |
| RAAT→ Leadership Style → SLC | 0.0025 | 1.1711 | 0.242 |

The interaction between RAAT leadership qualities and perceived leadership success predicting leadership style yielded a statistically significant result (p = 0.028). The positive $\beta$ coefficient of 0.05927 suggests a positive relationship between these two variables in influencing leadership style. This indicates that as RAAT leadership qualities and perceived leadership success increase, leadership style is more likely to improve. This result underscores the importance of both RAAT leadership qualities and perceived leadership success in shaping an individual's leadership style. Organizations should consider focusing on these factors to enhance leadership styles among their personnel (Wang et al., 2022). For the remaining

interactions and demographic variables, there were no statistically significant moderation effects, suggesting that these factors do not significantly alter the relationship between perceived leadership success and leadership style.

*Path model.* Presented in figure 2 is the path model revealing the intricacies of relationships with broken and solid lines symbolizing the presence or absence of significance between variables. Beginning with the mediators' models, m1 delves into leadership behavior, incorporating factors such as RAAT leadership qualities, perceived leadership success, prior leadership experiences, age, gender, rank/position, and educational attainment. Similarly, m2 and m3 explore organizational climate and leadership style. The comprehensive synthesis, embodied in the full model m4, encapsulates school leadership competence. This model intertwines leadership behavior, organizational climate, leadership style, and a spectrum of influential factors, offering a holistic perspective on leadership dynamics. Finally, the indirect effects reveal the paths leading to school leadership competence. Whether it is the influence of RAAT leadership qualities cascading through leadership behavior, organizational climate, or leadership style, or the impact of demographic variables like age, gender, rank/position, and educational attainment, each indirect effect charts a distinct trajectory.

**Figure 2**

*Path model*
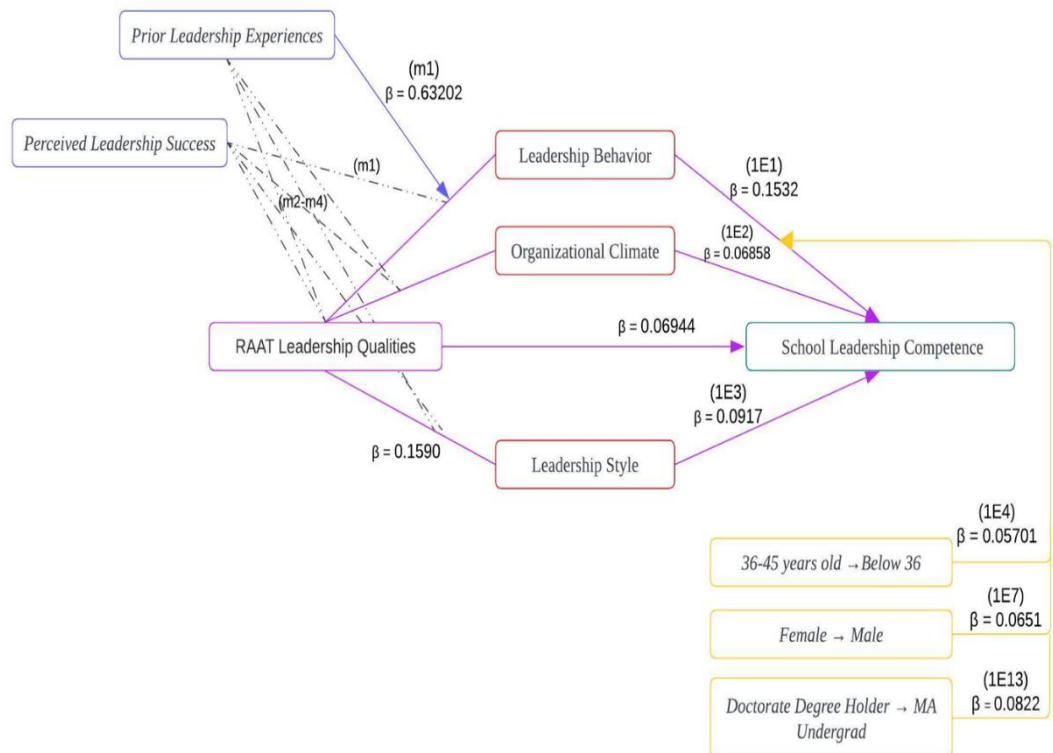
## 5. Conclusion and Recommendation

The analysis of the research framework provides profound insights into school leadership competence. The total effects analysis indicates that included variables collectively explain 15.4% of the variance, underscoring their impactful role. Positive correlations between prior leadership experiences and school leadership competence highlight the significance of practical exposure for educators, while elevated RAAT leadership qualities demonstrate enhanced competence. These findings emphasize the importance of nurturing leadership qualities and providing practical experiences to enhance school leadership competence. Moreover, the significant influence of prior leadership experiences on leadership behavior has practical implications for leadership development, suggesting the importance of targeted programs for diverse groups based on age, gender, and educational attainment. On the other hand, the impact of RAAT leadership qualities on leadership style suggests that strengthening these qualities can lead to more effective leadership styles. Incorporating assessments like RAAT in leadership development programs can identify and nurture leaders with strong attributes.

The full model (m4) offers a holistic perspective, explaining 18.1% of the variance in competence. Leadership behavior positively relates to competence, emphasizing the need for ongoing development. Organizational climate and leadership style mediate the association with RAAT leadership qualities, underlining the importance of robust leadership characteristics. The examination of fifteen distinct indirect effects highlights the significance of the interaction between RAAT leadership qualities and perceived leadership success predicting leadership style, accentuating their pivotal role. While other interactions and demographic variables show no substantial moderation effects, these findings advocate for tailored leadership development programs, integration of RAAT leadership qualities, and a continuous commitment to enhancing leadership competence.

In light of these comprehensive findings, this study offers a set of recommendations aimed at enhancing the effectiveness of school leadership and, ultimately, improving the quality of education.

*Prioritize leadership qualities.* RAAT leadership qualities are crucial in navigating the dynamic educational landscape. Educational institutions should focus on enhancing these qualities through leadership development programs, with an emphasis on adaptability, resilience, and transparency.

*Support leadership experiences.* Recognize and support individuals with prior leadership experiences. These leaders possess distinct competencies that can be further developed and utilized for the benefit of the organization.

*Emphasize leadership success factors.* Educational institutions should continue to prioritize leadership success factors such as motivation, adaptability, and effective communication, as they significantly impact the leadership process.

*Enhance leadership behaviors and styles.* While leadership behaviors and styles are commendable, leadership development programs should aim to further improve individualized consideration and tailor leadership styles to individual strengths, while accounting for demographic factors.

*Nurture organizational climate awareness.* The organizational climate plays a vital role in educational success. Schools should nurture leaders' awareness of this climate and empower them to create environments conducive to learning and growth.

# References

Al-Dhuwaihi, A., & Almohaisin, H. (2021). Degree of practicing authentic leadership among public school leaders from the teachers' viewpoint. *Cypriot Journal of Educational Sciences*, *16*(3), 1175–1193. https://doi.org/10.18844/cjes.v16i3.5838

Alvarez, A. (2022, April 7). *What do you connect with most?* Netmind. https://netmind.net/en/bani-or-vuca/

Barnová, S., Treľová, S., Krásna, S., Beňová, E., Hasajová, L., & Gabrhelová, G. (2022). Leadership styles, organizational climate, and school climate openness from the perspective of Slovak Vocational School Teachers. *Societies*, *12*(6), 192. https://doi.org/10.3390/soc12060192

Baskoro, G. (2023). From VUCA to BANI: A Challenge of Strategic Environment for Higher Education in Indonesia. G. W. Bhawika et al. (Eds.): *IConBEM 2022*, AEBMR 249, 229–235. https://doi.org/10.2991/978-94-6463-216-3_18

Bushuev, S., Ivko, A., Mudra, M., Murovanskyi, H., & Pilukhina, K. (2023). Adaptability in the management of innovative projects in the BANI environment. *Development Management of Complex Systems*, (54), 5–11. https://doi.org/10.32347/2412-9933.2023.54.5-11

Bushuyev, S., Bushuyeva, N., Murzabekova, S., & Khussainova, M. (2023). Innovative development of educational systems in the BANI environment. *Scientific Journal of Astana IT University*, *14*(14), 104–115. https://doi.org/10.37943/14YNSZ2227

Bushuyev, S., Bushuyeva, N., Murzabekova, S., Khusainova, M. (2023). Innovative development of educational systems in the bani environment. *Scientific Journal of Astana IT University*. 14, 104-115.

Bushuyev, S., Piliuhina, K. & Chetin, E. (2023). Transformation of values of the high technology projects from a VUCA to a BANI environment model. *Innovative Technologies and Scientific Solutions for Industries*. 2 (24). https://doi.org/10.30837/ITSSI.2023.24.191

Chang, Y.-Y., Chang, C.-Y., Chen, Y. C. K., Seih, Y.-T., & Chang, S.-Y. (2020). Participative leadership and unit performance: evidence for intermediate linkages. *Knowledge Management Research & Practice*, 1–15. https://doi.org/10.1080/14778238.2020.1755208

Collie, R. J. (2023). Teachers' work motivation: Examining perceived leadership practices and salient outcomes. *Teaching and Teacher Education*, *135*, 104348. https://doi.org/10.1016/j.tate.2023.104348

Crewell, J.W. & Creswell J.D. (2022). *Qualitative, Quantitative, and Mixed Methods Approaches* 6th ed. Sage

Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of transformational and authentic leadership on innovation in Higher Education: The Contingent Role of Knowledge Sharing. *Telematics and Informatics*, *35*(1), 55–67. https://doi.org/10.1016/j.tele.2017.09.018

Evseeva, S., Evseeva, O., & Rawat, P. (2022). Employee Development and Digitalization in BANI World. In: Rodionov, D., Kudryavtseva, T., Skhvediani, A., Berawi, M.A. (eds) Innovations in Digital Economy. SPBPU IDE 2021. *Communications in Computer and Information Science*, vol 1619. Springer, Cham. https://doi.org/10.1007/978-3-031-14985-6_18

Fisher, S. (2020, November 12). Ethical issues to consider when conducting survey research. *Qualtrics*. 2023, https://www.qualtrics.com/blog/ethical-issues-for-online-surveys/

Fritz, M. S., & MacKinnon, D. P. (2007). Required Sample Size to Detect the Mediated Effect. *Psychological Science*, 18(3), 233-239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Gallucci, M. (2020). *jAMM: jamovi Advanced Mediation Models*. [jamovi module]. Retrieved from https://jamovi-amm.github.io/.

Hayes, A. F., & Rockwood, N. J. (2020). Conditional process analysis: Concepts, computation, and advances in modeling of the contingencies of mechanisms. *American Behavioral Scientist, 64,* 19-54.

Hayes, A.F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis* 2nd Edition. The Guilford Press

Hrynchak, N. & Olena, M. (2023). The key administrative competencies of managers required for company development in the BANI world. *Innovative and Economics Research Journal*. 11(1). doi: 10.2478/eoik-2023-0012

Jiskra, T. (2023). *Leading in a bani world: Navigating complexity and embracing resilient leadership*. https://www.change-institute.org/post/leading-in-a-bani-world-navigating- complexity-and- embracing-resilient-leadership

Koh, D., Lee, K., & Joshi, K. (2019). Transformational leadership and creativity: A Meta-analytic review and identification of an integrated model. *Journal of Organizational Behavior*, *40*(6), 625–650. https://doi.org/10.1002/job.2355

Komives, S. R., Longerbeam, S. D., Mainella, F., Osteen, L., Owen, J. E., & Wagner, W. (2009). Leadership identity development. *Journal of Leadership Education*, *8*(1), 11–47. https://doi.org/10.12806/v8/i1/tf2

Liebowitz, D. D., & Porter, L. (2022). Descriptive evidence on school leaders' prior professional experiences and instructional effectiveness. *Leadership and Policy in Schools*, 1–25. https://doi.org/10.1080/15700763.2022.2160359

Martins, C. (2021, March 16). *After Vuca, the transformation to a bani world: Ideas llyc english*. Developing Ideas. https://ideasen.llorenteycuenca.com/2021/03/16/after-vuca-the-transformation-to-a-bani-world/

Mullooly, S. (2022). Higher education futures: The transformative potential of using critical foresights practices & arts based research in our brittle, anxious, non-linear, and incomprehensible (BANI) world. *Dissertations and Theses*. Paper 6062. https://doi.org/10.15760/etd.7932

Panthalookaran, V. (2022). Education in a VUCA-driven World: Salient Features of an Entrepreneurial Pedagogy. *Higher Education for the Future*, 9(2), 234-249. https://doi.org/10.1177/23476311221108808

Pulumbarit, J. (2023). School organizational climate and Leadership Styles Among School Admin-Istrators: Effect on the teacher's level of performance. *International Journal of Multidisciplinary: Applied Business and Education Research*, *4*(9), 3095–3103. https://doi.org/10.11594/ijmaber.04.09.03

R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01).

Ratanapitakdhada, C. & Trirat, P. (2023). Educational leaders' competencies to survive and thrive in a BANI world. *The Journal of the Pacific Institute of Management Science*. 9(1)

Rosseel, Y. (2019). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software, 48(2), 1-36. link*.

Soetaert, K. (2019). *diagram: Functions for Visualising Simple Graphs (Networks), Plotting Flow Diagrams*. [R package]. Retrieved from https://cran.r-project.org/package=diagram.

Stöttinger, B. (2020, April 23). *Bani vs. Vuca: How leadership works in the World of Tomorrow*. WU Executive Academy. https://executiveacademy.at/en/news/detail/bani-vs-vuca-how-leadership-works-in-the-world-of-tomorrow

The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from https://www.jamovi.org.

Wang, Q., Hou, H., & Li, Z. (2022). Participative leadership: A literature review and prospects for future research. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.924357

Wang, S. (2019). School heads' transformational leadership and students' modernity: The multiple mediating effects of school climates. *Asia Pacific Education Review*, *20*(3), 329–341. https://doi.org/10.1007/s12564-019-09575-3

Wilson Heenan, I., De Paor, D., Lafferty, N., & Mannix McNamara, P. (2023). The impact of Transformational School Leadership on school staff and school culture in primary schools—a systematic review of international literature. *Societies*, *13*(6), 133. https://doi.org/10.3390/soc13060133

Zachosova, N. (2023). Educational component of security-oriented economic behaviour formation under the risk of displacement in the conditions of digital world and BANI world. *Bulletin of the Cherkasy Bohdan Khmelnytsky national university. 27 (1-2)*

Zhao, Y. (2021). Virtual mentoring and coaching for school leaders. *Proceedings of the 2021 AERA Annual Meeting*. https://doi.org/10.3102/1690928