

Transformational Leadership Practices and Professional Performance among Optometry Educators

**Rosmerry Simanjuntak¹, Shirley A. Padua², Alvin S. Sicat², Askrening³,
Purnamawati Tjhin⁴, Adrianus Prihartanto⁵, Henny Sutrisman²**

¹Akademi Refraksi Optisi Leprindo, ²Graduate School of Education, The Philippine Women's University, Manila, Philippines, ³Politeknik Kesehatan Kendari, ⁴Universitas Trisakti, ⁵Universitas Islam Riau

Corresponding author e-mail: merryross54321@gmail.com

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Abstract: This study examined transformational leadership and professional performance among 102 optometry educators in two Indonesian higher education institutions. Using a quantitative survey, data were collected through an expert-validated questionnaire and analysed with descriptive statistics, t-tests, ANOVA, and Pearson correlation. All leadership dimensions and performance indicators were rated at a great extent. Individualized consideration had the highest leadership mean, while professional growth and development had the highest performance mean. Nineteen of 20 correlations were positive and significant, with intellectual stimulation and team collaboration showing the strongest relationship. The findings support leadership development, mentoring, and professional-development programmes in optometry education and provide discipline-specific evidence linking transformational leadership with multidimensional educator performance.

Keywords: Clinical education; educational management; optometry education; professional performance; transformational leadership

A. Introduction

Transformational leadership has received substantial attention in educational research because leadership practices can shape how educators engage with institutional goals, professional development, innovation, and collaborative work. Conceptualised transformational leadership through four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass and Riggio, 2008). These dimensions describe leadership behaviours that encourage role modelling, shared purpose, critical thinking, innovation, mentoring, and attention to individual professional needs. In educational institutions, such behaviours are particularly relevant because professional performance depends not only on technical competence but also on motivation, collaboration, organisational support, and opportunities for continuous development.

Previous research has associated transformational leadership with a range of educational and professional outcomes. Studies in educational settings have reported relationships between transformational leadership and teaching performance, organisational commitment, school culture, innovative behaviour, employee engagement, and professional well-being. In higher education, transformational leadership has also been examined in relation to organisational performance and institutional sustainability. Habeeb and Eyupoglu, 2024, for example, demonstrated its relevance within the relationship between strategic planning and organisational performance (Habeeb and Eyupoglu, 2024), while highlighted the contribution of transformational, transactional, and agile leadership to higher-education performance (Samodien, du Plessis and van Vuuren, 2024). Collectively, these studies indicate that transformational leadership may contribute to professional performance by creating conditions that support engagement, collaboration, development, and institutional effectiveness.

However, the relationship between transformational leadership and professional performance is not consistently direct or uniform across settings. Organisational culture and institutional conditions may influence the extent to which leadership practices translate into individual performance (Benkenzoua and Boussourdi, 2022; Jamali *et al.*, 2022). Psychological resources and employee-related factors may also shape leadership outcomes (Li, Liu and Yang, 2024). Evidence from higher education further suggests that transformational leadership does not necessarily produce a significant direct effect on every performance outcome. A study of lecturers in private universities in Jakarta found that lecturer competency played an important mediating role in the relationship between transformational leadership and lecturer performance (Nelly *et al.*, 2024). Similarly, no significant direct relationship was found between transformational leadership and the adoption of sustainability content in teaching (Eustachio *et al.*, 2024). These findings indicate that leadership should be examined in relation to specific performance dimensions and within the particular institutional and professional context in which educators work (Eustachio *et al.*, 2024; Nelly *et al.*, 2024).

This contextual consideration is especially important in optometry education. Optometry educators perform responsibilities that combine classroom teaching with clinical instruction, student supervision, professional mentoring, and the development of clinical competence. Unlike educators whose responsibilities are predominantly classroom-based, optometry educators must connect theoretical knowledge with supervised clinical practice and professional behaviour. Clinical supervision therefore places simultaneous demands on educators as teachers, practitioners, mentors, and role models. Optometry clinical preceptors viewed their roles as involving professional role modelling, attention to learner needs, and the creation of psychologically supportive learning environments, while also experiencing challenges related to workload, remuneration, and human-resource constraints (Xulu-Kasaba *et al.*, 2025). Systematic evidence from nursing similarly shows that transformational leadership can shape work-environment and professional outcomes in clinical settings (Ystaas *et al.*, 2023).

The academic evidence supporting optometry clinical education remains comparatively limited. A systematic review of optometry student clinical practice concluded that scholarly guidance for clinical training in optometry remains scarce and that standards

are frequently informed by evidence originating from other health disciplines (Segooa and Moodley, 2024). At the same time, formal expectations regarding the professional competencies required of optometry educators have only recently received systematic attention. Using a Delphi approach, professional competencies relevant to the education of optometrists were identified (Rodríguez-Zarzuelo, Gómez-Niño and Martín-Herranz, 2023). These developments underline the need for discipline-specific evidence concerning the organisational and leadership conditions that may support optometry educators in fulfilling their academic and clinical responsibilities.

The problem is particularly relevant in the Indonesian context. Optometry education operates within an evolving professional and higher-education environment in which educators are expected to maintain teaching quality, supervise clinical learning, collaborate with colleagues, motivate learners, and pursue continuing professional development. Indonesian leadership research has examined digital transition and organisational change in higher-education and health-related settings (Ariga *et al.*, 2023; Widiyanto, Harsanto and Arviansyah, 2023; Marlia *et al.*, 2025). Nevertheless, these studies have largely focused on organisational-level transformation rather than the professional performance of individual optometry educators. Consequently, institutional decisions regarding leadership development in optometry education are not yet supported by sufficient discipline-specific empirical evidence.

The research gap is therefore twofold. First, much of the available evidence on transformational leadership originates from schools, general higher education, nursing, or broader health-service settings rather than optometry education. This limits the extent to which previous findings can be directly applied to educators who combine academic teaching with clinical supervision. Second, studies within Indonesia have given limited attention to how individual dimensions of transformational leadership are associated with specific aspects of professional performance among optometry educators. It therefore remains unclear whether idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration relate differently to work efficiency, quality of work output, team collaboration, employee motivation and engagement, and professional growth and development.

Addressing this gap is practically important because leadership-development programmes require evidence about which leadership practices are most relevant to educator performance. Treating transformational leadership as a single undifferentiated construct may conceal meaningful differences among its dimensions. Evidence from adjacent educational contexts suggests, for example, that individualized consideration may be particularly relevant where mentoring and individual professional development are important, whereas intellectual stimulation may support innovative and collaborative behaviour (Zainal and Mohd Matore, 2021; Kareem *et al.*, 2023; Bao, 2024). At the same time, the effectiveness of these practices may depend on organisational culture, institutional support, and the professional conditions experienced by educators (Benkenzoua and Boussourdi, 2022; Jamali *et al.*, 2022). A dimension-specific analysis is therefore more useful for identifying practical priorities than a general assessment of transformational leadership alone.

Accordingly, this study examined transformational leadership practices and professional performance among optometry educators in Indonesia. It assessed four dimensions of transformational leadership—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—and five professional-performance indicators: work efficiency, quality of work output, team collaboration, employee motivation and engagement, and professional growth and development. By examining these dimensions separately, the study provides discipline-specific evidence that can inform faculty development, mentoring, and leadership-development initiatives in optometry and related clinical-education settings.

B. Methods

Research Design

This article reports the quantitative component of a quantitative-dominant mixed-method embedded study examining transformational leadership practices and professional performance among Indonesian optometry educators. The quantitative component employed a descriptive-comparative-correlational survey design. Descriptive analysis was used to determine the extent of four transformational-leadership dimensions and five professional-performance indicators, comparative analysis examined differences according to selected respondent characteristics, and correlational analysis determined the associations between leadership practices and professional performance. The qualitative component of the parent study addressed contextual issues encountered in practising transformational leadership and is outside the scope of the present article.

Participants and Research Setting

The study involved 102 optometry educators from two selected higher education institutions in Indonesia, coded as University A and University B to preserve institutional confidentiality. The institutions offered optometry or refraction-optometry programmes integrating classroom instruction, laboratory learning, and supervised clinical education. Data were collected from November to December 2025.

Respondent characteristics included age, sex, highest educational attainment, years of teaching experience in optometry, and number of leadership-related training sessions or seminars attended. These variables were used in the comparative analyses of transformational-leadership practices and professional performance.

Research Instrument

Data were collected using a researcher-developed questionnaire consisting of three sections. Part I contained five items describing respondent characteristics: age, sex, highest educational attainment, years of teaching experience in optometry, and number of leadership-related training sessions or seminars attended. Part II contained 20 items measuring transformational leadership, with five items assigned to each of four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Part III contained 25 items measuring professional performance, with five items for each of five indicators: work efficiency, quality of work

output, team collaboration, employee motivation and engagement, and professional growth and development.

Items in Parts II and III used a four-point Likert-type response scale: 4 = Very Great Extent, 3 = Great Extent, 2 = Moderate Extent, and 1 = Least Extent. Mean scores were interpreted as follows: 3.50–4.00 = Very Great Extent, 2.50–3.49 = Great Extent, 1.50–2.49 = Moderate Extent, and 1.00–1.49 = Least Extent.

The instrument was developed in English based on Transformational Leadership Theory and relevant educational and health-professions literature. It was subsequently translated into Bahasa Indonesia to improve respondents' comprehension and the contextual appropriateness of leadership and professional-performance terminology.

Validity and Reliability

Prior to full administration, the questionnaire underwent content validation by three experts: a senior educational-leadership specialist, a health-professions education expert, and an optometry academic with administrative experience. The validators assessed the clarity of instructions and items, relevance to the intended constructs, alignment with the theoretical framework, and appropriateness of the professional-performance indicators. Based on their recommendations, ambiguous wording was revised, redundant statements were removed, and items were refined to improve clarity and relevance to the optometry-education context.

The revised instrument was pilot-tested among 15 optometry educators who were not included in the final sample. Internal consistency was assessed using Cronbach's alpha. The coefficients were .635 for idealized influence, .863 for inspirational motivation, .775 for intellectual stimulation, .836 for individualized consideration, .795 for work efficiency, .400 for quality of work output, .819 for team collaboration, .601 for employee motivation and engagement, and .728 for professional growth and development. Most dimensions demonstrated acceptable to good internal consistency; however, the quality-of-work-output subscale showed poor internal consistency, while employee motivation and engagement and idealized influence were comparatively weaker. These coefficients were retained and the corresponding findings were interpreted cautiously rather than excluded from analysis.

Data Collection and Ethical Considerations

After institutional permission had been obtained from University A and University B, eligible optometry educators were invited to participate. The questionnaire was administered between November and December 2025 in either printed or online form, depending on respondent accessibility and institutional arrangements. Before participation, each respondent received information describing the purpose, objectives, procedures, expected duration, and nature of the data to be collected and completed an informed-consent form. Participation was voluntary, and respondents were informed of their right to decline or withdraw without penalty.

Institutional and participant confidentiality was maintained throughout the research process. The participating institutions were identified only as University A and University B. No personal identifiers, including names, employee numbers, or contact details, were included in the questionnaire or research report. Data were used solely for academic purposes and stored in password-protected files accessible only to the researcher.

Before implementation, the study protocol, research instruments, informed-consent documents, and data-collection procedures were submitted to the institution's Ethics Review Board (ERB). Ethical clearance was granted following review of the study objectives, methodology, data-management procedures, and safeguards for respondent welfare. The study was considered minimal risk because it collected professional perceptions and experiences without sensitive personal identifiers. Ethical principles of respect for persons, beneficence, justice, voluntary participation, confidentiality, and data minimisation were maintained throughout the study.

Data Analysis

Quantitative data were analysed using IBM SPSS Statistics version 27. Frequencies and percentages were used to summarise respondent characteristics. Means and standard deviations were calculated to determine the extent of transformational-leadership practices and professional-performance indicators. An independent-samples t-test was used for profile variables comprising two groups, while one-way analysis of variance (ANOVA) was used for variables containing more than two groups. These analyses examined differences according to age, sex, highest educational attainment, years of teaching experience in optometry, and participation in leadership-related training or seminars.

Pearson product-moment correlation was used to determine the direction and magnitude of associations between the four transformational-leadership dimensions and the five professional-performance indicators. Statistical significance was evaluated at the .05 level. Because the present article reports cross-sectional correlational data, associations were interpreted as relationships between variables rather than evidence of causal effects.

C. Results and Discussion

Results

Respondent Characteristics

The study included 102 optometry educators from two higher education institutions in Indonesia. The largest age group was 25–34 years (35.29%), followed by 35–44 years (33.33%), 45–54 years (23.53%), and 55 years and above (7.84%). Female respondents accounted for 57.84% of the sample and male respondents for 42.16%. Regarding educational attainment, 50.98% held a master's degree, 45.10% held a bachelor's degree, and 3.92% held a doctoral degree. Nearly half of the respondents had 1–5 years of optometry teaching experience (45.10%), while 50.98% had attended one or two

leadership-related training sessions or seminars. The sample therefore consisted predominantly of early- to mid-career educators with varied academic and leadership-development backgrounds.

Transformational Leadership Practices and Professional Performance

All four transformational-leadership dimensions were rated within the Great Extent category. Individualized consideration obtained the highest mean ($M = 3.20$, $SD = 0.365$), followed by intellectual stimulation ($M = 3.16$, $SD = 0.357$), inspirational motivation ($M = 3.14$, $SD = 0.349$), and idealized influence ($M = 3.13$, $SD = 0.322$). The overall transformational-leadership score was $M = 3.16$ ($SD = 0.348$). All five professional-performance indicators were likewise rated within the Great Extent category. Professional growth and development recorded the highest mean ($M = 3.27$, $SD = 0.336$), followed by team collaboration ($M = 3.23$, $SD = 0.327$), employee motivation and engagement ($M = 3.23$, $SD = 0.338$), work efficiency ($M = 3.20$, $SD = 0.337$), and quality of work output ($M = 3.19$, $SD = 0.306$). The overall professional-performance mean was 3.23 ($SD = 0.329$).

Table 1. Summary of Transformational Leadership Practices and Professional Performance

Construct/Indicator	Mean	SD	Interpretation
Transformational Leadership Practices			
Idealized Influence	3.13	0.322	Great Extent
Inspirational Motivation	3.14	0.349	Great Extent
Intellectual Stimulation	3.16	0.357	Great Extent
Individualized Consideration	3.20	0.365	Great Extent
Overall Leadership	3.16	0.348	Great Extent
Professional Performance			
Work Efficiency	3.20	0.337	Great Extent
Quality of Work Output	3.19	0.306	Great Extent
Team Collaboration	3.23	0.327	Great Extent
Employee Motivation and Engagement	3.23	0.338	Great Extent
Professional Growth and Development	3.27	0.336	Great Extent
Overall Professional Performance	3.23	0.329	Great Extent

Note. 1.00-1.49 = Least Extent; 1.50-2.49 = Moderate Extent; 2.50-3.49 = Great Extent; 3.50-4.00 = Very Great Extent.

Differences According to Respondent Characteristics

Comparative analyses showed no statistically significant differences in transformational-leadership practices or professional performance according to age, sex, years of teaching experience, or number of leadership-related training sessions attended. Highest educational attainment was the only profile variable for which statistically significant differences were reported.

For transformational leadership, a significant difference was reported for inspirational motivation ($p = .009$). Respondents holding bachelor's degrees recorded the highest mean

($M = 3.25$), followed by doctoral-degree holders ($M = 3.10$) and master's-degree holders ($M = 3.05$). Idealized influence, intellectual stimulation, and individualized consideration did not differ significantly according to educational attainment. For professional performance, a significant difference was reported only for work efficiency ($p = .007$). Bachelor's-degree holders obtained the highest mean ($M = 3.31$), compared with doctoral-degree holders ($M = 3.15$) and master's-degree holders ($M = 3.11$). The remaining four performance indicators did not differ significantly according to educational attainment.

The educational-attainment result should be interpreted cautiously because only four respondents held doctoral degrees. In addition, the pattern was not monotonic: the bachelor's group obtained the highest mean rather than the groups with progressively higher qualifications. The findings therefore do not support a simple interpretation that higher academic qualification corresponds to stronger transformational leadership or higher work efficiency.

Table 2. Significant Differences According to Highest Educational Attainment

Outcome	Bachelor's (n = 46)	Master's (n = 52)	Doctoral (n = 4)	p	Result
Inspirational Motivation	3.25	3.05	3.10	.009	Significa nt
Work Efficiency	3.31	3.11	3.15	.007	Significa nt

Note. The doctoral subgroup was small ($n = 4$), so subgroup comparisons require caution.

Table 3. Correlations Between Transformational Leadership Dimensions and Professional-Performance Indicators

Leadership Dimension	Work Efficiency	Quality of Work Output	Team Collaboration	Motivation & Engagement	Professional Growth
Idealized Influence	.21 (.032)	.35 (<.001)	.27 (.006)	.24 (.013)	.11 (.255)
Inspirational Motivation	.40 (<.001)	.28 (.004)	.21 (.034)	.37 (<.001)	.29 (.003)
Intellectual Stimulation	.33 (.001)	.21 (.034)	.43 (<.001)	.33 (.001)	.30 (.002)
Individualized Consideration	.39 (<.001)	.29 (.003)	.41 (<.001)	.35 (<.001)	.25 (.012)

Note. Entries are Pearson's *r* with *p*-values in parentheses. Statistical significance was evaluated at $\alpha = .05$.

Discussion

The findings demonstrate that Indonesian optometry educators reported transformational-leadership practices at a consistently high level within the Great Extent category. The relatively close mean scores across the four dimensions indicate a broadly balanced leadership profile, although individualized consideration emerged as the highest-rated dimension. This pattern is consistent with the developmental orientation of transformational leadership, in which leaders provide individualized support, mentoring, and opportunities for professional growth. Previous educational studies have similarly linked transformational leadership with educator commitment, sustainable teaching performance, and supportive institutional climates (Alzoraiki *et al.*, 2023, 2024; Kareem *et al.*, 2023). Evidence concerning faculty occupational well-being also indicates that transformational leadership can operate through developmental and motivational processes rather than through directive control alone.

The prominence of individualized consideration is particularly relevant to optometry education. Educators in this discipline perform both academic and clinical roles and frequently provide individualized supervision during the development of clinical competence. Research involving optometry clinical preceptors has highlighted role modelling, attention to learner needs, and psychologically supportive supervision as important aspects of clinical education (Xulu-Kasaba *et al.*, 2025). Similarly, the identification of professional competencies required in optometrist education indicates that educator development must extend beyond content delivery to supervision, professional formation, and responsive mentoring (Rodríguez-Zarzuelo, Gómez-Niño and Martín-Herranz, 2023). The present finding therefore suggests that relational and developmental leadership practices fit closely with the practical demands of optometry education.

The professional-performance findings show a similarly consistent pattern. All five indicators were rated at a great extent, with professional growth and development

obtaining the highest mean. This result suggests that continuing learning, networking, career development, and skills enhancement are particularly salient aspects of professional performance among the respondents. Transformational leadership has been associated with professional development and institutional capacity building across educational and health-professions settings (Ghorbani *et al.*, 2023; Habeeb and Eyupoglu, 2024). The importance of continued development may be particularly pronounced in optometry, where clinical standards, technologies, and educational expectations continue to evolve. The limited discipline-specific literature on optometry clinical training further reinforces the importance of continuous educator learning and professional networking (Segooa and Moodley, 2024).

The correlation findings provide more differentiated evidence. Although nearly all leadership-performance relationships reached statistical significance, the coefficients remained modest. This pattern supports the view that transformational leadership is meaningfully associated with professional performance but should not be treated as its sole determinant. Research across organisational and educational settings similarly indicates that transformational leadership operates through multiple motivational, relational, and organisational mechanisms (Jamali *et al.*, 2022; Jiatong *et al.*, 2022; Bakker *et al.*, 2023). Thus, the positive correlations observed in the present study are compatible with a broader systems perspective in which leadership contributes to, but does not independently determine, professional outcomes.

The strongest association occurred between intellectual stimulation and team collaboration ($r = .43$). Intellectual stimulation involves encouraging critical reflection, alternative perspectives, innovation, and problem solving. Such practices may be especially relevant to collaborative work among optometry educators, who must coordinate classroom teaching, laboratory activities, clinical supervision, and professional standards. Research has linked transformational leadership and intellectual stimulation with innovative behaviour and environments that support questioning and new approaches (Bao, 2024). In health-related settings, transformational leadership has also been associated with adaptation to technological and organisational change (Ariga *et al.*, 2023). Within optometry education, intellectual stimulation may therefore support collaboration by enabling educators to discuss alternative approaches, jointly solve instructional or clinical problems, and adapt collectively to evolving professional requirements.

The second-largest association, between individualized consideration and team collaboration ($r = .41$), further highlights the relational nature of the findings. Collaboration may be strengthened when educators feel heard, supported, and recognised as individuals within their professional teams. This interpretation is compatible with research linking transformational leadership to engagement, commitment, and supportive professional relationships (Jiatong *et al.*, 2022; Kareem *et al.*, 2023). In specialised clinical education, where educators often work across disciplinary, laboratory, and clinical boundaries, supportive interpersonal leadership may facilitate coordination by strengthening trust and willingness to exchange expertise.

Inspirational motivation was most strongly associated with work efficiency ($r = .40$). This relationship suggests that communicating optimism, shared goals, and collective purpose may be particularly relevant to how educators organise and complete their multiple professional responsibilities. Indonesian higher education is undergoing continuing organisational and institutional transformation, increasing the value of leadership that can align individuals around common objectives (Widianto, Harsanto and Arviansyah, 2023; Marlia *et al.*, 2025). However, because the present study is correlational, the result should be interpreted as an association rather than evidence that inspirational motivation directly causes improvements in efficiency.

Individualized consideration also showed a relatively stronger association with work efficiency ($r = .39$). Personalised support may help educators clarify responsibilities, obtain appropriate assistance, and respond more effectively to professional demands. The finding therefore suggests that relational leadership may have practical as well as developmental relevance. Nevertheless, the magnitude remains modest, indicating that workload, resources, administrative systems, and institutional structures are also likely to shape work efficiency.

Idealized influence showed significant positive relationships with four of the five performance indicators but had no significant relationship with professional growth and development. Its largest association was with quality of work output ($r = .35$), whereas its relationships with work efficiency, team collaboration, and employee motivation and engagement were smaller. The pattern suggests that ethical modelling, credibility, and value-based behaviour may be more closely connected to perceptions of work standards than to personal professional advancement. The non-significant association with professional growth and development also demonstrates that not every leadership dimension relates uniformly to every performance outcome. This dimension-specific pattern is compatible with evidence showing that transformational-leadership outcomes vary according to intervening psychological and organisational processes.

The educational-attainment findings also require restrained interpretation. Significant differences were reported for inspirational motivation and work efficiency, with bachelor's-degree holders obtaining the highest means in both cases. The pattern does not show a progressive increase from bachelor's to master's to doctoral qualification, and the doctoral group contained only four respondents. Consequently, academic qualification itself cannot be regarded as a straightforward explanation for the differences. The broader absence of significant differences according to age, sex, teaching experience, and leadership-training frequency suggests that transformational-leadership practices are relatively widely distributed among the educators studied rather than confined to particular demographic groups. This interpretation is consistent with literature emphasising institutional culture and professional context as important conditions shaping leadership effectiveness (Saad Alessa, 2021; Jamali *et al.*, 2022).

The present results are broadly consistent with studies reporting positive relationships between transformational leadership and educator or organisational outcomes, but the literature is not uniform. (Nelly *et al.*, 2024), studying lecturers in private universities in Jakarta, found that transformational leadership operated through lecturer competency

and that its direct path to lecturer performance was not statistically significant. Similarly, no significant direct relationship was found between transformational leadership and the adoption of sustainability content in higher-education teaching (Eustachio *et al.*, 2024). These contrasting findings caution against interpreting the significant correlations in the present study as evidence of a universal or direct leadership effect. Leadership may instead function through competence, institutional culture, psychological resources, or other contextual mechanisms.

Several methodological features further qualify interpretation of the results. First, the study relied on self-reported questionnaire responses from educators in two institutions and used purposive sampling; therefore, the findings should not be generalised automatically to all optometry educators in Indonesia. Second, the doctoral subgroup consisted of only four participants, limiting confidence in educational-attainment comparisons involving that group. Third, the quality-of-work-output subscale showed low internal consistency (Cronbach's $\alpha = .400$), meaning findings involving this indicator require particular caution. The remaining reliability coefficients varied from weaker to good levels. Finally, the cross-sectional quantitative component establishes association but cannot determine temporal or causal relationships.

Taken together, the findings indicate that transformational leadership is positively related to multiple dimensions of professional performance among the optometry educators studied, but the relationships vary in strength and should be understood within the broader academic and clinical environment. The most notable patterns involve intellectual stimulation and individualized consideration in relation to collaboration, and inspirational motivation and individualized consideration in relation to work efficiency. These results support leadership-development approaches that combine intellectual challenge, supportive mentoring, shared vision, and collaborative practice rather than relying on a single leadership behaviour.

D. Conclusions

This study concludes that Indonesian optometry educators practise transformational leadership and demonstrate professional performance to a great extent. Individualized consideration emerged as the highest-rated leadership dimension, while professional growth and development was the highest-rated performance indicator. Most outcomes did not differ across demographic groups; educational attainment was the only profile variable associated with significant differences in inspirational motivation and work efficiency. Nineteen of the 20 leadership-performance relationships were positive and statistically significant, with intellectual stimulation showing the strongest association with team collaboration. These findings indicate that transformational leadership is meaningfully associated with multiple aspects of educator performance, although the generally modest correlation magnitudes suggest that performance is also shaped by other institutional and contextual factors. Leadership development in optometry education should therefore emphasise intellectual stimulation, individualized support, shared purpose, and collaborative practice.

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References

- Alzoraiki, M. *et al.* (2023) "Impact of Teachers' Commitment to the Relationship between Transformational Leadership and Sustainable Teaching Performance," *Sustainability (Switzerland)*, 15(5). Available at: <https://doi.org/10.3390/su15054620>.
- Alzoraiki, M. *et al.* (2024) "The role of transformational leadership in enhancing school culture and teaching performance in Yemeni public schools," *Frontiers in Education*, 9(July), pp. 1–11. Available at: <https://doi.org/10.3389/feduc.2024.1413607>.
- Ariga, R.A. *et al.* (2023) "Transformational Leadership in Telenursing Implementation Towards Hospital Digital Transition," *TEM Journal*, 12(4), pp. 2460–2469. Available at: <https://doi.org/10.18421/TEM124-58>.
- Bakker, A.B. *et al.* (2023) "Daily transformational leadership: A source of inspiration for follower performance?," *European Management Journal*, 41(5), pp. 700–708. Available at: <https://doi.org/10.1016/j.emj.2022.04.004>.
- Bao, Y. (2024) "The effect of principal transformational leadership on teacher innovative behavior: the moderator role of uncertainty avoidance and the mediated role of the sense of meaning at work," *Frontiers in Education*, 9(June), pp. 1–12. Available at: <https://doi.org/10.3389/feduc.2024.1378615>.
- Bass, B.M. and Riggio, R.E. (2008) *transformational leadership*.
- Benkenzoua, N.E.H. and Boussourdi, S. (2022) "The Influence of Transformational Leadership on Human Resource's Flexibility in the Context of Development: A case study of the cement plant SCAEK Aïn El Kebira SETIF," *Finance and Business Economies Review*, 6(4), pp. 189–201. Available at: <https://doi.org/10.58205/fber.v6i4.121>.
- Eustachio, J.H.P.P. *et al.* (2024) "Implementing sustainability in teaching: The role of sustainability leadership and transformational leadership in the context of higher education institutions," *Sustainable Development*, 32(5), pp. 5331–5347. Available at: <https://doi.org/10.1002/sd.2980>.
- Ghorbani, A. *et al.* (2023) "Transformational leadership in development of transformative education in nursing: a qualitative study," *BMC Nursing*, 22(1), pp. 1–10. Available at: <https://doi.org/10.1186/s12912-022-01154-z>.
- Habeeb, Y.O. and Eyupoglu, S.Z. (2024) "Strategic planning, transformational leadership and organization performance: Driving forces for sustainability in higher education in Nigeria," *Sustainability*, 16(11), p. 4348. Available at: <https://doi.org/10.3390/su16114348>.

- Jamali, A.R. *et al.* (2022) "Impact of leadership styles on faculty performance: Moderating role of organizational culture in higher education," *Management Science Letters*, 12(1), pp. 1–20. Available at: <https://doi.org/10.5267/j.msl.2021.8.005>.
- Jiatong, W. *et al.* (2022) "The Impact of Transformational Leadership on Affective Organizational Commitment and Job Performance: The Mediating Role of Employee Engagement," *Frontiers in Psychology*, 13(April), pp. 1–12. Available at: <https://doi.org/10.3389/fpsyg.2022.831060>.
- Kareem, J. *et al.* (2023) "Transformational educational leaders inspire school educators' commitment," *Frontiers in Education*, 8(May). Available at: <https://doi.org/10.3389/feduc.2023.1171513>.
- Li, M., Liu, F. and Yang, C. (2024) "Teachers' Emotional Intelligence and Organizational Commitment: A Moderated Mediation Model of Teachers' Psychological Well-Being and Principal Transformational Leadership," *Behavioral Sciences*, 14(4). Available at: <https://doi.org/10.3390/bs14040345>.
- Marlia, M.A. *et al.* (2025) "An Exploratory Study on Effective Leadership and Change Management in the Transformation of Indonesian Public Universities Towards World-Class University Status," *Sustainability (Switzerland)*, 17(3). Available at: <https://doi.org/10.3390/su17031300>.
- Nelly, N. *et al.* (2024) "The mediating role of competency in the effect of transformational leadership on lecturer performance," *International Journal of Educational Management*, 38(2), pp. 333–354. Available at: <https://doi.org/10.1108/IJEM-06-2023-0275>.
- Rodríguez-Zarzuelo, G., Gómez-Niño, Á. and Martín-Herranz, R. (2023) "A Delphi study to identify and assess professional competencies in the education of optometrists," *Journal of Optometry*, 16(2), pp. 151–166. Available at: <https://doi.org/10.1016/j.optom.2021.12.005>.
- Saad Alessa, G. (2021) "The Dimensions of Transformational Leadership and Its Organizational Effects in Public Universities in Saudi Arabia: A Systematic Review," *Frontiers in Psychology*, 12(November), pp. 1–16. Available at: <https://doi.org/10.3389/fpsyg.2021.682092>.
- Samodien, M., du Plessis, M. and van Vuuren, C.D.J. (2024) "Enhancing higher education performance: Transformational, transactional and agile leadership," *SA Journal of Human Resource Management*, 22. Available at: <https://doi.org/10.4102/sajhrm.v22i0.2768>.
- Segooa, R.F. and Moodley, V.R. (2024) "Optometry student clinical practice at public health facilities: A systematic review," *Health SA Gesondheid*, 29, p. 2441. Available at: <https://doi.org/10.4102/hsag.v29i0.2441>.
- Sun, T.Y., Luo, Y. and Yoon, M. (2025) "The impact of presidents' transformational leadership on faculty occupational well-being—parallel mediating roles of teaching efficacy and job crafting," *Frontiers in Psychology*, 16(June), pp. 1–12. Available at: <https://doi.org/10.3389/fpsyg.2025.1468563>.
- Widianto, S., Harsanto, B. and Arviansyah, A. (2023) "The link of universalism, transformational leadership, innovativeness, and leader effectiveness: a multivariate dataset," *Frontiers in Psychology*, 14. Available at: <https://doi.org/10.3389/fpsyg.2023.1181844>.
- Xulu-Kasaba, Z.N. *et al.* (2025) "Optometry preceptors' perceptions of clinical supervision at a South African university," *Health SA Gesondheid*, 30, p. 2836. Available at:

<https://doi.org/10.4102/hsag.v30i0.2836>.

- Ystaas, L.M.K. *et al.* (2023) "The Impact of Transformational Leadership in the Nursing Work Environment and Patients' Outcomes: A Systematic Review," *Nursing Reports*, 13(3), pp. 1271–1290. Available at: <https://doi.org/10.3390/nursrep13030108>.
- Yu, X. and Jang, G. (2024) "A framework for transformational leadership to enhance teacher's work performance," *Frontiers in Psychology*, 15(July), pp. 1–19. Available at: <https://doi.org/10.3389/fpsyg.2024.1331597>.
- Zainal, M.A. and Mohd Matore, M.E.E. (2021) "The influence of teachers' self-efficacy and school leaders' transformational leadership practices on teachers' innovative behaviour," *International Journal of Environmental Research and Public Health*, 18(12). Available at: <https://doi.org/10.3390/ijerph18126423>.