



ISSN: 2617-6548

URL: www.ijirss.com



The role of communication in enhancing leadership effectiveness: A meta-analysis of research findings

Marianthi Loumakou¹, Athanasios Anastasiou^{2*}, Zacharias Dermatis³

^{1,2,3}*Department of Management Science and Technology, Laboratory of Data Science and Digital Transformation, University of Peloponnese, Tripolis, Greece.*

Corresponding author: Athanasios Anastasiou (Email: athanastas@uop.gr)

Abstract

The purpose of this meta-analysis is to investigate the role of communication in enhancing leadership effectiveness across organizations, with emphasis on the educational sector. The study is based on a systematic literature review following the PRISMA methodology. From an initial pool of 200 studies, 30 were selected based on predefined criteria. Data from studies conducted between 2006 and 2024 were analyzed to identify patterns between communication skills and leadership effectiveness. Findings indicate that communication skills are a critical factor in effective leadership, positively influencing performance, satisfaction, and motivation. Effective communication acts as a mediating factor between leadership styles and organizational outcomes, while fostering trust, collaboration, and commitment. The study concludes that communication is a fundamental pillar of leadership effectiveness. These findings highlight the importance of integrating communication training into leadership development programs and provide practical guidance for organizations, particularly educational institutions, to enhance leadership practices and organizational performance.

Keywords: Communication strategies, Effective leadership, Leadership communication, Leadership development, Organizational performance.

DOI: 10.53894/ijirss.v9i4.11503

Funding: This study received no specific financial support.

History: Received: 3 February 2026 / **Revised:** 26 March 2026 / **Accepted:** 31 March 2026 / **Published:** 14 April 2026

Copyright: © 2026 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Publisher: Innovative Research Publishing

1. Introduction

To understand the importance of communication in leadership, one must take a multi-faceted approach that integrates various theoretical perspectives—only through this approach can we gain a comprehensive understanding of the impact communication has on the process and outcome of leadership. This section will go over major theories that help connect effective communication with leadership, particularly within educational settings. The theories to be discussed include

transformational leadership theory, leader-member exchange (LMX) theory, communication accommodation theory (CAT), emotional intelligence (EI), and leader-member relations (LMR). These frameworks provide insight into how leaders' success is dependent on their communication strategies and help us see the big picture on how leadership is affected by these tactics.

1.1. Transformational Leadership Theory

Transformational leadership theory introduced by Burns [1] and later advanced by Bass and Bass Bernard [2] is considered the cornerstone of all leadership studies. This particular theory suggests that transformational leaders motivate followers to place the interests of the group above their own— by creating performance-related inducements for the organization— which results in higher levels of performance. Transformational leaders can be identified through their effective communication of vision with team members as well as demonstrating care for individuals and creating a climate where intellectual activity thrives [3-7].

In schools plus instructional environments transformational leadership has been linked with these things: increased student achievement, teacher satisfaction [8]. For instance, if a principal demonstrates transformational leadership behaviors such as providing intellectual stimulation and individualized attention towards their staff members, then the result would be a positive school climate where teachers actively participate in the teaching program [9]. These leaders use effective communication to navigate innovation within teaching — an already complex context — while involving stakeholders in the mission and vision of the school.

Within the context of schools and instructional environments, transformational leadership is connected with higher student achievement, increased teacher satisfaction, and better overall school performance [8]. For instance, a positive school climate that enhances teacher engagement can be achieved by principals who display transformational leadership behaviors such as providing intellectual stimulation plus individualized attention to the staff [9]. These leaders use innovative teaching methods through effective communication in navigating the complexities of the educational environment. The stakeholders are also actively involved in the mission and vision of the school.

1.2. Leader-Member Theory (LMT)

In 1975 Dansereau, Graen and Haga created LMX theory which focuses on the binary relationship between leaders and followers. According to LMX theory, leaders do not treat all followers the same; they develop different relationships with each individual. These relationships can be high quality (with mutual trust and respect) or low quality (more energetic, less personal). Graen and Uhl-Bien [10] that communication is vital for developing these leader-member relationships: high-quality LMX relationships are cultivated through frequent open supportive communications where leaders with high LMX provide followers more information, assistance, and participation in decision-making processes. Gerstner and Day [11] research shows this increases followers' sense of commitment and involvement in the organization.

Within the educational context, LMX theory is used to explain the relationship that exists between principals and teachers in building effective partnerships. It is through high-quality interactions that teacher-principal partnership is able to foster high levels of teacher motivation, job satisfaction and professional development [12]. Principals can develop such positive relationships by promoting open communication plus involving constructive criticism with their staff. In case they do, then they are more likely to have a strong supportive relationship with their staff which results in increased quality teaching and consequently enhanced student learning.

1.3. The Theory of Adaptive Communication

The Communication Adaptation Theory (CAT), introduced by Howard Giles during the seventies, delves into the terrains of metamorphosis that individuals undertake in altering their communication style for the ease of others during interactions. It postulates that individuals change their speech, vocal patterns and non-verbal behaviour with the aim of either convergence or divergence with their partners [13] these changes find roots being nurtured by social identification, personal relationships as well as physical setting.

In leadership contexts effective leaders use communication strategies that are adaptive to build rapport— reduce social distance, promote participation. Leaders can change their communication style to better fit the cultural and linguistic preferences of their team members (an action tending toward mutual understanding and cooperation) with the example for this case study from [14]. Educational organizations benefit from leaders who use adaptive communication methods by having a leader more likely to connect with various stakeholder groups (including students, teachers, parents) through talking to their audiences in a more empathetic and responsive manner (thereby creating an inclusive, supportive environment); as indicated by Harris and Jones [15].

1.4. Communication Skills and Emotional Intelligence

Communication competence is the ability to convert information into words, transmit messages through the system, and decode them in different situations. Emotional intelligence (EI) is described by Goleman [16] as the ability to recognise, understand and manage both one's own emotions and the emotions of others, as well as the emotions of others. Both of these entities are vital to effective leadership. Effective leaders with high communication skills and emotional intelligence are skilled at handling interpersonal relationships, resolving conflicts, and creating a positive work environment. They use communication to foster relationships, communicate empathy, and promote a sense of belonging among team members [16].

1.5. Mechanisms of Influence

1.5.1. Induction and Inspiration

Effective communication has an important role in inspiring and motivating followers. According to Herzberg [17] two-factor theory, communication can be effective as a motivator because it provides recognition, responsibility and opportunities for success. Transformational leaders, for example, use inspirational communication to describe a vision that inspires followers and imbues them with a sense of purpose [2]. This motivational aspect of communication is vital to inspire followers to achieve greater than expected performance.

1.5.2. Trust and Credibility

Trust is vital for effective leadership and communication has an important role in creating and maintaining trust. Mayer, et al. [18] theory of organizational trust focuses on the importance of a leader's competence, benevolence and integrity. Leaders who communicate with honesty, consistency and transparency are considered more trustworthy. This trust facilitates followers' willingness to accept and follow the leader's instructions [19].

1.5.3. Conflict Resolution and Team Cohesion

Communication is vital for resolving conflicts and enhancing group solidarity. Effective leaders use communication to address and resolve disputes in a productive manner, prevent issues from escalating, and maintain a collaborative work environment. Tuckman [20] stages of team development describe the importance of communication in the progression of teams from the formative stages to the performance stages. Effective leaders who promote open communication and honest interaction facilitate conflict resolution, develop trust and promote cohesion.

1.5.4. Feedback and Development

Feedback is a critical leadership role that directly influences subsequent development and performance. Effective communication skills are vital in providing effective feedback that is specific, practical and supportive. Feedback intervention theory [21] posits that effective feedback should serve to enhance understanding of one's performance as well as help in identifying areas where improvement is needed and new competencies to be developed. Effective leaders with good communication skills are better placed to take their employees through guidance and mentorship, which fosters continuous learning and development.

2. Methodology

This study adopts a qualitative approach by reviewing 30 articles on leadership and communication skills. The meta-analysis implementation process involves:

2.1. Source Selection Process and Criteria for Including/Excluding Articles.

The choice of sources and establishment of rules for article eligibility is pivotal to the meta-analysis methodology. The PRISMA (Preferred Reporting Items for Systematic Reviews) methodology was followed for this review [22]. Systematic reviews that lack a common approach often cannot reproduce the same results and lack scientific relevance. PRISMA provides a peer-recognized survey method that uses a checklist of guidelines, which we followed precisely in this paper [23]. This method guarantees the quality and consistency of the review process. A protocol for review was created that described the process of article selection, data search, data extraction and data analysis. It ensures the validity and reliability of research findings, as well as presents a comprehensive overview based on existing literature details [24, 25].

The databases that were used in the search for sources include google scholar, covering most scientific articles and publications; PubMed, specialized in social sciences and psychology— fields important to the analysis of leadership and communication competencies. JSTOR gives access to articles on leadership and communication both past and present. The choice of these databases was based on their reliability as major sources of quality scientific articles.

The criteria used to select the articles were based on the time period; the requirement was that articles had to be published between 2012 and 2023 to ensure data accuracy. A central theme, however, was the need to focus on leadership and communication skills in the education sector. In particular, research exploring aspects such as leadership style, the impact of leadership on communication skills and the cultivation of communication skills in the workplace. Ultimately, the language of publication should be based on English in order to facilitate analysis and comparison.

To ensure the quality and relevance of the articles, we excluded studies that did not directly focus on leadership or communication competencies in education, reviews, commentaries and secondary analyses that lacked primary data and were not fully accessible; this prevents a full evaluation of the data Figure 1.



Figure 1.
Inclusion and exclusion criteria.

Consistent application of the aforementioned criteria resulted in the selection of articles that were both rigorous and accurate, which would help to enhance the validity of the meta-analysis conclusions and provide an understanding of the importance of these skills in the contemporary educational environment. .

2.2. Selection Process

The article selection process for the meta-study was conducted in a systematic and structured manner designed to ensure the legitimacy and reliability of the results (Figure 2). The keywords used in the search were initially intended to include 'leadership', 'effective leadership', "communication skills" and "leadership communication", "training".

The search resulted in a large number of articles containing duplicate references that were initially removed. Titles and abstracts of the articles were then read. This was done to evaluate if they fell within the scope of this study. At this juncture, any article that did not meet the basic requirement for inclusion was thrown out. The selected articles — deemed relevant after the first screening based on titles and abstracts — were placed in a short list. Each article in this list was given a detailed review to ensure its quality. This involved looking at the methodology, findings, and conclusions to determine their fit with the inclusion criteria. Articles that failed to meet the requirements upon full reading were also eliminated. The final list of selected articles was generated and included only those articles that met all inclusion requirements. This list provided the basis for the next phase of data analysis.

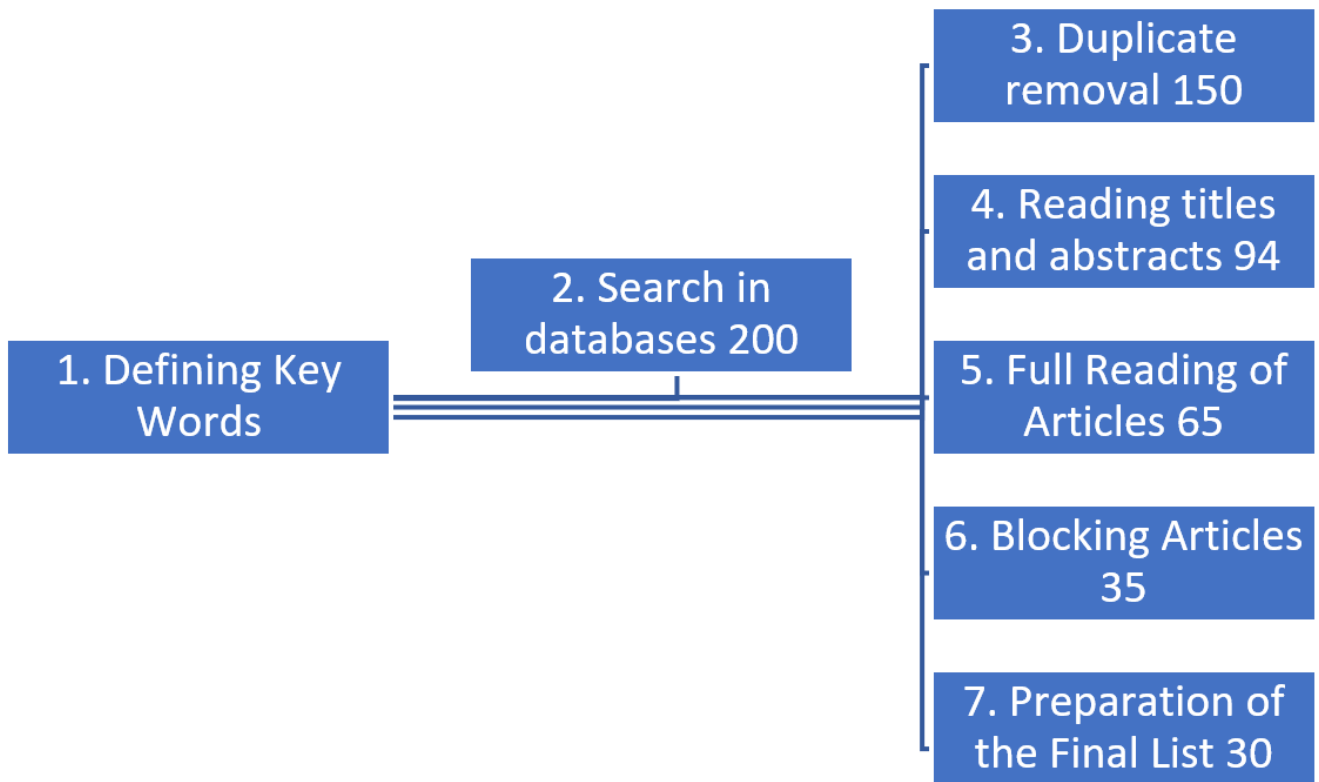


Figure 2.
Items that are reported in the systematic review (PRISMA).

2.3. Data Exporter

The data extractor is responsible for ensuring that all necessary data are extracted in a systematic and accurate manner from selected articles. This process facilitates additional analysis and comparison of data, which provides the means to draw accurate and reliable conclusions. For data collection, an Excel form was created to ensure consistency and uniformity in data collection from the studies. The form had a field that recorded the name, year, title, author's field of study, the impact of the author's communication skills, the communication strategies used, and the general findings of the article regarding leadership and communication.

2.4. Data Analysis

Data analysis of the 30 selected articles was conducted through a planned and systematic approach involving multiple stages (Figure 3). The aim was to identify common principles, patterns and important findings related to leadership and communication competencies.

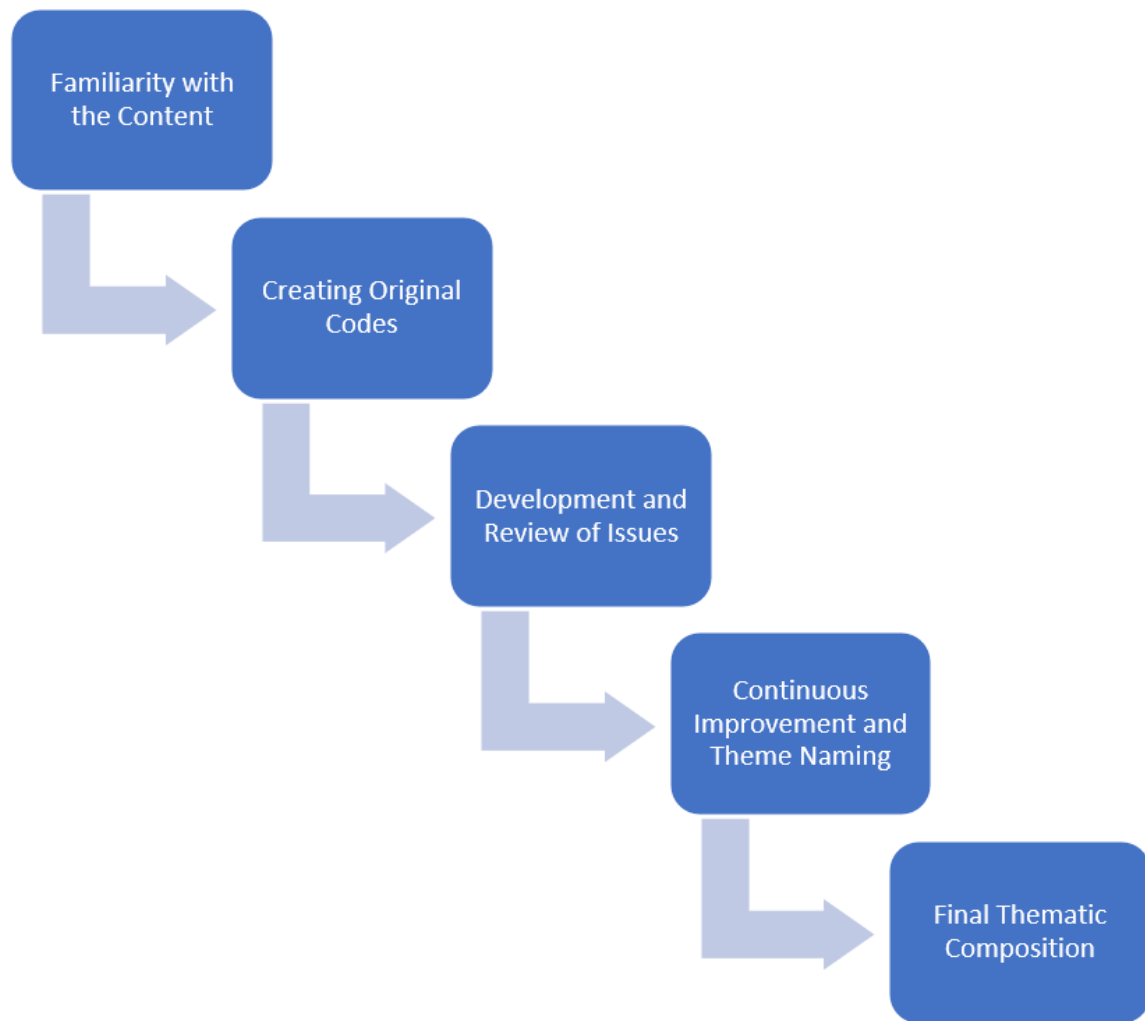


Figure 3.
Stages of data analysis.

The first stage involved reading the articles in depth to familiarise yourself with their subject matter. This process facilitated a better understanding of the topic and the primary outcomes of each article. This analysis originates from a collection of articles talking about leadership and communication and their significance in various disciplines with a focus on the education sector. In particular, the study was based on 30 identified articles that detailed how leaders' communication strategies impact organizations and individuals.

The data was tabulated including field of activity, impact of leaders' communication skills, strategy used, and major findings (see Table 1). Results suggest that leaders' communication skills are significant for achieving community involvement to enhance employee performance and create healthy workplace.

3. Results

This analysis originates from a collection of articles discussing leadership and communication. Their importance in various disciplines, notably in the field of education.

This article used the PRISMA method, which attempted to identify as many relevant studies as possible. In order to achieve this, we broadened the scope of the search terms in the databases, and resolved any discrepancies through active listening. Despite the intended international nature of our analysis, we chose to limit our search to databases that were considered scientifically important and had a significant impact on science in order to ensure the rigour and quality of the studies in our review.

The study was based on 30 specific articles that detailed how different leaders' communication strategies impact their organizations and the people within them.

The data was tabulated to include details from each article such as the industry impact, leaders' communication skills, strategy used, and major findings (see Table 1). Results demonstrate that leaders' communication skills have a significant effect: they enhance community involvement plus performance of employees and pecuniary is also widely positive. The thematic analysis conducted produces common patterns and themes that are worthwhile for developing leadership competencies and implementing effective communication strategies. The primary findings of the analysis will be described and analyzed in detail, with a focus on their practical applications and suggestions for future research.

		Sector	Impact of Leader's Communication	Communication Strategies	Key Findings
1	2023	K-12 Education	Improved community cohesion.- Enhanced trust and confidence within the school community.- Better management of crises and uncertainties.- Increased well-being and support for students, staff, and families	Regular and clear communication- Honest and transparent messaging- Use of multiple communication channels (email, social media, video messages)- Personal check-ins and feedback mechanisms	Effective communication is critical in managing crises like the COVID-19 pandemic.- School leaders play a key role as community leaders, providing stability and guidance.- Honest and transparent communication builds trust and reduces anxiety.- Regular updates and personal check-ins help maintain engagement and support well-being.- Leadership during crises requires flexibility and adaptability in communication strategies.
2	2023	K-12 Education	Improved teacher behavioral competence.- Enhanced physical attributes of teachers.- Increased emotional intelligence.- Better community relations.- Enhanced instructional management.	Decision-making- Relationship building- Team leadership- Effective communication- Personal productivity- Coaching and mentoring	Significant correlations between leadership skills and teachers' behavioral competence.- Leadership responsibilities positively impact teacher performance.- Effective communication and decision-making are crucial for improving teacher competence.- School heads who demonstrate strong leadership skills foster a positive teaching environment.- Coaching and mentoring are key to teacher development and performance.
3	2023	K-12 Education	Improved school governance.- Enhanced teacher and staff performance.- Increased job satisfaction among educators.- Better information dissemination and clarity.	Chain communication pattern- All-channel communication pattern- Regular meetings- Direct feedback	Effective communication by principals is crucial for successful school governance.- The use of chain and all-channel communication patterns ensures proper information flow.- Regular meetings and direct feedback enhance communication effectiveness.- Good communication practices foster a positive organizational climate and improve staff performance.
4	2023	Higher Education	Leader's communication skills play a crucial role in fostering global communication skills in students.- Effective communication by leaders can create a supportive environment for students to develop their communication abilities.	Motivation to improve communication skills is essential for students. Social and academic integration into the campus community enhances global communication skills. - Engagement with foreign language learning contributes to effective communication development. Institutional support and opportunities play a significant role in fostering	Motivation is a key driver for developing global communication skills. Social and academic integration significantly impacts students' global communication skills. - Institutional support and opportunities positively influence the development of intercultural competence. - Engagement with foreign language learning correlates with higher levels of global communication skills. - University guidance and support are essential for maximizing learning gains from intercultural encounters.
5	2022	K-12 Education	Enhanced teacher performance.- Increased job satisfaction among teachers.- Improved school climate.- Better teacher-principal relationships.	Clear and accurate communication- Regular feedback sessions- Open-door policy- Consistent and transparent messaging	Communication skills of principals significantly influence teacher performance.- Effective leadership requires both good communication and the ability to listen and respond to teachers' needs.- Principals' attributes and leadership skills are strongly correlated with teachers' job performance.- Clear and regular communication fosters a positive school environment and enhances teacher satisfaction.
6	2022	Education	Improved organizational climate.- Enhanced teacher performance.- Increased teacher job satisfaction.- Better relationship between administrators and staff.	Listening- Assertiveness- Resolving conflict- Solving problems- Clear and accurate communication- Regular feedback sessions	Communication skills of educational administrators are crucial for effective school management.- Listening, assertiveness, and conflict resolution are key skills for administrators.- Effective communication improves staff development and organizational climate.- Educational administrators' communication skills are linked to better teacher performance and satisfaction.- Regular feedback and clear communication are essential for addressing school
7	2022	Social Work Education	Enhanced empathy and active listening skills among students.- Improved ability to handle difficult conversations and conflicts.- Better engagement and trust with clients.	Role-playing and simulations - Reflective practice- Feedback sessions - Use of video playback for self-assessment	Communication skills training significantly improves students' empathy and listening abilities.- Role-playing and simulations are effective methods for teaching communication skills.- Reflective practice and feedback sessions help reinforce learning and improve skills.- Video playback allows
8	2022	K-12 Education	Improved job performance and productivity.- Enhanced engagement with school community and stakeholders.- Increased transparency in decision-making.- Better relationship and trust with staff and parents.	Use of social media platforms - Real-time communication- Frequent updates- Two-way communication channels	Digital leadership is essential in modern educational settings.- Social media is a crucial tool for effective communication.- Integration of digital tools enhances transparency and stakeholder engagement.- Effective use of ICT tools is associated with better job performance and productivity.
9	2022	Higher Education	Improved teamwork and collaboration skills among students.- Enhanced understanding of different leadership styles and their applications.- Better ability to provide and receive constructive feedback.	Situational Leadership Theory - Timely and constructive feedback- Peer review processes - Active listening and engagement	Leadership training needs to be integrated longitudinally throughout a clinician's career.- Peer feedback is crucial for developing leadership qualities.- Different leadership styles (delegating, supporting, directing, coaching) have specific impacts on team dynamics.- Students displayed reasonable ability in leadership behaviours but need further training.- Effective leadership involves
10	2022	Higher Education	Improved competence in management areas - Enhanced leadership and governance capabilities - Better community engagement and outreach - Increased use of evidence in decision-making - Higher employee motivation and satisfaction - Better crisis and emergency response planning - More collaborative and inclusive leadership practices - Enhanced trust and cooperation among staff	Timely and constructive communication - Mentorship and regular feedback - Collaborative leadership approach - Transparent communication - Evidence-based practice - Crisis communication - Regular feedback sessions	Participants reported increased competence in management areas - Effective leadership and governance involved creating and involving staff in planning, leading to better health outcomes. - Improved community engagement and outreach through targeted plans for less-utilized health services areas. - Use of data to develop health center plans improved planning and operational management. - Effective mentorship played a key role in applying learned skills to real-world situations. - Collaborative leadership led to better staff motivation and involvement in decision-making processes. - Crisis communication and preparedness plans improved emergency response capabilities.

11	2021	Møller, J. E., Kjaer, L. B., Helledie, E., Nielsen, L. F., & Malling, B. V. (2021). Transfer of communication teaching skills from university to the clinical workplace—does it happen? A	Healthcare Education	Enhanced personal communication skills of teachers.- Improved ability to provide feedback to colleagues.- Increased willingness to engage in informal teaching moments.	Role-playing- Small group teaching - Video supervision - Feedback mechanisms	Communication skills learned in university settings are not fully utilized in clinical practice.- Teachers feel more competent in their own communication but face barriers in teaching colleagues.- Informal teaching opportunities are often spontaneous and unstructured.- Hierarchical structures and lack of
12	2021	Harapan, E., & Fitria, H. (2021). The interpersonal communication skills and perceptions of the leadership style on teachers' commitment. Jurnal Iqra': Kajian Ilmu Pendidikan, 6(1), 140-153.	K-12 Education	Increased teacher commitment.- Enhanced job satisfaction.- Improved teacher performance.- Strengthened relationships among teachers and with the principal.	Interpersonal communication - Principal's leadership style - Collaborative meetings - Open communication channels	Interpersonal communication significantly affects teacher commitment.- Teachers' perceptions of the principal's leadership style impact their commitment.- Good communication with colleagues, superiors, and students enhances task performance.- Both communication and leadership style simultaneously influence teacher commitment.
13	2021	Ross, S. J., Sen Gupta, T., & Johnson, P. (2021). Leadership curricula and assessment in Australian and New Zealand medical schools. BMC Medical Education, 21, 1-10.	Higher Education	Improved communication and interpersonal skills.- Enhanced ability to lead and manage teams.- Increased student engagement in leadership roles.- Better conflict resolution and negotiation skills.	Evidence-based practice- Critical reflective practice- Self-management- Ethical decision-making- Communication skills- Inter-professional teamwork	Leadership skills are integrated throughout the medical curricula.- Communication and evidence-based practice are key components of leadership education.- Major gaps exist in financial management and strategic planning training.- Continuous quality improvement processes for leadership education are lacking.- Leadership
14	2020	van Diggele, C., Burgess, A., Roberts, C., & Mellis, C. (2020). Leadership in healthcare education. BMC medical education, 20, 1-6.	Healthcare Education	Enhanced teamwork and collaboration.- Improved patient outcomes.- Increased engagement in educational and clinical settings.- Strengthened interprofessional relationships.	Role modeling- Clear and consistent communication- Active listening- Constructive feedback- Conflict resolution	Effective leadership is essential for high standards of education, research, and clinical practice.- Leaders need to balance autonomy and accountability.- Emphasis on teamwork and collaboration improves outcomes.- Effective communication skills are crucial for successful leadership.- Leadership training should be integrated into healthcare education curricula.
15	2020	Syakur, A., Susilo, T. A. B., Wike, W., & Ahmadi, R. (2020). Sustainability of communication, organizational culture, cooperation, trust and leadership style for lecturer commitments in higher education. Budapest International Research and Critics Institute (BIRCI-Journal):	Higher Education	Improved lecturer commitment.- Enhanced cooperation among faculty members.- Increased trust within the organization.- Better organizational culture and climate.	Sustainability of communication- Organizational culture- Cooperation- Trust-building- Leadership style	Communication and organizational culture significantly impact leadership style and cooperation.- Trust and cooperation are critical for organizational commitment.- Leadership style directly affects communication and organizational commitment.- Effective communication leads to better organizational outcomes and faculty engagement.- Structural Equation Modeling (SEM) shows positive effects of communication on
16	2020	Ismail, K., Sutarman, T., Yudhakusuma, D., & Mayasari, L. I. (2020). The social communication competence as a softskill of the school leadership in Archipelago region. International Journal of Psychosocial Rehabilitation, 24(08), 2020.	K-12 Education	Enhanced teacher performance. Improved teacher-student interaction.- Increased student academic and non-academic achievements.- Better school community relations.	Situational leadership style- Social communication- Feedback mechanisms- Collaborative approach	Social communication skills significantly impact teacher performance.- Principals' situational leadership styles enhance teacher motivation and performance.- Good communication practices lead to improved student achievements.- Effective leadership requires both good communication and situational adaptability.
17	2020	Balanaieva, O., Salashchenko, H., Shurupova, K., Romanchuk, A., & Devos, A. (2020). Development of skills of intercultural communication in the process of studying at higher educational institutions. International Journal	Higher Education	Enhanced intercultural communication skills among students.- Improved adaptability to multicultural environments.- Increased competitiveness in the global job market.- Better professional mobility and	Use of Web 2.0 technologies- Interactive online platforms-> Multicultural engagement activities - Reflective practice	Web 2.0 technologies effectively develop intercultural communication skills.- Students gain better adaptability and flexibility in multicultural contexts.- Effective use of online resources enhances professional mobility.- Intercultural communication skills are critical for global competitiveness.
18	2019	Alward, E., & Phelps, Y. (2019). Impactful leadership traits of virtual leaders in higher education. Online Learning, 23(3), 72-93.	Higher Education	Improved team engagement and cohesion.- Enhanced trust and respect within virtual teams.- Better alignment with institutional goals.- Increased motivation and job satisfaction among team members.	Training and development- Trust-building activities- Emotional intelligence- Communication/team building/technology- Employee recognition and motivation	Virtual leaders need specific competencies to lead effectively.- Trust and emotional intelligence are critical for successful virtual leadership.- Effective communication and team-building strategies are essential.- Virtual leaders often lack formal training but draw on prior experiences.- Recognition and motivation are important for virtual team success.
19	2019	Suherman, A., & Suhardan, D. (2019, March). Interpersonal Communication between Principals and Teachers in Elementary Schools. In 2nd International Conference on Research of Educational	K-12 Education	Improved teacher performance.- Enhanced professional development.- Increased teacher commitment and motivation.- Better understanding of teacher challenges and needs.	Instructional leadership- Professional dialogue- Regular meetings- Open communication channels- Providing feedback and directions	Effective interpersonal communication by principals enhances school quality.- Principals' instructional leadership involves professional dialogue to improve teaching quality.- Regular and open communication helps address teacher challenges.- Principals' communication skills are crucial for teacher development and school
20	2019	Nekongo-Nielsen, H. N., & Ngololo, E. N. (2019). Principals' experiences in the implementation of the English Language Proficiency Programme in Namibia. Journal of Educational Administration, 58(1), 81-95.	K-12 Education	Improved teacher participation in professional development programs.- Enhanced ability to implement educational programs.- Better teacher engagement and morale.- Increased effectiveness in managing school activities.	Instructional leadership- Transformational leadership- Regular communication- Motivational support- Administrative leadership	Effective communication by principals is crucial for successful implementation of professional development programs.- Principals' leadership skills significantly influence teacher participation and learning.- Regular and motivational communication enhances teacher morale and program effectiveness.- Principals need adequate support and training to fulfill their roles effectively.- Principals' leadership styles directly impact the success of educational programs and teacher development.

21	2019	Udin, U., Handayani, S., Yuniawan, A., & Rahardja, E. (2019). Leadership styles and communication skills at Indonesian higher education: Patterns, influences, and applications for	Higher Education	Improved employee satisfaction.- Enhanced job performance.- Increased commitment to organizational goals.- Better teamwork and collaboration.	Verbal communication- Non-verbal communication - Active listening- Motivational language- Clear and concise messaging	Leadership styles and communication skills significantly affect employee satisfaction.- No significant difference in communication skills between male and female leaders.- Effective communication is crucial for successful leadership.- Both task-oriented and relationship-oriented leadership styles positively influence job
22	2018	Chikeleze, M., Johnson, I., & Gibson, T. (2018). Let's argue: Using debate to teach critical thinking and communication skills to future leaders. Journal of Leadership Education, 17(2), 123-137.	Education	Improved critical thinking and decision-making abilities.- Enhanced ability to articulate and defend positions.- Increased confidence in public speaking and communication.- Better engagement and collaboration among students.	Use of academic debate- Role-playing scenarios- Real-time feedback- Structured argumentation frameworks	Debate activities significantly improve communication and critical thinking skills.- Students report increased confidence and ability to engage in discussions.- Debate fosters a deeper understanding of course material.- Critical thinking skills acquired through debate are transferable to real-world situations.- Incorporating debate into curricula can enhance overall educational outcomes.
23	2018	Wikaningrum, T., & Yuniawan, A. (2018). The relationships among leadership styles, communication skills, and employee satisfaction: A study on equal employment opportunity in leadership. Journal of Business	Education	Improved employee communication satisfaction.- Enhanced job satisfaction.- Increased trust and respect within the organization.- Better alignment with organizational goals.	Task-oriented leadership- Relationship-oriented leadership- Motivating language- Empathetic communication	Communication skills and leadership styles significantly affect employee satisfaction.- No significant difference between male and female leaders in communication skills and leadership styles.- Effective communication enhances employee satisfaction with leadership.- Both task-oriented and relationship-oriented leadership styles
24	2017	Tabak, F., & Lebron, M. (2017). Learning by doing in leadership education: experiencing followership and effective leadership communication through role-play. Journal of Leadership Education, 16(2), 199-212.	Education	Improved leader-follower relationship.- Enhanced self-awareness and understanding of implicit assumptions.- Better conflict resolution and problem-solving skills.- Increased engagement and motivation among participants.	Role-playing exercises- Real-time feedback- Reflective practice- Active listening- Managing-up the hierarchy	Role-playing exercises help students understand and predict leader-follower dynamics.- Effective communication is essential in challenging and conflict-laden situations.- Leadership and followership are developed jointly through interaction and communication.- Experiential learning fosters critical thinking, emotional engagement, and lasting retention.- Higher quality teacher-student relations result from interactive and engaging learning methods.
25	2017	Grootenboer, P., & Hardy, I. (2017). Contextualizing, orchestrating and learning for leading: The praxis and particularity of educational leadership practices. Educational Management Administration &	Education	Enhanced understanding of school context and history.- Improved collaboration among staff.- Increased teacher involvement and empowerment.- Better student outcomes in marginalized communities.	Formal and informal leadership practices- Distributed leadership- Democratic decision-making- Reflective practice- Community engagement	Effective leadership is context-specific and responsive to the needs of the school community.- Both formal and informal leadership practices are crucial.- Distributed leadership enhances teacher engagement and collaboration.- Reflective practices and community involvement are essential for socially just leadership.- Leadership practices need responsible leadership.- Open-ended challenges
26	2016	Higham, R. (2016). Communication breakdown: How conflict can promote responsible leadership in students. School Leadership & Management, 36(1), 96-112.	Education	Enhanced understanding of leadership through conflict.- Improved ethical and responsible decision-making.- Increased self-awareness and self-reflection.- Better teamwork and collaboration skills.	Open-ended, difficult group tasks- Pedagogy of challenge- Reflective practice- Dialogic and existentialist theories- Distributed and authentic leadership	Reflection on difficult experiences promotes leadership development.- Responsible leadership involves ethical responses to differences.- Leadership education should integrate unstructured and challenging tasks to build resilience and
27	2015	Ariratana, W., Sirisooksrip, S., & Ngang, T. K. (2015). Development of leadership soft skills among educational administrators. Procedia-Social and Behavioral Sciences, 186,	Education	Improved organizational awareness.- Enhanced staff development.- Increased collaboration and teamwork.- Better management of interpersonal relationships.	Use of technology to monitor and evaluate teaching- Promotion of teamwork- Healthy interpersonal relationships- Action research workshops- Mentoring and	Leadership soft skills are crucial for educational administrators.- Communication skills are vital for improving teachers' attitudes and behaviors.- Effective use of technology and interpersonal skills enhance organizational efficiency.- Development of leadership soft skills is associated with positive
28	2015	Tan, S., Smith, B. A., & O'Halloran, K. L. (2015). Online leadership discourse in higher education: A digital multimodal discourse perspective. Discourse & Communication, 9(5), 559-584.	Higher Education	Enhanced understanding of leadership styles.- Improved engagement with staff and stakeholders.- Better adaptation to organizational changes.- Increased transparency and accessibility of leadership	Multimodal communication (videos, blogs)- Use of digital tools for communication- Social semiotic theory- Critical discourse analysis	increasingly mediated online.- Multimodal discourse analysis reveals different leadership styles and approaches.- Online communication can both enhance and complicate leadership effectiveness.- The study highlights the importance of integrating digital tools in leadership
29	2012	Ruiz-Gallardo, J. R., López-Cirugeda, I., & Moreno-Rubio, C. (2012). Influence of Cooperative Learning on Students' Self-Perception on Leadership Skills: A Case Study in Science	Higher Education	Enhanced self-perception of leadership skills.- Improved teamwork and communication.- Increased decision-making capabilities.	Cooperative Learning- Team-based activities- Reflective practice	Cooperative learning significantly improves students' self-perceived leadership skills.- Practical exercises in teamwork and communication are essential for skill development.
30	2012	Male, T., & Palaiologou, I. (2012). Learning-centred leadership or pedagogical leadership? An alternative approach to leadership in education contexts. International Journal of	Higher Education	Enhanced leadership skills through reflective practice.- Improved team collaboration.- Increased ability to lead educational initiatives.	Reflective practice- Action research- Leadership workshops	Reflective practice is essential for developing leadership skills.- Engaging in action research projects fosters leadership and collaboration skills.- Leadership workshops provide practical insights and skills.

Figure 4.

Overview of the selected studies, presenting the field of activity, leadership communication skills, applied communication strategies, and key research findings.

3.1. Sector

From the analysis of the data, it is evident that the majority of articles focus on Higher Education, followed by Primary and Secondary Education and General Education (Figure 5). Health education and social work are mentioned in less detail, suggesting possible discrepancies in the literature that could be further explored. The focus on different topics demonstrates the complexity and breadth of the influence of communication skills on leadership in different educational sectors.

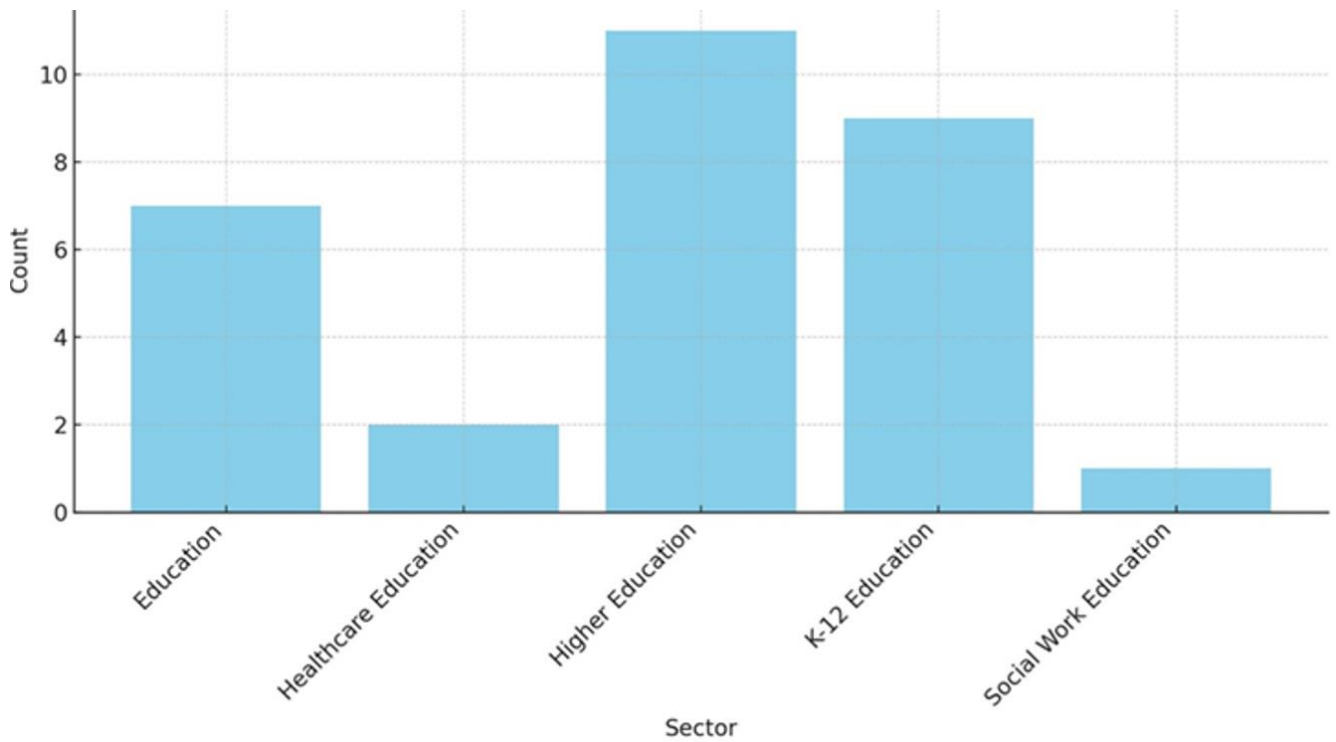


Figure 5.
Number of entries in each sector.

In particular, the Higher Education sector has 11 articles in its total articles. These articles discuss the communication skills of college leaders and the impact of these skills on educational success and student satisfaction. There are two articles in the Health Education field. They delve into communication competencies of healthcare leaders in educational settings and how they contribute to the education of healthcare professionals. Results indicate that communication skills for leaders can improve quality of education— as well as the professional development of healthcare students. The article indicators are 11 and 14. In Social Work Education, there is only one article. Two articles are found in the Health Education field. They delve into the communication competencies of healthcare leaders in educational settings and their contributions to educating healthcare professionals, with results indicating that leader communication skills can enhance quality education and professional development for healthcare students. One of the article indicators is 11 while the other is 14. The field of Social Work Education has only one article.

This article explores the communication skills of social work leaders and their impact on other professionals in the field. This article demonstrates that effective communication skills are vital to effectively assist social workers and in order to improve services provided to vulnerable populations. The index of the article is 7.

3.3. *The Impact of Leader's Communication*

Analysis of the impact of leader communication demonstrates a variety of benefits and positive outcomes across many disciplines and educational institutions. The articles discussed demonstrate how leaders' communication skills can have an impact on community cohesion, teacher effectiveness, employee satisfaction, and organizational effectiveness (Figure 6).

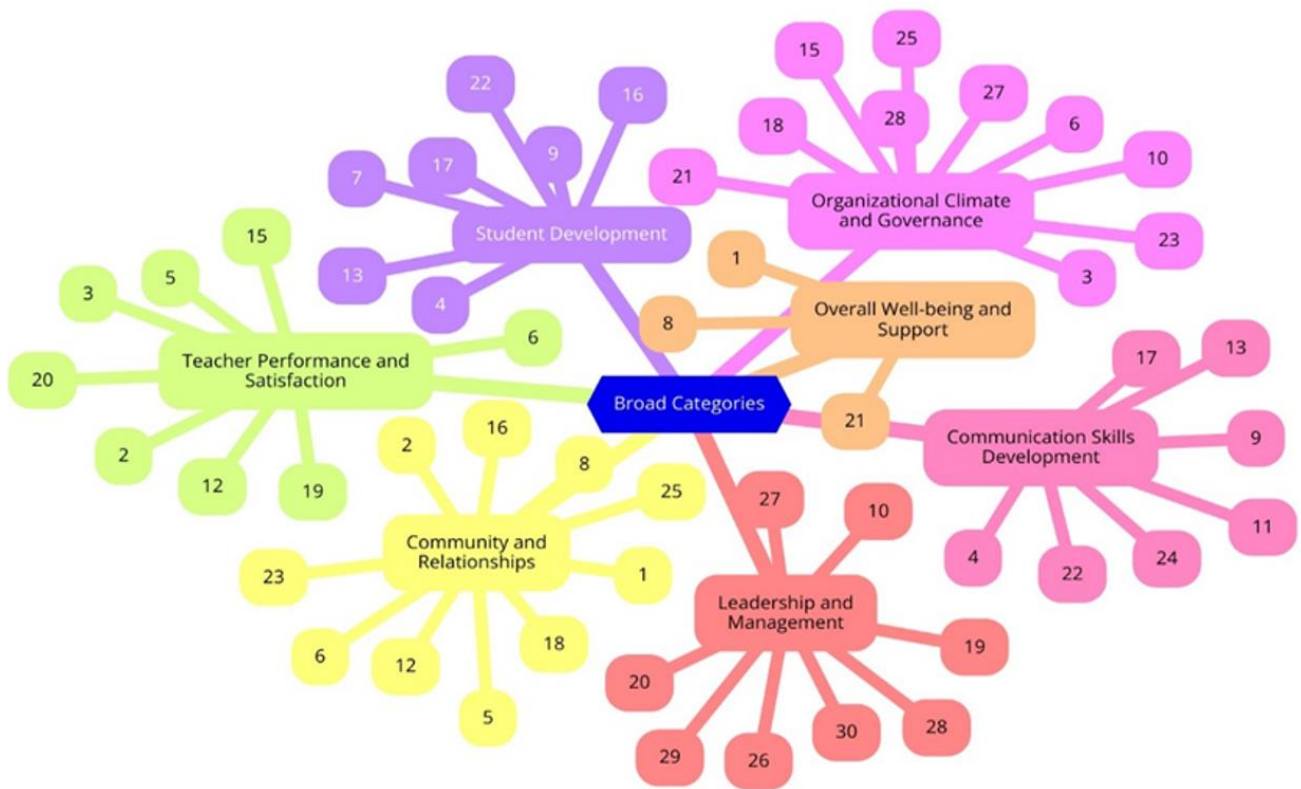


Figure 6.
Impact of Leader’s Communication.

Community and Relationships: Increasing community solidarity and strengthening relationships is one of the most important effects of leaders' communication skills. Leadership communication skills contribute significantly to improving school-community relationships by increasing trust and support among students, staff, and families (Articles 1, 2, 5, 6, 8, 12, 16, 18, 23, 25). Effective communication by leaders promotes a positive relationship between teachers and the principal, which creates an atmosphere of collaboration.

Teacher Performance and Teacher Satisfaction: The communication skills of leaders have a significant impact on teacher performance and satisfaction. Teachers documented increased job satisfaction and improved performance due to clear and ethical communication (Articles 2, 3, 5, 6, 12, 15, 19, 20). These competencies increase teacher commitment and participation in professional development initiatives.

Pupil development: Leaders' communication has a significant impact on student development. Increased communication has the potential to enhance the effectiveness of school governing bodies, teachers and other staff members, and teacher satisfaction (Articles 4, 7, 9, 13, 16, 17, 22). In addition, leadership communication skills facilitate the creation of a supportive environment for students; this environment promotes the development of communication skills in and of itself.

The climate of organisations and their governance: Leadership communication skills are essential for developing a positive environment and strengthening the governance of the organization. Increased organizational climate, improved teacher performance and increased job satisfaction are among the effects of these skills (Articles 3, 6, 10, 15, 18, 21, 23, 25, 27, 28).

The development of communication skills: The communication skills of leadership also have an impact on the development of communication skills between teachers and students. Personal communication skills are enhanced, feedback is provided and a greater willingness to participate in informal teaching moments is part of the benefits (Articles 4, 9, 11, 13, 17, 22, 24).

Leadership and management: Increasing organisational and leadership skills is another important area of influence. Effective communication skills in leadership enhance management's ability to lead and work with the team; this helps to promote a more collaborative and inclusive leadership style (Articles 10, 19, 20, 26, 27, 28, 29, 30).

Total Health and Support: Ultimately, communication skills in leadership help to increase the overall well-being and support of the school community. Increased empathy and listening skills, improved management of difficult conversations, and increased trust and interaction with clients are all examples of the impact (Articles 1, 8, 21).

3.3. Communication Strategies

The different communication strategies used by leaders in different sectors demonstrate a variety of outcomes and methods that contribute to effective leadership and increased performance and satisfaction for stakeholders. These strategies fall into six main categories, as shown in the diagram below (Figure 7).

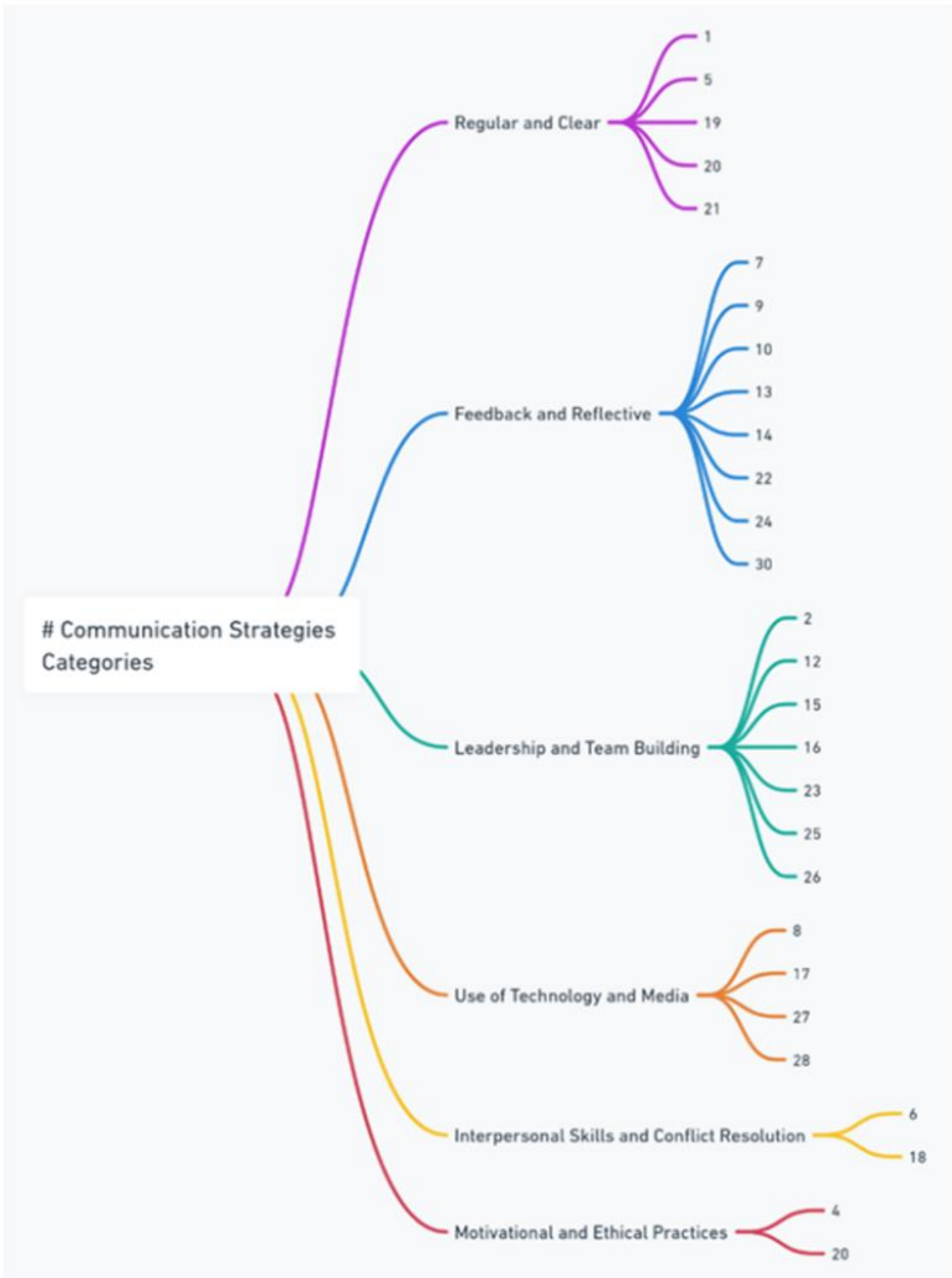


Figure 7.
Communication Strategies Categories.

Continuous and adequate communication: This category includes strategies such as regular and frequent communication, honest and simple messages, use of multiple communication methods (such as email, social media, video), personal connections and feedback mechanisms. These strategies are particularly beneficial in creating an open, transparent environment that facilitates knowledge of what is expected of each participant and the organization's goals and policies

(Articles 1, 5, 19, 20, 21). The use of regular and open communication channels increases trust and understanding among community members, which leads to more effective management and superior performance.

Feedback and reflective practices: Strategies for feedback and reflective practices include the use of simulations, reflective practice, feedback sessions, use of video for self-assessment, timely and constructive criticism, peer review processes, coaching and regular feedback. These methods help leaders create a supportive environment that promotes feedback as an ongoing and structured process that facilitates continuous improvement and skill acquisition (Articles 7, 9, 10, 13, 14, 22, 24, 30). These practices facilitate the creation of a culture of continuous learning and self-improvement.

Leadership and team building: Leadership and team building include tactics such as decision making, relationship building, team leadership, effective communication, personal productivity, coaching and mentoring, and interpersonal communication. The manager's leadership style is also involved. These strategies promote cooperation, trust and effective management within the organization, which creates a dynamic and collaborative environment (Articles 2, 12, 15, 16, 23, 25, 26). The emphasis on collaboration and participative leadership promotes the involvement of all team members in the active pursuit of objectives.

The use of technology and media: The use of technology and media includes the use of social media platforms, real-time communication, regular updates, two-way communication channels, the use of Web 2.0 technology, interactive web platforms and multicultural activities that are interactive. These strategies facilitate communication, collaboration and improved monitoring and evaluation of teaching (Articles 8, 17, 27 and 28). Technology facilitates the transmission of information and the development of relationships through modern methods of communication.

Personal skills and violent resolution: Interpersonal skills and conflict resolution include listening, assertiveness, conflict resolution, problem solving, training and development, confidence building activities, emotional intelligence and employee recognition and motivation. These strategies facilitate effective management of personal relationships and conflicts and promote teamwork and positive emotions within the organization (Articles 6, 18).

Ethical and Motivational Practices: Ethical and motivational strategies and practices include encouraging students to improve their communication skills, social and academic integration into the university community, participation in language learning, institutional support and enhancement of intercultural competencies, self-management, ethical decision-making and leadership support (Articles 4, 20). These strategies facilitate the creation of ethical and supportive leadership that promotes skills development and personal and professional progress.

3.4. The Main Findings of Leaders in the Analysis of Communication

Analysis of the primary findings from the reviewed articles is beneficial in providing information on the impact of leaders' communication skills in different domains and educational settings. The most important categories of animals and their findings follow (Figure 8).

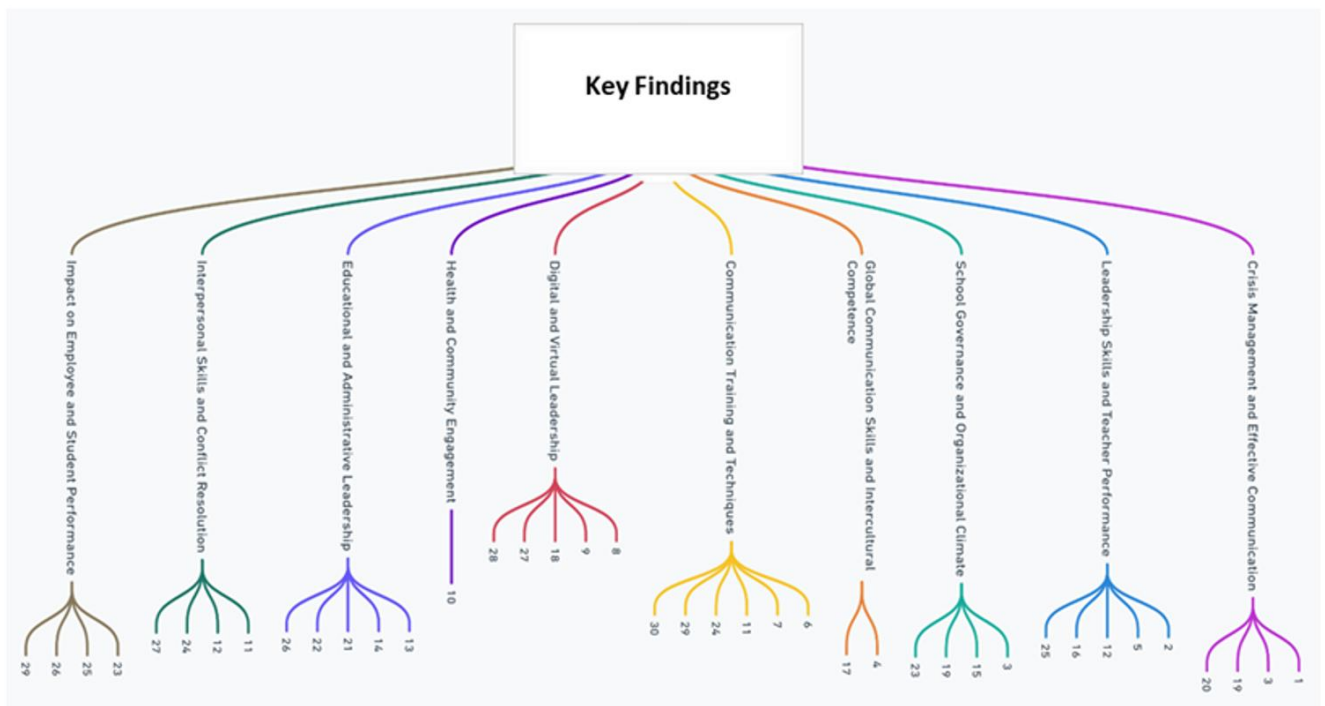


Figure 8.
Key Findings.

Crisis Management and Effective Communication: Effective communication is essential in dealing with crises such as pandemic COVID-19. School leaders have an important role as community members, providing stability and guidance. Honest and open communication builds trust and reduces stress, while regular updates and personal interaction help maintain

engagement and well-being. During crises, leadership requires flexibility and adaptability in communication methods (Articles 1, 3, 19, 20).

The impact of leadership and teachers: There are significant correlations between leadership skills and teacher behavior. Leadership responsibilities have a positive impact on teacher quality, while effective communication and decision making are necessary to enhance teacher competence. Effective school leaders who are demonstrably competent in leadership create a positive teaching environment, with coaching and support being paramount to teacher development and performance (Articles 2, 5, 12, 16, 25).

School governance and the climate of organisations: Effective communication between the headteacher and other stakeholders is vital to the successful running of the school. The practice of using communication chains and channels is responsible for the proper transmission of information. Regular conversations and prompt responses increase the effectiveness of communication, and effective communication practices promote a positive organizational climate and improve staff performance (Articles 3, 15, 19, 23).

Global Communication Skills and Intercultural Understanding: Motivation is vital to the development of global communication competencies. Social and academic integration has a significant impact on the communication skills of students around the world. Institutional support and opportunities have a positive impact on the development of intercultural competencies. Participation in language learning is associated with increased communication skills around the world, and universities need to provide guidance and support in order to achieve the benefits of international experiences (Articles 4, 17).

Education and Communication Techniques: The communication skills of the principal have a significant impact on teacher performance. Effective leadership involves both good communication and the ability to listen and respond to teachers' needs. Principal characteristics and leadership skills are closely related to teacher professional performance. Regular and clear communication between teachers and students promotes a positive school climate and increases teacher satisfaction (Articles 6, 7, 11, 24, 29, 30).

Leaders involved in developing digital and virtual leadership: The communication skills of educational leaders are critical to successful school management. Listening, decision-making, and conflict resolution are essential skills for supervisors. Effective communication promotes staff development and positive organizational climate. Communication skills of educational administrators are associated with increased teacher performance and satisfaction. Regular feedback and direct communication are vital in addressing school management issues (Articles 8, 9, 18, 27, 28).

Health and Community Participation: The development of communication skills has a significant impact on pupils' empathy and listening skills. Simulations and role-plays are effective methods of teaching communication skills. Reflective practice and feedback sessions facilitate knowledge enhancement and reinforcement of skills. Watching videos promotes students' self-evaluation and the improvement of communication methods (Article 10).

Educational and administrative leadership: Today's digital leadership is vital for modern educational environments. Social media is essential for effective communication. The use of digital technology increases transparency and promotes stakeholder participation. Effective use of ICT tools is associated with increased performance and productivity in the workplace (Articles 13, 14, 21, 22, 26).

Personal skills and non-violent resolution: Leadership skills training should be long-term and integrated into the career of each clinician. Feedback from peers is vital to the development of leadership skills. Different types of leadership (delegation, support, mentoring and coaching) have different effects on team dynamics. Students demonstrated effective leadership behavior, but need additional instruction. Effective leadership is characterized by clear and concise communication and the ability to adapt to the demands of the situation (Articles 11, 12, 24, 27).

Impact on employee and student performance: Participants reported increased competencies in areas of management. Effective leadership and rule making involves involving staff in the planning process, which will lead to improved health outcomes. Increased community participation and outreach to underserved health areas improves health center planning and oversight. Effective coaching has an important role in utilizing acquired competencies.

4. Conclusion

The current meta-analysis of communication and leadership competencies focuses on 30 studies that explore the essential role of communication in enhancing leadership effectiveness in various educational settings. The studies in this review demonstrate the value of communication skills in enhancing leadership attributes such as motivation, satisfaction, and team performance. Effective communication has been associated with successful management of the relationship between leadership style and organizational outcomes, this association highlights the importance of strategic communication in developing leadership competencies [26]. In addition, leaders need to take charge of crises, improve teacher performance, increase organizational effectiveness, and cultivate global communication skills among students [27].

The data analysis aimed to answer the key questions about the impact of communication on leadership performance and organizational performance, the results showed that communication strategies had a significant impact on the performance of educational institutions, teacher instruction, student development, and overall well-being and support within institutions. These include regular and direct communication, feedback and reflection, leadership and team building, technology and media use, interpersonal skills and conflict resolution, and motivation and ethical behaviour. Findings revealed numerous general themes and patterns which helped to make clear the intricate relationship between communication and leadership—including practical implications of these two important components (the concepts for leadership development and future research).

At the heart of the primary study lies this question: can optimal communication practices boost leadership effectiveness? And the results unveiled point to a solid relationship between a leader's communication finesse and his/her capacity to inspire high levels of engagement and motivation among team members. When we co-opt effective leaders with a knack for communication, they are able to clearly explain an inspiring philosophy plus stoke trust between colleagues while navigating seemingly insurmountable organizational dysfunctions. This finding resonates well with extant literature which places emphasis on the pivotal role played by communication in lifting leadership effectiveness to great heights— leading to desirable positive organizational outcomes [28].

In the meta-analysis, another critical issue emerged: the influence of communication on team behavior and organizational performance. Research synthesis revealed that proper communication is more than just important for fostering a culture of collaboration, innovation, and participation among teams. Leaders developing a culture via effective lines of communication were able to promote unity of purpose in a team plus alignment of individual goals with organizational goals in order to create a productive and creative work environment— which underscores transformative impact of optimal communication on building team chemistry and begetting organizational success [29].

The meta-study also focused on communication's influence on leadership and talent development within organizations. When they acknowledge the pivotal role of communication in improving leadership effectiveness, organizations can develop training programs, coaching sessions, and mentoring for potential leaders that are specifically designed to enhance their communication skills— an act that benefits both the individual leader and the organization as a whole. This fosters organizational transparency in developing leadership skills tailored to individual needs— in addition to promoting general communication for all levels within an organization, which begets collaboration; such a culture has performance orientation more than other cultures [30].

At the end of the day, it is communication's strategic importance that is most important of all to inspire your team, to encourage your team, and to drive them to success. The meta-study has shown how critical a role good (enhancing leadership effectiveness) and successful communication can play in any organization! The research we looked at demonstrated that trust-promoting, stress-reducing and supportive environments are what well-run organizations have— through effective (regular, open) communication. When crises come leaders must be able not only change their plans freely but also keep their staffs' commitment high while caring about every individual's well-being with flexibility in strategies used during these times. Effective teacher instructions stem largely from global communications: they help develop teachers' instructional competencies as well as the overall job satisfaction they derive from their work.

Communication. Ultimately and strictly, the most important strategy is this: to inspire your team and encourage them as well; drive them to success. The meta-study has come to explain the critical role that communication plays in leader-enhancing leadership effectiveness (thus) enhancing organizational success. The research studied has shown that trust can be promoted through effective regular open communication— also reducing stress, fostering support. In crises leadership needs flexibility with their communications: they must find a strategy that will maintain commitment while promoting well-being. But effective communication does more than this alone: it also significantly impacts teachers' instructional competencies and management of their work, plus job satisfaction overall.

More so, global communication skills are increased among students (not forgetting intercultural knowledge) through motivation as well as social inclusion supported by institutions.

Teachers need transparency which should be promoted by education leaders— this can only be achieved if teacher effectiveness is enhanced through communication training. The importance of listening, assertiveness, and conflict resolution for training administrators in order to improve staff development and establish an environment favorable for learning cannot be overstated. Leadership is about delivering a message that is clear and concise while being able to adapt and take part in reflection practices that would promote positivity within the learning space.

The results of this analysis are meant for scholars and practitioners to gain insight into leadership as well as the leader behavior within an educational institution organization. And thus it adds a spark to the ongoing debate about leadership and behavior in such institutions. The results show — vividly — how effective communication can transform the outcome of leaderships, by creating employee engagement and organizational growth. This analysis, which synthesized data from several studies, underscores the need for leaders and future leaders, scholars, and practitioners to take innovation leadership skills seriously— with a view of establishing a culture that breeds innovation and success in their organizations.

To delve into the finesse of communication strategies in varying educational settings and how they affect leadership efficacy over time, it is suggested that further research be conducted. The complex interplay between communication and leadership should continue to be the focus of future research in this area because it will offer valuable insights for developing effective leadership skills— and strategy — with the organization contexts constantly evolving in an unsteady business landscape. Consider recommendations from this recent review on a relationship-focused approach to leadership development, which integrates adaptive strategy based on situational specifics, complexity thinking principle, and system psychodynamics perspective.

References

- [1] J. M. Burns, *Leadership*. New York: Harper & Row, 1978.
- [2] B. M. Bass and M. Bass Bernard, *Leadership and performance beyond expectations*. New York: Free press, 1985.
- [3] B. M. Bass and R. E. Riggio, *Transformational leadership*. Mahwah, NJ: Psychology Press, 2006.
- [4] N. Spilioti and A. Anastasiou, "European structural and investment funds (ESIFs) and regional development across the European union (EU)," *Journal of Risk and Financial Management*, vol. 17, no. 6, p. 228, 2024. <https://doi.org/10.3390/jrfm17060228>

- [5] E. Samara, P. Kilintzis, N. Komninos, A. Anastasiou, and G. Martinidis, "Assessment of smart technologies in regional innovation systems: A novel methodological approach to the regionalisation of national indicators," *Systems*, vol. 12, no. 1, p. 12, 2024. <https://doi.org/10.3390/systems12010012>
- [6] C. Papageorgiou, A. Anastasiou, and A. Dermatis, "A brief assessment of compliance with the "Europe 2020" strategy criteria of member states of the European Union," *Review of Economic and Business Studies*, vol. 14, no. 2, pp. 205–221, 2021.
- [7] K. Kounetas, A. Anastasiou, P. Mitropoulos, and I. Mitropoulos, "Departmental efficiency differences within a greek university: An application of a DEA and tobit analysis," *International Transactions in Operational Research*, vol. 18, no. 5, pp. 545-559, 2011. <https://doi.org/10.1111/j.1475-3995.2011.00813.x>Digital
- [8] K. Leithwood and D. Jantzi, "Transformational leadership," *The Essentials of School Leadership*, vol. 31, p. 43, 2005.
- [9] C. Day, Q. Gu, and P. Sammons, "The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference," *Educational Administration Quarterly*, vol. 52, no. 2, pp. 221-258, 2016. <https://doi.org/10.1177/0013161X15616863>
- [10] G. B. Graen and M. Uhl-Bien, "Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective," *The Leadership Quarterly*, vol. 6, no. 2, pp. 219-247, 1995. [https://doi.org/10.1016/1048-9843\(95\)90036-5](https://doi.org/10.1016/1048-9843(95)90036-5)
- [11] C. R. Gerstner and D. V. Day, "Meta-analytic review of leader-member exchange theory: Correlates and construct issues," *Journal of Applied Psychology*, vol. 82, no. 6, p. 827, 1997.
- [12] B. Erdogan and T. N. Bauer, "19 leader-member exchange (LMX) theory: The relational approach to leadership," *The Oxford Handbook of Leadership and Organizations*, p. 407, 2014.
- [13] H. Giles and T. Ogay, *Communication accommodation theory*. In B. B. Whaley & W. Samter (Eds.), *Explaining communication: Contemporary theories and exemplars*. Mahwah, NJ: Lawrence Erlbaum Associates, 2007.
- [14] C. Gallois, T. Ogay, and H. Giles, "Communication accommodation theory," *Theorizing About Intercultural Communication*, pp. 121-148, 2005.
- [15] A. Harris and M. Jones, "Leading schools as learning organizations," vol. 38, ed: Taylor & Francis, 2018, pp. 351-354.
- [16] D. Goleman, *Leadership that gets results in leadership perspectives*. New York: Routledge, 2017.
- [17] F. Herzberg, "One more time: How do you motivate employees?," *Harvard Business Review*, vol. 46, no. 1, pp. 53-62, 1968.
- [18] R. C. Mayer, J. H. Davis, and F. D. Schoorman, "An integrative model of organizational trust," *Academy of Management Review*, vol. 20, no. 3, pp. 709-734, 1995.
- [19] K. T. Dirks and D. L. Ferrin, "Trust in leadership: Meta-analytic findings and implications for research and practice," *Journal of Applied Psychology*, vol. 87, no. 4, p. 611, 2002.
- [20] B. W. Tuckman, "Developmental sequence in small groups," *Psychological bulletin*, vol. 63, no. 6, pp. 384-399, 1965. <https://doi.org/10.1037/h0022101>
- [21] A. N. Kluger and A. DeNisi, "The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory," *Psychological Bulletin*, vol. 119, no. 2, p. 254, 1996.
- [22] R. Wittorski, *Professionalisation and the development of competences in education and train-ing; Cohen-Scali, V., Ed.* Opladen/Berlin, Germany; Toronto, ON, Canada: Barbara Budrich Publisher, 2012.
- [23] K. Pussegoda *et al.*, "Systematic review adherence to methodological or reporting quality," *Systematic reviews*, vol. 6, no. 1, p. 131, 2017.
- [24] L. Shamseer, L. Weeks, L. Turner, S. Straus, J. Grimshaw, and D. Moher, "Identifying barriers to uptake and implementation of the CONSORT statement," in *Proceedings of the Seventh International Congress on Peer Review and Biomedical Publication, Chicago, IL, USA, 8–10 September 2013*, 2013.
- [25] A. Anastasiou, K. Kounetas, P. Mitropoulos, and Y. Mitropoulos, "Evaluating efficiency of university academic departments," *Journal of Interdisciplinary Mathematics*, vol. 10, no. 3, pp. 409-431, 2007. <https://doi.org/10.1080/09720502.2007.10700502>
- [26] I. T. Sanusi, S. S. Oyelere, H. Vartiainen, J. Suhonen, and M. Tukiainen, "A systematic review of teaching and learning machine learning in K-12 education," *Education and Information Technologies*, vol. 28, no. 5, pp. 5967-5997, 2023.
- [27] L. R. Men, J. Jin, R. Mitson, and M. Vielledent, *Leadership communication during turbulent times. In Research handbook on strategic communication*. Cheltenham, UK: Edward Elgar Publishing, 2022.
- [28] L. de Lange and D. Mulder, "Towards more effective leadership communication," *Communicare: Journal for Communication Sciences in Southern Africa*, vol. 36, no. 1, pp. 27-46, 2017.
- [29] P. J. Salem, *Transformative organizational communication practices. In Research Anthology on Digital Transformation, Organizational Change, and the Impact of Remote Work*. Hershey, PA: IGI Global, 2021.
- [30] S. Shrivastava, J. Martinez, D. J. Coletti, and A. Fornari, "Interprofessional leadership development: Role of emotional intelligence and communication skills training," *MedEdPORTAL*, vol. 18, p. 11247, 2022.