

The Role of Transformational Leadership in Enhancing Engagement and Motivation of Millennial Employees

Peran Kepemimpinan Transformasional dalam Meningkatkan Keterlibatan dan Motivasi Karyawan Milenial

Marezza Putri Anggreani¹, Suyanto²

ASMI Citra Nusantara Banjarmasin¹, STIE Indonesia Banjarmasin²

*marezzamab@gmail.com¹, suyantojamkrida@gmail.com²

*Corresponding Author

ABSTRACT

The millennial generation who now dominates the workforce has different communication preferences, especially in the digital era, which requires adaptation of leadership styles, in particular transformational leadership. This research aims to analyze the influence of transformational leadership towards digital communication preferences and levels of engagement of millennial employees, using the approach Systematic Literature Review which is based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISM). The research results show that the internal dimensions of transformational leadership, like individualized consideration And intellectual stimulation, significantly influences millennial employee engagement through digital communication platforms. The practical implications of this research provide insights for HR managers to better understand the communication preferences of the millennial generation and adapt leadership styles to increase employee engagement and retention in a work environment that continues to develop digitally.

Keywords: Transformational Leadership, Digital Communication Preferences, Millennials, Employee Engagement, Systematic Literature Review

ABSTRAK

Generasi milenial yang kini mendominasi angkatan kerja memiliki preferensi komunikasi yang berbeda, khususnya di era digital, yang menuntut adaptasi gaya kepemimpinan, khususnya transformational leadership. Penelitian ini bertujuan untuk menganalisis pengaruh transformational leadership terhadap preferensi komunikasi digital dan tingkat engagement karyawan milenial, menggunakan pendekatan Systematic Literature Review yang berpedoman pada Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Hasil penelitian menunjukkan bahwa dimensi-dimensi dalam transformational leadership, seperti individualized consideration dan intellectual stimulation, secara signifikan mempengaruhi engagement karyawan milenial melalui platform komunikasi digital. Implikasi praktis dari penelitian ini memberikan wawasan bagi manajer SDM untuk lebih memahami preferensi komunikasi generasi milenial dan menyesuaikan gaya kepemimpinan guna meningkatkan engagement dan retensi karyawan di lingkungan kerja yang terus berkembang secara digital.

Kata Kunci: Transformational Leadership, Digital Communication Preferences, Millennials, Employee Engagement, Systematic Literature Review

1. Introduction

Transformational leadership is increasingly recognized as an important approach in increasing employee engagement, motivation and commitment in organizations. This leadership style is characterized by its ability to inspire a shared vision, stimulate innovative thinking, and provide individual attention to team members, which collectively contributes to a positive organizational culture and improved employee performance. Research shows that transformational leadership significantly influences employee engagement, especially in dynamic and digital work environments, where adaptability and innovation are essential (Hayati, 2022; Milhem et al., 2019; Marinda et al., 2018).

The emergence of digital transformation has changed the dynamics of communication in the workplace, especially among the millennial generation who are accustomed to fast and technology-based interactions. This generation prefers digital communication tools, such as instant messaging and collaboration platforms, compared to more formal, traditional communication methods. Therefore, leaders must adapt their leadership styles to suit these communication preferences, to maintain high levels of engagement and motivation among millennial employees (Mariah, 2023; Besieux et al., 2015; Lai et al., 2020). Transformational leadership, by leveraging digital communications, can convey personal concerns and strengthen shared goals, which in turn builds deeper relationships and increases engagement (Tims et al., 2010; Mirda & Prasetyo, 2022).

In addition, the role of transformational leadership in facilitating effective interactions through digital media is very important. Leaders who apply individualized consideration can utilize digital platforms to provide personalized support, while inspirational motivation can be delivered through virtual media to strengthen team cohesion. This adaptability not only increases employee engagement, but also meets the expectations of a workforce that prioritizes flexibility and innovation (Patricia et al., 2020; Hayati et al., 2014; Aferi et al., 2023). Empirical research shows that transformational leadership has a positive correlation with employee engagement, indicating that leaders who employ this leadership style can significantly improve organizational outcomes by cultivating a motivated and committed workforce (Marinda et al., 2018; Tims et al., 2011; Abasilim et al., 2019).

Overall, transformational leadership is a crucial factor in increasing employee engagement and performance, especially in the context of workplaces that have undergone digital transformation. Leaders who understand and adapt to millennial employees' communication preferences can leverage this leadership style to create a more engaged and productive workforce, which will ultimately drive organizational success in an increasingly competitive environment (Kurland et al., 2010; Breevaart et al., 2015; Caniels et al., 2018).

The relevance of this research is even stronger in the post-pandemic era, where digitalization has become a major aspect of almost all work activities. Various organizations implement *remote working* or *hybrid working*, which increases the use of digital communication media as the main way of interaction between employees. This transformation requires leaders to not only understand the technical needs in digital communication, but also how the millennial generation's communication preferences can be maximized through an adaptive leadership style.

This research becomes increasingly important considering that the millennial generation now dominates the global workforce and is predicted to continue to play an important role in the next few decades. Organizations that want to retain millennial employees must understand and accommodate their preferences, including in digital communication aspects. The failure of leaders to adapt their leadership style according to digital communication needs can cause a decrease in engagement and motivation, which ultimately has a negative impact on employee productivity and loyalty.

The main problem in this research is the lack of in-depth understanding of how transformational leadership can influence digital communication preferences and engagement of millennial employees. Most previous research only focuses on the impact of transformational leadership in general contexts or on an intergenerational workforce, but rarely examines how transformational leaders can adapt to millennials' specific digital communication preferences. In addition, many studies do not consider the important differences between direct communication and digital communication, making it less relevant for modern work contexts that rely heavily on digital media.

The main aim of this research is to explore how transformational leadership can influence the digital communication patterns that millennials prefer, as well as how this affects their level of engagement. This research aims to provide an in-depth understanding of how

leaders can use a transformational leadership style to adapt to digital communication preferences, so as to increase engagement and motivation of millennial employees more effectively.

Based on the background and problems that have been identified, then research questions (research questions) to be answered in this study are: "How does transformational leadership influence the digital communication preferences and engagement levels of millennial employees?"

This question aims to investigate:

1. What aspects of transformational leadership, such as individualized consideration or inspirational motivation, has a particular impact on millennials' digital communication preferences?
2. How millennial digital communication preferences, such as the use of instant messaging applications or collaborative platforms, play a role in increasing engagement in the workplace.
3. What factors can moderate the relationship between transformational leadership and millennial engagement, for example the role of organizational culture or the digital communication policies implemented.

By answering these questions, this research seeks to enrich the literature on transformational leadership and the millennial generation with new insights regarding the integration of leadership with digital communication technology.

2. Research Methods

2.1. Research Design

This research uses a Systematic Literature Review (SLR) approach, which aims to compile, analyze and synthesize various research related to the topic of transformational leadership in the context of digital communication preferences and engagement of millennial employees. This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure rigor, transparency, and replicability of procedures. The PRISMA methodology will be used to identify, select and analyze literature systematically, so that the results obtained can provide clear insight into the relationship between transformational leadership and millennial digital communication preferences.

Each stage of article search, selection and analysis will be documented in detail, including clear inclusion and exclusion criteria, to build a credible research framework. The analysis will be carried out thematically, identifying main patterns related to three main variables: transformational leadership, digital communication preferences, and millennial employee engagement.

2.2. Article Search and Selection Protocol

1. Main Database

This research used several major academic databases to ensure the quality and relevance of the articles found, including:

- Scopus: As one of the largest databases covering multidisciplinary research, relevant to the topics of leadership, management and millennial generation studies.
- Web of Science: To find research articles that have a high impact and have gone through rigorous peer-review.
- ProQuest: To access relevant literature from various journals, especially those that focus on aspects of communication and engagement in the workplace.

The aim of selecting this database is to ensure that the articles found have high relevance and have gone through a peer-review process, thereby increasing the quality and validity of the findings.

2. Keywords and Search Strategy

To maximize the relevance of search results, specific keyword combinations relevant to the research topic have been designed, such as:

- Transformational leadership
- Digital communication preferences
- Millennials
- Employee engagement

These keyword variations also include the use of synonyms and related terms, as well as boolean operators (AND, OR) to expand or narrow the search. Examples of keyword combinations used in searches include:

- ("Transformational leadership" AND "millennials" AND "employee engagement")
- ("Digital communication" AND "leadership" AND "millennials")

3. Inclusion and Exclusion Criteria

To maintain research focus and quality, specific inclusion and exclusion criteria were established:

- **Inclusion**
 - Articles published in the last 10 years to ensure data that is relevant to digitalization trends and the development of the millennial generation.
 - Studies examining transformational leadership in the context of modern organizations, as well as its relationship to digital communication preferences or employee engagement.
 - Research is available in English, to avoid language barriers and increase accessibility to international literature.
- **Exclusion:**
 - Studies that do not have direct relevance to transformational leadership or do not focus on the millennial generation.
 - Articles that are comments, editorials, or summaries of literature without empirical analysis.
 - Research that focuses on sectors or geographical contexts that is not appropriate to the aims of this study, for example, that focuses on the basic education sector or regions with organizational cultures that are very different from the global context.

4. PRISMA Procedure

The PRISMA procedure will be visualized through a PRISMA flow diagram to show the results of each stage of the article search and selection process:

- Identification Stage: The diagram will show the number of initial articles found from searching the main database.
- Screening Stage: The process of eliminating articles based on the title and abstract, by recording the number of articles excluded because they did not meet the inclusion criteria.
- Eligibility Stage: Further selection is based on a thorough review of the article content, with additional exclusion reasons such as irrelevance or low quality.
- Inclusion Stage: Final articles selected for in-depth analysis.

Each stage in the PRISMA flow chart will be accompanied by reasons for exclusion, such as studies that are irrelevant or do not meet adequate methodological standards, to ensure transparency in the literature selection process.

5. Data Analysis Methods

A thematic analysis approach will be used to identify key themes related to transformational leadership, digital communication preferences, and millennial employee engagement. This process involves several stages, namely:

- Initial Coding: Each article will be coded based on relevant themes, such as “millennial engagement,” “transformational leadership in digital communications,” or “the role of communication preferences on job satisfaction.”
- Identify Main Themes: Themes that appear repeatedly will be grouped and identified as main themes. For example, key themes may include the role of transformational leadership in enhancing digital collaboration, leaders' adaptation to millennial communication preferences, or the impact of digital media use on engagement.
- Analysis and Synthesis of Findings: Each main theme will be analyzed to understand patterns, relationships, or gaps in the literature related to transformational leadership and millennial employee engagement. This synthesis process will combine the results from various articles to produce a comprehensive and complementary understanding of the topic.
- Interpretation of Findings: The thematic analysis will conclude with an interpretation of the findings relevant to the research question. The resulting findings are expected to provide new insights into how leaders can adapt their transformational leadership style to increase millennial employee engagement in the context of digital communication. This interpretation will also provide further directions for future research.

This thematic analysis method will ensure that the study results can identify main patterns and themes and answer research questions in an in-depth and comprehensive way.

3. Results

3.1. Characteristics of Reviewed Studies

The studies reviewed in this systematic literature review cover various characteristics, providing a broader context regarding the role of transformational leadership in influencing digital communication preferences and engagement of millennial employees.

- Types of research: The majority of studies identified were quantitative research evaluating the relationship between transformational leadership style and employee engagement, with some qualitative research exploring the direct experiences of millennial employees. Mixed-method research is also found, but in limited numbers.
- Geographic Area: The articles reviewed come from various regions, including the United States, Europe, and several Asian countries such as China and India. This shows global coverage, although research from specific regions, such as Latin America or Africa, is still limited.
- Industry Under Study: Most studies focus on the information technology, financial services and creative industries sectors. These sectors are considered to have a high reliance on digital communications and employee engagement, especially involving the millennial generation. Traditional industries such as manufacturing and construction are underrepresented, indicating a potential gap for future study.
- Methodological Approach: Common methodological approaches used in these studies include employee surveys to measure engagement levels and communication preferences, as well as in-depth interviews that explore individual perceptions of leadership styles and experiences with communicating digitally.

3.2. Key Findings on the Effects of Transformational Leadership

From the literature analysis, several main themes related to transformational leadership and its influence on millennial digital communication patterns were found. These

themes provide deep insight into how specific aspects of transformational leadership can drive engagement through millennials' digital communication preferences.

1. Individualized Consideration

- A leadership style that emphasizes personal attention to each employee (individualized consideration) turns out to have a significant influence in encouraging a preference for more personal and direct communication. Leaders who actively provide personal support via digital platforms, such as instant messaging applications or email, are considered capable of increasing millennial employee loyalty and engagement.
- Studies show that millennial employees are more likely to be motivated when they feel cared for and treated as unique individuals, and this is often accommodated through a personalized digital communication approach.

2. Intellectual Stimulation

- Intellectual stimulation in transformational leadership apparently has a role in encouraging engagement through collaboration-based digital communication platforms, such as project management applications or discussions on company internal social media. Leaders who encourage employees to think critically and innovatively find that the use of collaborative communication technology strengthens new ideas and accelerates the implementation of ideas from millennial employees.
- Digital literacy and collaborative skills honed by intellectual stimulation also create a more inclusive discussion culture and increase intrinsic motivation for employees to continue contributing.

3. Inspirational Motivation

- This theme shows how transformational leaders can provide motivation through inspirational messages delivered via various digital platforms, such as internal social media and video conferences. This inspiration has proven important in creating a positive work atmosphere, where millennial employees feel motivated to achieve common goals.
- Effective application of inspirational motivation can reduce stress levels and increase job satisfaction, especially in a flexible and collaborative work environment.

4. The Influence of Transformational Leadership on Engagement through Digital Communication

Transformational leadership has been proven to have a strong impact on millennial employee engagement, especially through their preference for certain digital communication media. Here are some key findings:

- **Company Internal Social Media:** Many studies show that internal social media, such as intranets or company-specific platforms, provide effective channels for leaders to convey the company's vision and goals. Millennial employees respond well to this internal social media, feeling more connected to the organization and collaborating more easily with colleagues.
- **Instant Messaging and Email Applications:** Direct engagement between leaders and employees via instant messaging applications, such as WhatsApp or Slack, allows for faster and more informal communication. Studies show that this platform helps create trust and mutual respect, which ultimately supports millennial engagement.
- **Cloud Based Collaboration:** Cloud-based collaborative platforms, such as Google Workspace or Microsoft Teams, are often utilized by transformational leaders to increase engagement. Leaders who actively collaborate on this platform create a sense of openness and inclusiveness that millennial employees respond positively to.

5. Gaps in the Literature and Issues Identified

Several significant research gaps were found in the existing literature:

1. Lack of Cross-Cultural Studies

- There is a lack of research exploring how the effects of transformational leadership on millennials' digital communication preferences and engagement may differ across cultures. Communication preferences, for example, can be strongly influenced by cultural norms, but cross-cultural studies comparing Asian, European, or North American countries are rare.

2. Differences by Industry

- Many studies focus on industries that are already familiar with digital technology, such as the information technology and financial services sectors. Meanwhile, traditional sectors such as manufacturing and the public sector have not been widely researched in the context of transformational leadership and digital engagement, raising the question of whether the same leadership approach will be effective in these sectors.

3. Influence the Specifics of Digital Communication Platforms

- Although there is literature that discusses various types of digital platforms, research that explores the specific effects of each communication platform on millennial employee engagement and preferences is still lacking in detail. Thus, not much is known about whether certain platforms, such as social media or messaging applications, are more effective in increasing engagement than other platforms.

4. The Long-Term Impact of Transformational Leadership in Digital Engagement

- The existing literature mostly highlights the short-term results of applying transformational leadership to millennial engagement through digital communications. However, longitudinal studies evaluating long-term impacts, for example over several years, are rare. This leads to a gap in understanding the continued effectiveness of transformational leadership in the digital era.

The results of this study provide a deeper understanding of how transformational leadership can be adapted to the digital communication preferences of the millennial generation and encourage employee engagement effectively. This gap analysis also provides a basis for future research to fill existing gaps and expand the application of transformational leadership to more diverse cultural and industrial contexts.

4. Discussion

4.1. Interpretation of Findings

In this study, the main findings show that transformational leadership (transformational leadership) can play an important role in encouraging millennial employee engagement through their preference for digital communication. Based on transformational leadership theory, this leadership style relies on four main dimensions: idealized influence, inspirational motivation, intellectual stimulation, And individualized consideration, each of which is capable of increasing employee motivation and engagement in unique ways. This finding is closely related to the research question is, "How does transformational leadership

influence the digital communication preferences and engagement levels of millennial employees?"

- **The Relationship between Transformational Leadership and Engagement**

The relationship between transformational leadership and employee engagement has attracted significant attention in recent research, especially in the context of adapting leadership styles to meet the preferences of the millennial generation. Transformational leaders who employ individualized consideration and intellectual stimulation have proven to be highly effective in increasing employee engagement. This is due to their ability to adapt their communication style to suit the informal and digital preferences of the younger generation, which often involves the use of digital platforms such as instant messaging and personal emails as a means of communication (Procházka et al., 2017; Ghadi et al., 2013).

Individualized consideration, which is a key component in transformational leadership, allows leaders to provide personalized attention to their employees. This approach not only strengthens the relationship between leaders and followers, but also contributes to creating a work environment that recognizes and values each employee's unique contributions. Research shows that personalized interactions like this can increase levels of work engagement, as employees feel more valued and understood (Hayati et al., 2014; Schmitt et al., 2016). For example, Hayati et al. found that transformational leadership positively influences work engagement by increasing personal resources, which is very important for creating a proactive and creative workforce (Hayati et al., 2014).

Additionally, the positive relationship between transformational leadership and employee engagement is further supported by evidence showing that leaders who demonstrate transformational behavior can significantly increase the self-efficacy of their followers. This, in turn, mediates the relationship between leadership style and level of engagement (Salanova et al., 2011; Tims et al., 2011). The ability of transformational leaders to inspire and motivate their teams through effective communication and support not only increases engagement, but also promotes a culture of innovation and initiative among employees (Gemeda & Lee, 2020).

Overall, transformational leadership, characterized by individualized consideration and intellectual stimulation, plays an important role in adapting to millennial communication preferences. By creating a work environment that supports and encourages engagement, transformational leaders can increase employee engagement, ultimately leading to better organizational outcomes. This relationship is mediated by factors such as self-efficacy and personal resources, which are critical to developing a motivated and engaged workforce (Mariah, 2023; Islam et al., 2021).

- **The Role of Digital Communication Preferences in Mediating Relationships**

Millennials show distinctive communication preferences, characterized by flexibility, informality and a strong inclination towards digital platforms. This generational shift in how we communicate is most visible in the workplace, where digital tools such as corporate social media, instant messaging apps, and cloud-based collaboration tools have become an important part of building engagement between millennials and their leaders. Research shows that these digital communication channels not only facilitate interaction, but also increase the effectiveness of transformational leadership, which is critical in building trust, collaboration, and motivation among employees (Gachugu, 2023; Sheehan et al., 2020).

Transformational leadership, which emphasizes inspiration and motivation for employees, aligns well with millennials' digital communications preferences. Leaders who use digital platforms effectively can create a more engaging and collaborative environment, which is essential for driving innovation and performance in organizations (Gachugu, 2023; Sheehan et al., 2020). The use of cloud-based tools has been shown to have a significant impact on

collaborative efforts, enabling more frequent and effective communication between team members (Kurniawan et al., 2020; Chan et al., 2019). This is especially relevant in the context of remote work, where digital tools have become vital for maintaining productivity and connection between disparate teams (Hungwe, 2024; Pillen & Eckard, 2022).

In addition, the role of digital leadership is increasingly recognized as a crucial factor in dealing with the complex dynamics of modern organizations. Digital leaders must have competencies that enable them to utilize technology in effective communication and collaboration (Roman et al., 2018; Toit, 2022). This includes an understanding of how to engage team members through digital means, which is especially relevant considering the unique characteristics of millennial workers who thrive in an environment that prioritizes digital flexibility and interaction (Sukmawati, 2024; Maryati & Siregar, 2022). Therefore, the effectiveness of transformational leadership in engaging millennials is significantly enhanced by the strategic use of digital communication tools, which not only serve as instruments, but also as important components of a collaborative culture that drives innovation and performance (Gachugu, 2023; Abedi et al., 2015).

In conclusion, these findings emphasize the importance of adapting leadership styles to meet millennials' digital communication preferences. By adopting transformational leadership through digital channels, organizations can increase engagement, trust, and collaboration, ultimately driving better outcomes in an increasingly digital workplace.

- **Links to Previous Literature**

This finding is consistent with existing literature, which shows that transformational leadership is able to adapt to new communication technology to meet the needs of the millennial generation. However, this research makes a unique contribution by explaining how preferences for certain digital media can mediate the relationship between transformational leadership and engagement. This study enriches existing literature by linking transformational leadership and engagement through digital communication preferences, which has not previously been explored in the context of the millennial generation.

4.2. Implications for HR Practice and Management

Based on these findings, there are several important implications for HR practitioners and management in adapting their leadership styles to be more effective in managing millennial employees:

1. Adapting Leadership Style to Communication Preferences

In the contemporary world of work, understanding the communication preferences of the millennial generation is critical for effective leadership. Millennials tend to prefer digital and collaborative communication methods, which require leaders to adopt a transformational leadership approach that leverages digital platforms. Research shows that effective internal communications significantly increases the engagement and commitment of millennial employees, underscoring the importance of organizations aligning their communications strategies with the expectations of this generation (Prasetya & Kartikawangi, 2021). By leveraging digital tools such as internal social media and collaborative applications, leaders can create an environment of transparency and direct interaction, which is critical for engaging millennial employees (Dema et al., 2023).

Transformational leadership, characterized by an emphasis on communication, collaboration, and inspiration, plays a key role in this context. Research shows that transformational leaders who can communicate and interact effectively with their teams can build trust and support, which is critical for successful digital governance (Dema et al., 2023). In addition, the implementation of digital leadership practices is closely related to improving organizational performance through digital transformation, which highlights the importance of

leaders who can direct and anticipate the changes brought by digitalization (Senadjki, 2023). This finding is in line with research results that show a positive relationship between digital leadership and the ability to encourage innovation and adaptability in organizations (Khaw et al., 2022).

Furthermore, the role of leadership in a digitalized world is not just limited to communication; Leadership also includes the ability to inspire and guide employees through digital means. Research shows that leaders who adopt digital-based approaches can significantly improve employee well-being and performance, especially among millennials who thrive in environments that support collaborative learning and innovation (He et al., 2019). The emphasis on ethical leadership and two-way communication further strengthens the need for leaders to be transparent and supportive, which in turn increases employee engagement and satisfaction (Cortellazzo et al., 2019).

In conclusion, effective engagement of millennial employees through digital platforms is a multifaceted challenge that requires leaders to adopt both transformational and digital leadership approaches. By creating a culture of collaboration and transparency, leaders can not only meet millennial communication preferences, but also drive organizational success in an increasingly digital landscape.

2. Strategies for Increasing Engagement through Digital Communication

To increase millennial employee engagement, organizations can adopt proactive transformational leadership strategies, especially in the context of the digital environment. Transformational leadership is characterized by leaders who inspire and motivate employees to achieve common goals, which is critical for creating a sense of engagement and purpose among millennial workers. This demographic is highly responsive to leadership styles that emphasize communication and engagement via digital platforms, such as instant messaging and social media (Sari, 2023; Nurhatisyah et al., 2021).

Research shows that digital leadership plays a critical role in driving organizational performance through effective employee engagement strategies. For example, leaders who utilize digital tools to deliver inspirational messages can significantly increase employee motivation and productivity (Senadjki, 2023; "The Impact of Digital Leadership on Digital Transformation in University Organizations: An Analysis of Students' Views", 2024). The integration of digital leadership practices enables leaders to create a more connected and engaged workforce, which is critical in the contemporary digital landscape (Fitriani, 2023; Shin et al., 2023). Moreover, effective digital leadership not only facilitates communication, but also empowers employees by building a culture of collaboration and shared goals (Musaigwa, 2023; "Research Status and Enhancement Path of Executive Digital Leadership in the Context of Enterprise Digital Transformation", 2024).

Furthermore, implementing training programs for leaders to develop their transformational leadership skills can increase employee engagement. Such training can be focused on improving leaders' abilities to provide encouragement and support via digital channels, thereby strengthening the sense of community and shared purpose among employees (Rahi, 2021; Hai et al., 2020; Gachugu, 2023). Studies show that transformational leadership has a positive influence on employee engagement, especially when leaders actively involve employees in the decision-making process and recognize their contributions (Jha et al., 2019; Nurhatisyah et al., 2021; Dong, 2023). This approach is especially effective for millennials, who highly value transparency and recognition in their work environment (He et al., 2019; Purba, 2023).

In conclusion, organizations aiming to strengthen millennial employee engagement should prioritize developing transformational leadership capabilities, especially in a digital context. By leveraging digital communication tools and building a culture of engagement,

organizations can increase employee motivation and productivity, which will ultimately improve organizational performance.

3. Application of Intellectual Stimulation through Digital Tools:

Digital collaboration tools have become essential in fostering intellectual stimulation within organizations, especially under the guidance of transformational leaders. Transformational leaders can leverage online forums and cloud-based brainstorming sessions to create an environment that encourages creativity and critical thinking among employees. Research shows that these digital platforms facilitate the sharing of innovative ideas and enhance collective learning, which is critical to driving engagement and productivity in the workplace.

For example, Ling and Martins highlight that online discussion forums can significantly contribute to collective learning and regional innovation by cultivating communities of practice (Ling & Martins, 2015). This is in line with the findings of Mukherjee and Jain, who emphasized that social intermediaries in online innovation networks increase user productivity, suggesting that leaders can leverage these networks to stimulate employee creativity and engagement (Mukherjee & Jain, 2022). Additionally, Duverger's study of crowdsourcing innovative service ideas shows how structured online ideation forums can generate creative solutions, as participants are encouraged to share and refine ideas collaboratively (Duverger, 2015).

Transformational leadership plays an important role in this context. Hooi and Chan argue that transformational leaders, by promoting a culture of innovation and leveraging digital tools, can significantly influence employee engagement (Hooi & Chan, 2023). Their research shows that workplace digitalization serves as a channel through which transformational leadership can increase engagement, thereby fostering a more innovative organizational culture. This is further supported by findings from a study on employee engagement, which emphasizes the importance of digital tools in facilitating communication and collaboration among team members ("Employee engagement, culture, and leadership lessons from mid-automation Malaysian companies", 2023).

Additionally, the design and implementation of online discussion forums is critical to maximizing their effectiveness. Tibi discusses important components for designing asynchronous discussion forums that encourage interaction and collaboration among participants, which can lead to increased learning and idea development (Tibi, 2016). Likewise, Kılınç and Altınpulluk emphasize the importance of discussion forums in higher education, noting that they allow learners to reflect on their ideas and interact with others, thereby building a collaborative learning environment (Kılınç & Altınpulluk, 2021).

In conclusion, leaders who effectively utilize digital collaboration tools can create a culture of intellectual stimulation that not only encourages creativity but also increases employee engagement. By building an environment where innovative ideas can be shared and developed, transformational leaders can drive organizational success and adaptability in an increasingly digital world.

4. Research Limitations and Recommendations for Future Research

While this study provides valuable insight into the relationship between transformational leadership, digital communication preferences, and millennial engagement, there are several limitations that need to be acknowledged:

1. **Limitations to Cultural Context:** Most of the literature analyzed comes from Western countries, so it pays less attention to cultural contexts in Asia or Africa, which have different communication values and norms. This indicates the potential for cultural bias in the reviewed literature. Digital communication preferences and responses to transformational leadership may differ in cultural contexts that are more collectivist or with more rigid hierarchies.

2. **Methodological Limitations in Observational Studies:** Most of the studies identified used observational or correlational designs, which only allow researchers to observe associations between variables. Therefore, the causal relationship between transformational leadership, digital communication preferences, and engagement still requires further proof.
3. **Limitations in Exploration of Specific Digital Platforms:** The study found different preferences for various digital platforms (e.g., instant messaging versus social media platforms). However, existing literature does not specifically examine the effects of different platforms on engagement and response to transformational leadership.

5. Recommendations for Future Research

1. **Cross-Cultural Research:** To expand understanding of the impact of transformational leadership on engagement through digital communication, cross-cultural studies are needed that explore differences in communication preferences and responses to transformational leadership in various countries. This research can provide deeper insight into how cultural aspects can moderate the relationship between transformational leadership and engagement.
2. **Experimental Approaches to Examining Direct Effects:** Considering the limitations of observational studies, future research can use experimental methods to test the direct influence of transformational leadership on millennial employee engagement in the context of digital communication. This experiment can evaluate changes in engagement more objectively through variations in leaders' communication styles across various digital platforms.
3. **Specific Digital Platform Analysis:** Future research could explore more deeply the differences in the effects of specific digital platforms on employee engagement and preferences. Studies that identify the most effective platforms for increasing engagement under transformational leadership will be invaluable for organizations in designing more targeted communications strategies.

By taking these recommendations into account, future research can complement existing findings and help organizations develop more effective strategies for implementing transformational leadership that are tailored to the digital communication preferences of millennial employees.

5. Conclusion

5.1. Summary of Key Findings

This research reveals that transformational leadership has a significant influence on digital communication preferences and levels of engagement of the millennial generation. In this context, a transformational leadership approach that focuses on dimensions such as individualized consideration and intellectual stimulation proven to be able to meet the speed the need for more flexible and digital-based communication, which is the main preference of the millennial generation. Transformational leaders who are able to adapt to digital media to build interaction, whether through cloud-based collaborative platforms, internal social media, or instant messaging applications, can increase millennial employee engagement more effectively.

These findings suggest that the use of digital communication in a transformational leadership style not only facilitates more personalized and accessible communication, but is

also able to strengthen employee engagement and commitment to organizational goals, which has the potential to improve overall performance.

5.2. Contribution to Literature and Practice

This research contributes to leadership literature, especially in enriching understanding of how transformational leadership can be applied in the context of digitalization and the needs of the millennial generation. This study provides new insights into how leaders can use digital communications to influence millennial engagement, enriching literature that previously tended to focus more on transformational leadership in traditional or face-to-face contexts. Thus, this research highlights the relevance of transformational leadership in the digital era and provides empirical evidence regarding its impact on the communication patterns of the millennial generation.

On the practical side, these findings provide guidance for management and HR on the importance of adapting leadership approaches to millennial digital communication needs. This emphasizes that *engagement* Higher levels can be achieved when leadership styles align with employees' preferred communication platforms, supporting a more inclusive and interactive work culture.

5.3. Practical Implications and a Call for Further Research

For management and HR practitioners, this research emphasizes the importance of implementing transformational leadership that is relevant to digital communication. Leaders need to not only understand millennial communication preferences, but also master various digital communication tools that can strengthen employee engagement. This approach can be applied more strategically in a variety of leadership training programs, specifically designed to enhance leaders' skills in using digital media for inspiration, support and collaboration.

This study also provides a call for further research in developing more innovative approaches in digital communication for transformational leadership. Future research could focus on in-depth experimental trials to evaluate the impact of specific communication media on millennial engagement and assess the effectiveness of various digital platforms in increasing employee engagement. Further research could also assess cross-cultural or sectoral differences in the relationship between transformational leadership and digital communication preferences, resulting in more holistic guidance for organizations in implementing adaptive and responsive leadership in this digital era.

6. References

- Abasilim, U., Gberville, D., & Osibanjo, O. (2019). Leadership styles and employees' commitment: empirical evidence from Nigeria. *Sage Open*, 9(3). <https://doi.org/10.1177/2158244019866287>
- Abedi, M., Rawai, N., Fathi, M., & Mirasa, A. (2015). Cloud computing information system architecture for precast supply chain management. *Applied Mechanics and Materials*, 773-774, 818-822. <https://doi.org/10.4028/www.scientific.net/amm.773-774.818>
- Aferi, A., Amali, H., & Lukito, H. (2023). Effect of transformational leadership style on organizational commitment, employee engagement, and employee performance pt. pIn (persero) up3 bukittinggi. *Journal of Business Studies and Management Review*, 6(2), 135-142. <https://doi.org/10.22437/jbsmr.v6i2.23792>
- Besieux, T., Baillien, E., Verbeke, A., & Euwema, M. (2015). What goes around comes around: the mediation of corporate social responsibility in the relationship between transformational leadership and employee engagement. *Economic and Industrial Democracy*, 39(2), 249-271. <https://doi.org/10.1177/0143831x15614914>

- Breevaart, K., Bakker, A., Demerouti, E., & Derks, D. (2015). Who takes the lead? a multi-source diary study on leadership, work engagement, and job performance. *Journal of Organizational Behavior*, 37(3), 309-325. <https://doi.org/10.1002/job.2041>
- Caniëls, M., Semeijn, J., & Renders, I. (2018). Mind the mindset! the interaction of proactive personality, transformational leadership and growth mindset for engagement at work. *Career Development International*, 23(1), 48-66. <https://doi.org/10.1108/cdi-11-2016-0194>
- Chan, M., Plata, R., Medina, J., Alario-Hoyos, C., & Rizzardini, R. (2019). Modeling educational usage of cloud-based tools in virtual learning environments. *Ieee Access*, 7, 13347-13354. <https://doi.org/10.1109/access.2018.2889601>
- Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The role of leadership in a digitalized world: a review. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01938>
- Dema, H., Hamid, H., & Barisan, B. (2023). Transformational leadership in supporting innovative digital governance. *Journal of Government and Politics*. <https://doi.org/10.18196/jgp.v14i1.13528>
- Dong, B. (2023). A systematic review of the transforming leadership literature and future outlook. *Journal of Innovation and Development*, 3(1), 54-58. <https://doi.org/10.54097/jid.v3i1.8420>
- Duverger, P. (2015). Crowdsourcing innovative service ideas. *Journal of Hospitality and Tourism Technology*, 6(3), 228-241. <https://doi.org/10.1108/jhtt-10-2014-0063>
- Gachugu, E. (2023). The role of transformational leadership on digital innovation and performance in large organizations. *Journal of Strategic Management*, 7(5), 82-93. <https://doi.org/10.53819/81018102t2186>
- Gemeda, H. and Lee, J. (2020). Leadership styles, work engagement and outcomes among information and communications technology professionals: a cross-national study. *Heliyon*, 6(4), e03699. <https://doi.org/10.1016/j.heliyon.2020.e03699>
- Ghadi, M., Fernando, M., & Caputi, P. (2013). Transformational leadership and work engagement. *Leadership & Organization Development Journal*, 34(6), 532-550. <https://doi.org/10.1108/lodj-10-2011-0110>
- Hai, S., Wu, K., Park, I., Li, Y., Chang, Q., & Zhu, X. (2020). The role of perceived high-performance hr practices and transformational leadership on employee engagement and citizenship behaviors. *Journal of Managerial Psychology*, 35(6), 513-526. <https://doi.org/10.1108/jmp-03-2019-0139>
- Hayati, D., Charkhabi, M., & Naami, A. (2014). The relationship between transformational leadership and work engagement in governmental hospitals nurses: a survey study. *Springerplus*, 3(1). <https://doi.org/10.1186/2193-1801-3-25>
- Hayati, K. (2022). Transformational leadership how its effect work-life balance and employee engagement. *Asian Journal of Economics Business and Accounting*, 75-82. <https://doi.org/10.9734/ajeba/2022/v22i2230711>
- He, J., Morrison, A., & Zhang, H. (2019). Improving millennial employee well-being and task performance in the hospitality industry: the interactive effects of hr and responsible leadership. *Sustainability*, 11(16), 4410. <https://doi.org/10.3390/su11164410>
- Hooi, L. and Chan, A. (2023). Does workplace digitalization matter in linking transformational leadership and innovative culture to employee engagement?. *Journal of Organizational Change Management*, 36(2), 197-216. <https://doi.org/10.1108/jocm-06-2022-0184>
- Hungwe, T. (2024). An ai model for digital forensic readiness in the cloud using secure access service edge. *International Conference on Cyber Warfare and Security*, 19(1), 447-454. <https://doi.org/10.34190/iccws.19.1.2132>
- Islam, M., Furuoka, F., & Idris, A. (2021). Employee engagement and organizational change initiatives: does transformational leadership, valence, and trust make a difference?.

- Global Business and Organizational Excellence, 40(3), 50-62. <https://doi.org/10.1002/joe.22078>
- Jha, N., Potnuru, R., Sareen, P., & Shaju, S. (2019). Employee voice, engagement and organizational effectiveness: a mediated model. *European Journal of Training and Development*, 43(7/8), 699-718. <https://doi.org/10.1108/ejtd-10-2018-0097>
- Khaw, T., Teoh, A., Khalid, S., & Letchmunan, S. (2022). The impact of digital leadership on sustainable performance: a systematic literature review. *The Journal of Management Development*, 41(9/10), 514-534. <https://doi.org/10.1108/jmd-03-2022-0070>
- Kurland, H., Peretz, H., & Hertz-Lazarowitz, R. (2010). Leadership style and organizational learning: the mediate effect of school vision. *Journal of Educational Administration*, 48(1), 7-30. <https://doi.org/10.1108/09578231011015395>
- Kurniawan, D. and Suganda, L. (2020). Cloud collaboration: its effect toward writing achievement and impact toward attitude to learning. *Indonesian Research Journal in Education | Irje |*, 466-482. <https://doi.org/10.22437/irje.v4i2.11211>
- Kılınç, H. and Altınpulluk, H. (2021). Discussion forums as a learning material in higher education institutions. *International Journal of Higher Education Pedagogies*, 2(1), 1-9. <https://doi.org/10.33422/ijhep.v2i1.25>
- Lai, F., Tang, H., Lu, S., Lee, Y., & Lin, C. (2020). Transformational leadership and job performance: the mediating role of work engagement. *Sage Open*, 10(1). <https://doi.org/10.1177/2158244019899085>
- Ling, S. and Martins, J. (2015). Learning and innovation in network: online communicative practices of a local enterprise partnership sector group. *Regional Studies Regional Science*, 2(1), 171-184. <https://doi.org/10.1080/21681376.2015.1013149>
- Mariah, W. (2023). Transformational leadership and work engagement in muslim workers: the moderating role of gender. *Inspira Indonesian Journal of Psychological Research*, 4(1), 97-110. <https://doi.org/10.32505/inspira.v4i1.5760>
- Marinda, V., Saudi, M., Dora, Y., & Saudi, N. (2018). The influence of transformational leadership and employee engagement to organizational citizenship behavior (ocb) and the effect to division effectiveness at pt. x in indonesia. *International Journal of Engineering & Technology*, 7(4.34), 309. <https://doi.org/10.14419/ijet.v7i4.34.25302>
- Maryati, S. and Siregar, M. (2022). Digital leadership in improving organizational performance the role of information and communication technology. *Owner*, 6(4), 3616-3624. <https://doi.org/10.33395/owner.v6i4.1176>
- Milhem, M., Muda, H., & Ahmed, K. (2019). The impact of transformational leadership style on employee engagement: using structural equation modeling (sem). *International Journal of Modern Trends in Social Sciences*, 162-173. <https://doi.org/10.35631/ijmtss.280016>
- Mirda, R. and Prasetyo, P. (2022). Job characteristics, job involvement, and transformational leadership's effects on employee performance through work engagement. *Indonesian Journal of Multidisciplinary Science*, 2(3), 2129-2140. <https://doi.org/10.55324/ijoms.v2i3.341>
- Mukherjee, S. and Jain, T. (2022). Social brokerage and productivity of users in online innovation networks. *Journal of Product Innovation Management*, 40(2), 231-254. <https://doi.org/10.1111/jpim.12648>
- Musaigwa, M. (2023). Examining the leadership approaches adopted by fintech management when implementing organizational change prompted by digital transformation. *Technology Audit and Production Reserves*, 4(4(72)), 20-27. <https://doi.org/10.15587/2706-5448.2023.286627>
- nurhatisyah, N., Rumengan, J., Satriawan, B., Yanti, S., Fahizah, A., & Dewi, N. (2021). The influence of transformational leadership, personal value and organizational commitment to the performance of millierial employees in digital era in companies internet services provider (isp) in city batam with motivation as an intervening

- variable. Conference Series, 3(2), 113-122. <https://doi.org/10.34306/conferenceseries.v3i2.470>
- Patricia, V., Matagi, L., & Nantamu, S. (2020). Transformational leadership, work engagement and performance among public service employees in uganda. *EJBM*. <https://doi.org/10.7176/ejbm/12-23-03>
- Pillen, D. and Eckard, M. (2022). The impact of the shift to cloud computing on digital recordkeeping practices at the university of michigan bentley historical library. *Archival Science*, 23(1), 65-80. <https://doi.org/10.1007/s10502-022-09395-2>
- Prasetya, M. and Kartikawangi, D. (2021). Corporate culture and internal communication influence on millennial employee engagement. *Jurnal Aspikom*, 6(2), 387. <https://doi.org/10.24329/aspikom.v6i2.915>
- Procházka, J., Gilová, H., & Vaculík, M. (2017). The relationship between transformational leadership and engagement: self-efficacy as a mediator. *Journal of Leadership Studies*, 11(2), 22-33. <https://doi.org/10.1002/jls.21518>
- Purba, M. (2023). The effect of transformational leadership and employee placement on work engagement of civil servants with job satisfaction as an intervening variable. *Jurnal Maksipreneur Manajemen Koperasi Dan Entrepreneurship*, 13(1), 326. <https://doi.org/10.30588/jmp.v13i1.1458>
- Rahi, S. (2021). Investigating the role of employee psychological well-being and psychological empowerment with relation to work engagement and sustainable employability. *International Journal of Ethics and Systems*, 38(2), 266-285. <https://doi.org/10.1108/ijoes-12-2020-0200>
- Roman, A., Wart, M., Wang, X., Liu, C., Kim, S., & McCarthy, A. (2018). Defining e-leadership as competence in ict-mediated communications: an exploratory assessment. *Public Administration Review*, 79(6), 853-866. <https://doi.org/10.1111/puar.12980>
- Salanova, M., Lorente, L., Chambel, M., & Martínez, I. (2011). Linking transformational leadership to nurses' extra-role performance: the mediating role of self-efficacy and work engagement. *Journal of Advanced Nursing*, 67(10), 2256-2266. <https://doi.org/10.1111/j.1365-2648.2011.05652.x>
- Sari, N. (2023). Millennial employees perception of the influence of transformational leadership on organizational performance through the implementation of total quality management (tqm) empirical study at pt asabri (persero) branch offices. *Return Study of Management Economic and Bussines*, 2(7), 695-709. <https://doi.org/10.57096/return.v2i7.125>
- Schmitt, A., Hartog, D., & Belschak, F. (2016). Transformational leadership and proactive work behaviour: a moderated mediation model including work engagement and job strain. *Journal of Occupational and Organizational Psychology*, 89(3), 588-610. <https://doi.org/10.1111/joop.12143>
- Senadjki, A. (2023). Unlocking the potential: the impact of digital leadership on firms' performance through digital transformation. *Journal of Business and Socio-Economic Development*, 4(2), 161-177. <https://doi.org/10.1108/jbsed-06-2023-0050>
- Sheehan, M., Garavan, T., & Morley, M. (2020). Transformational leadership and work unit innovation: a dyadic two-wave investigation. *Journal of Business Research*, 109, 399-412. <https://doi.org/10.1016/j.jbusres.2019.10.072>
- Shin, J., Mollah, M., & Choi, J. (2023). Sustainability and organizational performance in south korea: the effect of digital leadership on digital culture and employees' digital capabilities. *Sustainability*, 15(3), 2027. <https://doi.org/10.3390/su15032027>
- Sukmawati, M. (2024). E-leadership: concept and influence of digital leadership. *Journal of Information Technology and Education*, 17(1), 87-97. <https://doi.org/10.24036/jtip.v17i1.811>

- Tibi, M. (2016). Essential components in structuring asynchronous discussion forums. Turkish Online Journal of Distance Education, 0(0). <https://doi.org/10.17718/tojde.12429>
- Tims, M., Bakker, A., & Xanthopoulou, D. (2010). Do transformational leaders enhance their followers' daily work engagement?.. <https://doi.org/10.1037/e572992012-318>
- Tims, M., Bakker, A., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement?. The Leadership Quarterly, 22(1), 121-131. <https://doi.org/10.1016/j.leaqua.2010.12.011>
- Toit, J. (2022). Digital transformational leadership in open distance learning: understanding progressive transparency.. <https://doi.org/10.25159/unisarxiv/000045.v1>