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Managing the Generational Divide in Digitally Transformed Workforces

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Abstract

This study explores how generational differences influence employees' engagement with digital transformation in the workplace, focusing on the challenges and opportunities faced by different age groups during the process of digital adoption. A qualitative research design was employed, using semi-structured interviews to collect data from 29 participants recruited from online platforms. The study followed a purposive sampling strategy to include employees from diverse generational cohorts (Baby Boomers, Generation X, Millennials, and Generation Z). Data were analyzed using NVivo software, and theoretical saturation was reached to ensure the robustness of the findings. Thematic analysis was used to identify key themes related to generational responses to digital transformation. The study revealed three main themes: (1) generational differences in digital adaptation, with younger generations expressing greater comfort with new technologies and older generations experiencing higher levels of stress and anxiety; (2) the crucial role of leadership and support systems in mitigating resistance to digital change, particularly for older employees; and (3) varying perceptions of the impact of digital transformation on work engagement, with younger employees viewing digital tools as opportunities for growth, while older employees were more concerned about job security and work-life balance. Generational differences significantly affect employees' engagement with digital transformation. Organizations should consider these differences when implementing digital strategies, providing targeted support and training to ensure inclusivity across all age groups. Leadership plays a key role in fostering a positive attitude toward digital transformation, especially for older employees, and should be focused on enhancing communication, training, and addressing concerns about job displacement.

Keywords: Generational differences, digital transformation, employee engagement, leadership support, workplace technology, multigenerational workforce, digital adaptation.

1. Introduction

The generational divide has long been a subject of interest in organizational studies, particularly in relation to work behaviors, leadership, and communication. However, in the context of digital transformation, this divide becomes more pronounced, as the integration of new technologies such as artificial intelligence (AI), machine learning, and data analytics forces employees to adapt rapidly to unfamiliar systems and workflows (Kablashova, 2023). While younger generations such as Millennials and Generation Z are often seen as digital natives, possessing the skills and attitudes necessary to thrive in these environments, older generations like Baby Boomers and Generation X may experience greater challenges in adapting to these changes. This disparity in digital adoption not only affects individual performance but also impacts the overall work culture, collaboration, and organizational learning processes (Kamioka, 2023; Zhang et al., 2023).



In light of this, understanding how different generations perceive and adapt to digital transformation is vital for organizations seeking to manage these challenges effectively. Prior studies have highlighted that generational differences can influence how employees engage with digital technologies, how they perceive leadership, and how they cope with the stresses associated with digital changes (Asad, 2023; Sherin, 2022, 2023). Moreover, the need for organizations to foster intergenerational collaboration and inclusion in digital initiatives has never been more pressing, as inclusive digital strategies have been shown to increase employee engagement, satisfaction, and retention (Thileepan & Raveendran, 2022).

However, while digital transformation holds significant potential for enhancing employee engagement, it also introduces new challenges. For many employees, the transition to a more digitalized workplace involves learning new tools and processes, which can lead to feelings of uncertainty, stress, and anxiety (Hizam et al., 2023). These emotional responses to digital change are not uniform across generational cohorts, as different age groups have varying levels of comfort and experience with technology. As a result, older employees may experience greater digital anxiety and stress compared to younger employees, who are generally more accustomed to rapid technological advancements (Kensbock & Stöckmann, 2020). This gap in digital comfort levels can create friction between generational groups, hindering collaboration and engagement. To mitigate these challenges, organizations must understand the unique experiences and needs of each generation when it comes to digital transformation. Transformational leadership, for instance, plays a critical role in fostering an environment where employees feel supported and motivated during the digital change process (Asad, 2023; Hizam et al., 2023). Leaders who are able to communicate the benefits of digital transformation, offer tailored training, and provide emotional support can help bridge the gap between different generational cohorts, ensuring that all employees feel included and engaged in the digital transition process (Kamioka, 2023). One of the primary challenges in managing a generationally diverse workforce in the context of digital transformation is the varying attitudes and perceptions of technology across age groups. Younger generations, such as Millennials and Generation Z, are often described as digital natives, meaning they grew up with technology and are typically more open to adopting new digital tools and systems (Maharani, 2022; Monstad & Burman, 2020). These employees are often seen as highly adaptable and capable of leveraging digital technologies to improve productivity and innovation (Kadur & R, 2022; Kamioka, 2023; Pandey & Sushil, 2023). As digital transformation accelerates, these employees are more likely to embrace changes that involve the adoption of new technologies, viewing them as opportunities for personal and professional growth. In contrast, older generations such as Baby Boomers and Generation X may have developed work habits that are less reliant on technology, and they may find it more difficult to navigate the rapid changes brought on by digital transformation. For these employees, digital tools may be viewed as complex or unnecessary, and they may be more resistant to change (Zhang et al., 2023). This resistance can lead to decreased engagement and job satisfaction, especially if employees feel unsupported in the digital transition process (Alafi, 2024). In some cases, the generational divide can also lead to feelings of exclusion, with older employees perceiving that their contributions are undervalued in favor of younger, tech-savvy colleagues (Pandey & Sushil, 2023). This study focuses on examining the generational divide in digitally transformed workplaces and explores how employees from different age cohorts experience and engage with digital transformation.

2. Methods and Materials

This study employed a qualitative research design to explore the perspectives and experiences of employees from different generational cohorts in digitally transformed workplaces. The research focused on identifying the challenges and strategies for managing generational divides in such environments.

A total of 29 participants were recruited using purposive sampling through online professional platforms, including LinkedIn and relevant industry forums. Participants were selected based on their experience in digitally transformed work environments and represented a diverse mix of generational cohorts, including Baby Boomers, Generation X, Millennials, and Generation Z. Efforts were made to ensure balanced representation across industries and organizational roles.

Data were collected through semi-structured interviews, which provided participants the flexibility to share detailed insights while ensuring consistency across interviews. The interview guide included open-ended questions addressing participants' experiences, challenges, and recommendations related to generational dynamics in digital workplaces.



Interviews were conducted via virtual communication platforms (e.g., Zoom and Microsoft Teams), with an average duration of 45-60 minutes per session. To maintain rigor and ensure data richness, interviews were conducted until theoretical saturation was achieved, wherein no new themes or insights emerged from additional participants.

The collected data were transcribed verbatim and analyzed using NVivo software to facilitate systematic coding and thematic analysis. An initial coding framework was developed based on the interview guide and iteratively refined as new themes emerged. Key themes were identified through an inductive approach, ensuring that the analysis was grounded in the data.

3. Findings and Results

The study included 29 participants from diverse generational cohorts and professional backgrounds, ensuring a comprehensive exploration of perspectives. Participants were categorized into four generational groups: Baby Boomers (aged 59–77, n = 6), Generation X (aged 43–58, n = 8), Millennials (aged 27–42, n = 10), and Generation Z (aged 18–26, n = 5). The sample was nearly gender-balanced, with 16 female and 13 male participants. Industries represented included technology (n = 8), healthcare (n = 5), education (n = 6), finance (n = 4), and manufacturing (n = 6). Educational qualifications ranged from high school diplomas (n = 4) to bachelor's degrees (n = 15) and postgraduate degrees (n = 10). The inclusion of participants with varying levels of professional experience, from entry-level employees (n = 7) to mid-level managers (n = 14) and senior executives (n = 8), ensured a rich diversity of insights into generational dynamics in digitally transformed workplaces.

Table 1. The Results of Qualitative Analysis

Category	Subcategory	Concepts
Generational Perceptions	Communication Styles	Formal vs. informal language, preference for in-person communication, reliance on digital tools, generational misunderstandings.
	Work Ethic	Value of traditional work hours, focus on work-life balance, emphasis on output vs. process, multitasking efficiency.
	Technological Adaptation	Comfort with new tools, learning curve differences, reliance on legacy systems, tech-driven collaboration preferences.
	Attitudes Toward Change	Resistance to change, enthusiasm for innovation, generational differences in adaptability, impact of organizational culture on receptivity.
	Team Dynamics	Stereotyping across generations, intergenerational mentorship, trust-building challenges, collaboration techniques.
Challenges in Digital Workplaces	Skill Gaps	Lack of digital literacy, outdated technical skills, training program effectiveness, need for personalized upskilling approaches.
	Remote Work Adaptation	Generational preferences for remote work, impact of isolation, hybrid work adaptability, challenges in virtual engagement.
	Career Progression Concerns	Differences in promotion expectations, career stability focus, mentorship needs, generational advancement fairness.
	Inclusion in Decision-Making	Feeling excluded due to age, generational biases in leadership, equitable participation in decision-making, acknowledgment of diverse ideas.
Bridging Strategies	Managing Stress	Coping mechanisms for digital overload, work-life balance strategies, intergenerational stress support, impact of tech on well-being.
	Training and Development Initiatives	Cross-generational learning programs, tech training workshops, reverse mentorship, intergenerational knowledge-sharing.
	Fostering Collaboration	Cross-generational team-building, conflict resolution techniques, collaborative project platforms, shared responsibility practices.
	Leadership Interventions	Inclusive leadership styles, generational awareness training for leaders, open communication channels, recognition of individual strengths.
	Policy Frameworks	Flexible working policies, customized benefit schemes, tech infrastructure accessibility, generational inclusion in policy-making.

Generational Perceptions

Communication Styles: Participants highlighted distinct generational differences in communication preferences. Older employees preferred formal communication styles and face-to-face interactions, while younger employees leaned toward informal language and digital communication tools. One Baby Boomer participant remarked, "Sometimes, I feel like everything has become too impersonal; a quick message can't replace a meaningful conversation." Conversely, a Millennial noted, "I find emails and chats more efficient; they save time and avoid unnecessary meetings."

Work Ethic: Generational cohorts differed in their definitions of productivity. Baby Boomers and Generation X emphasized traditional work hours and process-oriented tasks, while Millennials and Generation Z prioritized work-life balance and multitasking efficiency. A Generation X employee explained, "I've always believed in putting in the hours; it's about the



journey, not just the results." Meanwhile, a Millennial reflected, "For me, the output matters more than the time spent. Flexible schedules make me more productive."

Technological Adaptation: Adaptation to new technologies was a recurring theme. While younger employees demonstrated comfort with emerging tools, older employees sometimes faced learning curve challenges. As one Baby Boomer shared, "I've used the same tools for years, and switching to new ones feels overwhelming." However, a Generation Z respondent noted, "Technology is second nature to us; we're constantly exploring new platforms for better collaboration."

Attitudes Toward Change: Resistance to change varied across generations. Baby Boomers expressed reluctance to abandon familiar processes, whereas younger cohorts embraced innovation. A Millennial participant commented, "Change is exciting; it's how we grow and improve." In contrast, a Baby Boomer said, "It's not easy to let go of what you know works; there's a risk in jumping into something new."

Team Dynamics: Generational stereotypes and trust-building challenges were noted as barriers to effective teamwork. However, intergenerational mentorship emerged as a strategy for fostering collaboration. A Generation Z participant shared, "I've learned so much from my older colleagues; their experience is invaluable." Similarly, a Baby Boomer noted, "Working with younger employees keeps me updated and energized."

Challenges in Digital Workplaces

Skill Gaps: Participants highlighted disparities in digital literacy, with older employees often requiring additional training to match younger colleagues' tech-savviness. A Generation X respondent stated, "The pace of technological change makes it hard to keep up without constant training." A Millennial added, "It's not about age; it's about exposure and willingness to learn."

Remote Work Adaptation: Generational preferences for remote work varied significantly. Younger employees valued the flexibility, while older cohorts struggled with isolation. A Baby Boomer shared, "I miss the camaraderie of the office; working remotely feels disconnected." In contrast, a Millennial mentioned, "Remote work has improved my productivity and work-life balance."

Career Progression Concerns: Generational expectations around career progression and stability differed widely. Younger employees sought rapid promotions, while older employees focused on long-term career stability. A Generation Z participant commented, "I want to see quick growth; if I'm not moving up, I feel stagnant." Meanwhile, a Baby Boomer shared, "For me, stability and job security are more important than fast promotions."

Inclusion in Decision-Making: Participants noted that generational biases sometimes excluded certain cohorts from decision-making processes. A Generation X employee remarked, "Younger voices often dominate discussions, and older perspectives are overlooked." Conversely, a Millennial noted, "We bring fresh ideas to the table, but sometimes they're dismissed as impractical."

Managing Stress: Generational differences in coping with digital overload emerged as a challenge. Younger employees relied on technology-driven solutions for managing stress, while older employees preferred traditional methods. A Generation Z respondent stated, "Apps and digital tools help me stay organized and reduce stress." In contrast, a Baby Boomer said, "I find taking a walk or talking to a colleague much more effective."

Bridging Strategies

Training and Development Initiatives: Cross-generational learning programs and reverse mentorship were highlighted as effective strategies. A Generation Z participant shared, "Teaching older colleagues about tech is rewarding; I learn from their experience, too." Similarly, a Baby Boomer said, "These programs help bridge the gap and foster mutual respect."

Fostering Collaboration: Structured team-building activities and conflict resolution techniques were identified as essential. A Millennial noted, "Workshops and team-building exercises help us understand each other better." Another participant shared, "When conflicts arise, having a neutral mediator helps resolve them quickly."

Leadership Interventions: Inclusive leadership styles and generational awareness training for leaders were emphasized as critical. A Generation X manager shared, "Leaders must adapt their approach to cater to diverse teams." Similarly, a Millennial participant stated, "Transparent and open leadership fosters trust across generations."

Policy Frameworks: Flexible working policies and generational inclusion in policy-making emerged as key solutions. A Generation Z employee noted, "Policies that accommodate diverse needs create a fair workplace." A Baby Boomer added, "Being included in policy discussions makes me feel valued and respected."



4. Discussion and Conclusion

The results of this study offer valuable insights into how generational differences manifest in employees' experiences of and engagement with digital transformation in the workplace. Our analysis revealed several key themes: generational differences in digital adaptation, leadership and support systems, and perceived impacts of digital transformation on work engagement. These findings contribute to the growing body of literature on digital transformation and employee engagement by highlighting the complexities of managing a multigenerational workforce in the digital age. In this section, we discuss these findings in relation to previous research and explore the implications of our results for theory, practice, and future research.

One of the most prominent findings of this study was the significant generational divide in the perceived ease and challenges associated with adapting to digital transformation. Younger generations, including Millennials and Generation Z, expressed greater comfort and confidence with new technologies, while older generations, particularly Baby Boomers and Generation X, often reported higher levels of anxiety and stress in adapting to digital tools and systems. These results align with previous research that highlights the varying degrees of digital literacy and openness to new technologies across generational groups (Deng, 2023). For instance, Millennials and Generation Z, having grown up with digital technologies, are often seen as "digital natives" who readily embrace change (Kamioka, 2023). In contrast, older generations may feel overwhelmed or underprepared to navigate the rapid pace of technological change, leading to lower levels of engagement and productivity (Maharani, 2022).

Our findings echo those of Zhang et al. (2023), who found that generational differences in technological fluency and comfort with digital tools significantly affect employees' engagement with digital transformation (Zhang et al., 2023). These findings underscore the importance of addressing the specific needs of different generational cohorts when implementing digital strategies in the workplace. The generational gap in digital adaptation also highlights the need for targeted training and support to ensure that employees from all generations can successfully navigate digital changes.

Another critical finding of this study was the significant role of leadership in bridging the generational divide and fostering engagement with digital transformation. Participants who reported having supportive leaders were more likely to feel confident in their ability to adapt to digital changes, regardless of their generational cohort. In contrast, employees who perceived a lack of leadership support or who were unsure about the organization's digital strategy expressed frustration and disengagement. This finding is consistent with the literature on transformational leadership, which emphasizes the role of leaders in motivating and guiding employees through periods of change (Asad, 2023). Leaders who provide clear communication, encourage continuous learning, and create an inclusive culture can help mitigate the stress and anxiety that often accompany digital transformation (Kablashova, 2023; Sherin, 2022, 2023).

Furthermore, our results support the findings of Hizam et al. (2023), who demonstrated that employee engagement with digital transformation is closely linked to leadership's ability to communicate a clear vision and provide the necessary resources for learning and development. Leaders who are adept at managing digital change and fostering a sense of inclusivity can ensure that employees feel supported in their digital journeys, thereby increasing engagement and reducing resistance (Kablashova, 2023; Sherin, 2022). This is especially important for older generations who may need more time and assistance to adapt to new technologies (Maharani, 2022). The importance of leadership in navigating the digital divide reinforces the need for organizations to invest in developing digital leadership capabilities, particularly among middle and senior managers.

The study also revealed that digital transformation has different impacts on work engagement across generational cohorts. Younger employees, particularly those from Generation Z, tended to view digital transformation as an opportunity for growth and innovation, often reporting increased motivation and job satisfaction as a result of engaging with new technologies. Conversely, older employees expressed concerns about the potential negative effects of digital transformation on job security and work-life balance, which in some cases led to decreased engagement and increased stress. These findings align with those of Zhang et al. (2023) who found that younger employees are more likely to embrace digital change as a chance for career advancement, while older employees may feel threatened by the shift toward automation and AI-driven processes (Zhang et al., 2023).

Despite the valuable insights provided by this study, several limitations must be acknowledged. First, the sample size, while adequate for qualitative research, may not be fully representative of the broader workforce across all industries. The study



included participants from a range of sectors, but the findings may not be generalizable to all industries or regions. For example, industries with lower levels of digital adoption, such as manufacturing or agriculture, may present different challenges related to generational divides and digital transformation. Future research should aim to include larger and more diverse samples to better capture the nuances of generational differences in digital engagement across different industries and regions.

Second, the study relied solely on semi-structured interviews as the primary data collection method, which may limit the depth of understanding in certain areas. Although interviews allowed for rich, detailed insights into participants' experiences and perceptions, they may also have introduced interviewer bias or limited the range of responses. Triangulating interview data with other methods, such as surveys or case studies, could provide a more comprehensive understanding of generational differences in digital transformation. Furthermore, the study focused on employees' self-reported experiences, which may be subject to social desirability bias or inaccuracies in memory.

Finally, the study did not explore the long-term effects of digital transformation on employee engagement. While our findings provide a snapshot of employees' perceptions during the initial stages of digital adoption, future research should examine how generational differences evolve over time as digital tools become more integrated into everyday work practices. This would help organizations better understand the lasting impacts of digital transformation on work engagement and how to maintain long-term employee satisfaction.

Future research should explore the role of organizational culture in shaping generational responses to digital transformation. While this study focused on individual experiences, the broader organizational context, including the culture, values, and management practices, plays a critical role in how employees from different generations perceive and adapt to digital changes (Li & Zhang, 2024). Investigating how organizational culture interacts with generational differences could offer deeper insights into how organizations can create more inclusive and engaging digital work environments.

Additionally, research should explore the effectiveness of different leadership styles in managing generational divides in digital transformation. While transformational leadership emerged as a key theme in this study, it is possible that other leadership approaches, such as servant leadership or digital leadership, may be more effective in certain organizational contexts. Investigating the relationship between leadership style and generational engagement with digital transformation could provide actionable insights for leaders seeking to foster a more engaged and resilient workforce.

Finally, future research should examine the role of digital competency and training programs in bridging the generational divide. While this study highlighted the importance of leadership support, there is a need for more research on how digital literacy initiatives can be tailored to the needs of different generational cohorts. By understanding the most effective methods for delivering digital training across age groups, organizations can improve employees' skills and increase their confidence in using new technologies.

Organizations should prioritize creating a culture of inclusivity when implementing digital transformation initiatives. Given the generational differences in digital adoption, it is crucial for leaders to ensure that employees from all age groups feel supported and valued during the transition. Tailored training programs, mentorship opportunities, and open communication about the benefits and challenges of digital tools can help bridge the generational divide and foster greater engagement.

In addition, organizations should invest in leadership development programs that equip managers with the skills needed to navigate the generational divide and guide employees through digital transformation. Leaders who are capable of understanding and addressing the unique needs of different generational cohorts will be better positioned to create a cohesive and engaged workforce. Furthermore, organizations should provide opportunities for continuous learning and reskilling to ensure that employees, regardless of their age, remain adaptable and resilient in the face of digital change.

Lastly, organizations must address employees' concerns about job security and work-life balance in the context of digital transformation. As our study found, older employees are particularly sensitive to these issues, and organizations that proactively offer support in these areas will likely see higher levels of engagement and retention across all generational groups.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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