

A SCOPING REVIEW ON GENERATION Z'S LEADERSHIP EXPERIENCE AND EXPECTATIONS

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Abstract

For contemporary leadership and workplace, the entry of Generation Z, those born between the mid-1990s and early 2010s, presents both challenges and opportunities. Gen-Z represents the latest generation to enter workforce and with their numbers increasing, they will soon overtake key leadership positions in the workforce. In the meantime, their leadership expectations, preferences, and leadership styles are displaying marked differences from other generational cohorts in the labor market, and these are evolving along with the realities of the new world of work shaped by rapidly emerging technologies. This study provides a current literature review on Gen-Z and leadership nexus and complements this qualitative approach with a bibliometric analysis of the evidence on the topic. We provide a thematic map of the existing literature on Gen-Z and leadership by demonstrating key research areas, trending topics while identifying the most forthcoming leadership styles and preferences for Gen-Z members, and areas worthy of future investigation. 146 papers that are indexed in Scopus are included in the analysis without any temporal restrictions. Using VOSviewer and Biblioshiny, the research identified key publication trends, influential authors, contributing regions, most cited research and thematic trends. Our findings reveal a significant growth in research over the last five years and highlight a strong preference for some leadership approaches such as transformational leadership among Generation Z. Research highlights the importance of tailored educational programs, and the need for innovative HR practices to foster retention and job satisfaction. Additionally, the research emphasizes the psychosocial resilience of Generation Z in facing career-related challenges.

Keywords: Generation Z, leadership, digital natives, transformational leadership, bibliometric analysis

1. INTRODUCTION

The newest generation of workers, known as Generation Z, is already having an impact on leadership styles and company culture. This generation, which was born between the middle of the 1990s and the beginning of the 2010s, has grown up in an era where social media, digital technology, and worldwide connectedness are the norm. Their views, attitudes, and expectations have been molded by these experiences, particularly with regard to leadership and the workplace. From a practical point of view, workplaces are becoming home to people from several generations and as such, may face difficulties due to the contrasting leadership inclinations of Generation Z and other generational cohorts, such as Millennials and Generation X. This underscores the significance of formulating leadership approaches that not only accommodate the inclinations of Generation Z but also cultivate unity and cooperation among all generations in the labor force.

Knowing what Generation Z looks for in a leader is essential for companies trying to effectively engage and retain this generation of workers. In contrast to earlier generations, Generation Z is more likely to support transformational leadership, which places a strong emphasis on emotional intelligence, teamwork, and inspiration. They want leaders who are inclusive, elful, and able top create a great work atmosphere in addition to those who are competent and fair. The preferences of Generation Z are expected to impact and maybe modify traditional leadership approaches as more of them join the workforce, so it is critical for academics and practitioners to understand this generation better.

Even though Generation Z is becoming more and more prevalent in the workforce, research into their preferred styles of leadership is still in its infancy. There is a large deficiency of empirical evidence because most of the study that has been done so far is conceptual or anecdotal. Research delving deeper into the particular leadership styles and behaviors that appeal to Generation Z is obviously needed, given that these preferences may vary depending on the cultural and organizational context.

Generation Z has distinct work values because of their digital upbringing and increased knowledge of global issues. These values are fundamental in determining how they participate at work and what kind of leadership they demand. According to research, the traits of pragmatism, self-assurance, and strong ambition characterize Generation Z (Benítez-Márquez et al., 2022). They are more likely than Generation Y to be highly entrepreneurial, driven by the desire to expand their skills and land the perfect job. If they are not happy in their current roles, they will often switch jobs. Progression in one's career, increased pay, fulfilling work, and positive team dynamics are all important motivators. The characterization of Generation Z as a homogeneous group with such shared traits and attitudes oversimplifies the diversity within this cohort, which spans approximately 15 distinct age groups. Significant intragenerational changes are unavoidable. Early studies, the majority of which were conducted in the US, may have created a false impression of this generation (Scholz et al., 2019). Further research reveals that there are significant regional and workplace perception differences in the visions, desires, and traits of Generation Z (Leslie et al., 2021), shaped by outside environmental factors such as significant events, crises, technological breakthroughs, and popular culture during their early years.

This paper aims to elaborate on these issues through a bibliometric analysis of the corpus of literature on Generation Z and leadership. We hope to identify significant trends, seminal studies, and emerging themes that could guide future theoretical trajectories and practice. In addition to bibliometric analysis, we attempt to draw a conceptual framework based on a thematic analysis of data. The knowledge gathered from this research is not merely theoretical, but it has practical applications for companies trying to modify their leadership approaches to better serve the demands of Generation Z. Understanding what this generation values in a leader will be essential to building a productive and happy work environment that can draw and hold on to top talent from this growingly influential generation as they continue to enter the workforce in greater numbers.

2. LITERATURE REVIEW

2.1. Generation Z: generational characteristics and work values

Mannheim (1952) was the first to conceptualize generations as a sociological phenomena, arguing that they are shaped by people's shared experiences, which have a substantial impact on their viewpoints and how they interpret the world. Generalizations and definitive statements about generational characteristics are frequently criticized for failing to respect individuals' uniqueness. When comparing and analysing value preferences across generational workforce of employees, according to frequent descriptions, members of generation Y are well-educated, self-assured, career-oriented, socially concerned, have integrity, and believe that creating and attaining personal objectives matter. They like clear instructions and managerial assistance while also requesting responsibility and flexibility. On the other hand, multitasking, effective technology use, independence over teamwork, inventiveness, a global perspective, and a fondness for non-standard and individualized works are just a few of the traits attributed to Generation Z. However there are criticisms that scant research on generational differences in work values and motivation has frequently relied on nonempirical data (anecdotes, interviews) or questionable research design (cross-sectional studies, which cannot distinguish the impacts of age and generation (Gungor & Alp, 2019; Twenge et al., 2010; Utami et al., 2018). Numerous studies do, however, point to similarities in traits, values, and worldviews among members of the same generation, which differ noticeably from earlier ones (de Boer & Bordoloi, 2022).

While values act as a guide to direct people through life and give them a sense of how to live morally, work values are specific to the workplace. The values that people perceive should be met as a result of their involvement in the job role are termed as work values. These values are fundamental in determining an individual's preferences for and expectations of their work, as well as how they would react in work-related

situations. Since the 1970s, research on work values has changed dramatically but more recent studies emphasize the significance of being aware of Gen Z workers' work values and of being ready to hire them.

Based on earlier research, Maloni and colleagues (2019) created a thorough set of work value categories and identified seven essential values: intrinsic, extrinsic, supervisory, social, altruistic, leisure, and stability. Through exploratory factor analysis, these categories were further developed, offering a strong framework for evaluating the work values of Generation Z. Similar findings were made by Hampton and Welsh (2019) who assessed the work values of nursing students from Generation Z using the Lyons Work Values Survey. They discovered that altruistic and social values were prioritized over instrumental and prestige values. This highlights how crucial it is to support the less fortunate and provide steady work for Generation Z. Again in the same vein, The Minnesota Importance Questionnaire (MIQ), which covers 20 facets of values grouped in six overarching values, is commonly used to assess an individual's work-related needs and values. However, because it was created many years ago, it does not take into account some aspects of the modern workplace.

Using a revised version of the Minnesota Importance Questionnaire (MIQ), Ludviga and Sluka (2023) expanded their research across European nations and identified seven workplace-related value dimensions, including achievement, supervision, comfort, altruism, independence, excitement, and technology. According to their findings, older generations value independence more than younger generations do. Younger generations seem to place more value on excitement and technology. These findings are in line with Boer and Bordoloi's (2022) study which discovered that Generation Z favors intrinsic motivation over stability and global citizenship, with cultural variances affecting how much weight is given to different work ideals.

In order to gauge Generation Z's aspirations and views toward their present and future careers, Marginean (2021) looked at the attitudes and expectations of Gen Z-ers on their current or future jobs. It was an exploratory survey that served as a preliminary assessment of people's perceptions and wants in a broad, descriptive, and exploratory manner. According to the findings, this cohort values financial security, a stable employment, and prefers to work for large corporations. They opt for informal and comfortable situations where they can have their own clearly defined office space and choose tasks that represent their passions. This cohort is eager for professional mentoring and acutely aware that success necessitates lifelong learning. Despite being referred to as digital natives, they nevertheless need to form bonds with their coworkers. Meanwhile despite being highly success-oriented, the newest generation to enter the workforce, generation Z, has been stereotyped as being less engaged at work. This discrepancy may be explained by the theory of generations and generation units, which states that subgroups exist within each generational cohort. Leslie et al.'s (2021) additional research revealed three unique subgroups within Generation Z: Go Getters, Chill Worker Bees, and Social Investors. Work-life balance is important to Social Investors, Chill Worker Bees want a comfortable work atmosphere, while Go Getters are more concerned with developing their careers. These subgroups have varied work values and objectives, indicating that Generation Z is not a homogeneous generation.

According to Strauss and Howe's Generational Cohort Theory (Strauss & Howe, 1991), social environments and historical events influence the beliefs and actions of several generations. Using this theory, Acheampong (2021) investigated how Generation Z's upbringing affected their work values and discovered that individual traits and life experiences were significant factors in defining their preferences for work values and benefits. The study determined that employee compensation, job stability, professional advancement, and a positive work environment are among the most important work values for Generation Z.

2.2. Generation Z: leadership preferences and outcomes

Studies from many cultural contexts, both empirical and review-based, also demonstrate that Generation Z is drawn to leaders who possess transformative qualities, placing particular emphasis on emotional intelligence and helpful behavior (Alkan et al., 2023; Bernardino & Teixeira, 2023; Christopher Lee & Lim, 2024; Esteves et al., 2024; Palalar-Alkan, 2020). Research suggests that generation Z clearly favors transformative leadership over transactional leadership. This choice is typified by the need for leaders that can effectively communicate, cultivate a culture that is positive and inclusive, exhibit high emotional intelligence, and advance equality (McGaha, 2018). The major leadership attributes that Generation Z values include emotional intelligence, digital abilities, management prowess, and foresight (Yavuz-Aksakal & Ulucan, 2024). These results are consistent

with previous research (Dwidienawati et al., 2021) arguing that friendly, humble, and supporting traits are associated by Generation Z with effective leadership.

When Saracel et al. (2023) investigated leadership preferences from the viewpoint of executives overseeing Generation Z workers, they discovered that autocratic leadership is least desired and transformational leadership is greatly favored. Grow and Yang's (2018) study, wherein Generation Z participants underlined the significance of justice, confidence, and soft skills in their ideal leaders, echoes this demand for transformative leadership.

In order to investigate Generation Z's preferences for leadership styles, Zehetner et al. (2022) carried out a cross-cultural study in Austria and Ukraine. They discovered notable cultural disparities in the preference for transactional versus transformational leadership approaches. The study found that both countries highly valued transactional leadership with non-financial benefits, but that the importance of various leadership qualities was greatly altered by cultural context. In another study, Yadav and Chaudhari (2024) compared the leadership preferences of Generation Z with those of Generation X and Y in India, finding that while there were commonalities, Generation Z showed distinct preferences for approachable and respectful leaders. Olmeda (2023) expanded on previous generational leadership frameworks by including Generation Z, finding no significant differences in leadership preferences across cohorts, but highlighting the importance of education and work experience in shaping these preferences. Camberos (2023) investigated the preferences for leadership styles among different generational cohorts in an online work setting. The study revealed notable distinctions in the preference for laissez-faire leadership amongst Generation X, Y, and Z. According to the study, all generations experienced an increase in job satisfaction as a result of transformational leadership, but Generation X experienced this increase more strongly than Generation Z.

The connection between Generation Z's preferences for leadership and outcomes relating to the workplace has been the subject of numerous research. One such investigation, Sigaeva et al.'s (2022) study focused the role of authentic leadership on work engagement and discovered that it had a greater impact on work engagement levels of Gen Z hospitality workers than that of servant leadership. Another study by Lee et al. (2022) illustrated that transformational leadership and employee engagement was strongly correlated for Generation Z workers, whereas transactional leadership had little to no effect. Another study (Gaan & Shin, 2023) provided evidence for the benefits of resonant leadership in improving job outcomes for Generation Z employees, especially in times of crises, with positive implications for self-efficacy, organizational identity, improved job satisfaction and retention. Das and Malik's (2024) study in the Indian financial services identified transformational leadership as a key factor in promoting employee engagement and retention among Generation Z employees. Finally, Nguyen and Petchsawang's (2024) analysis of factors influencing innovative behavior in Vietnamese Generation Z workers showed transformational leadership to be a significant determinant of employee engagement and creativity. The aforementioned results highlight the significance of transformative leadership in augmenting a range of work outcomes for Generation Z workers in diverse cultural settings.

3. METHOD

3.1. Purpose and research questions

This study aims to present a bibliometric analysis of the literature examining the connection between leadership and Generation Z as well as to pinpoint overarching themes in this field of study. This study specifically aims to map out the major topics, lines of inquiry, and developing trends in the literature on leadership and Generation Z. The following are the study questions that we aim to investigate:

RQ1: What are the key research trends and thematic focuses in the academic literature on the relationship between Generation Z and leadership?

RQ2: How has the volume, authorship, and citation patterns of research on Generation Z and leadership evolved over time, and what emerging themes or gaps can be identified for future exploration in this field?

3.2. Search procedure

A comprehensive review of the literature was done in order to investigate the current research questions. This study concentrated on studies that looked at how Generation Z and leadership interact, with particular attention on issues like expectations for leadership, work values, preferences, and views on the efficacy of leadership. The evaluation encompassed research articles written in English, without any limitations on the publication date, guaranteeing a thorough examination of the existing body of work. Scopus was chosen as the main database for this bibliometric investigation for a number of reasons. First off, with a vast array of highly regarded social science publications, Scopus is acknowledged as one of the biggest and most extensive citation databases. Second, since separate databases frequently offer data in different formats, adopting a single database reduces human error. Lastly, the Scopus database is well-suited for conducting network analysis using tools like VOSviewer and the Biblioshiny package in R, both of which are essential for mapping the intellectual landscape of this research domain. We have followed the five-stage literature search method presented in Figure 1 (Fahimnia et al., 2015). The database search focused on academic papers (books, book chapters, articles, reviews, and conference papers) with the following search terms: ("Generation Z" OR "Gen Z" OR "Post-Millennials" OR "iGeneration" OR "Zoomers" OR "Digital Natives") AND ("leadership" OR "leadership styles" OR "leadership behavior" OR "leadership development" OR "leadership skills" OR "transformational leadership" OR "authentic leadership" OR "servant leadership" OR "adaptive After a careful reading of each paper's abstract, we have excluded one more paper as it was an author log informing the reader about an ongoing systematic review study in advance which Scopus erroneously registered as an article. The resulting 146 publications have been included in the analysis.

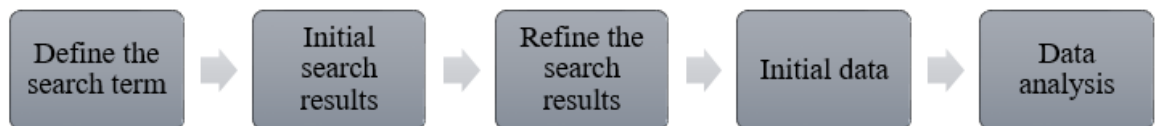


FIGURE 1 - STAGES OF BIBLIOMETRIC ANALYSIS

3.3. Analysis

VOSViewer and the R software package Biblioshiny were used to analyze the data for this review. The descriptive results indicate that the relevant studies were published in 128 different sources and the average citation per document was 6.51. A total of 396 authors published research on this topic, and out of those, 33 were single-authored papers. The annual growth rate in publications was found to be 25.48%. The oldest research dates to 2010. To answer this study's research questions regarding identifying the existing literature patterns, the selected 146 papers were analyzed based on numerical metrics such as published years, regions of research, journal details, citations, and author/paper linkages.

4. RESULTS

4.1. Publication trend

The publishing trend shown in Figure 2, which illustrates the sharp rise in publications since the research area's expansion in 2019, makes the growth in the field of study evident. In the previous six years, a total of 127 articles have been published. The previous five years have seen a very high level of interest in this topic, as seen by the amount of papers—78.9% of all papers—that have been published on it.

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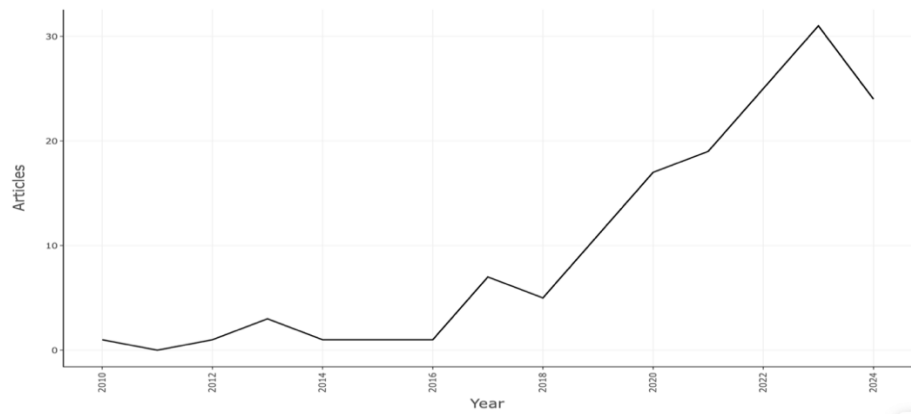


FIGURE 2 - PAPERS BY YEARS

4.2. Countries of production

Figure 3 shows the studies conducted in different regions of the world. Most articles are focused in the USA (97), followed by India (26), Spain (24), Portugal (22), Indonesia (20), Spain (1), UK (18), China (12) and Turkey (11).

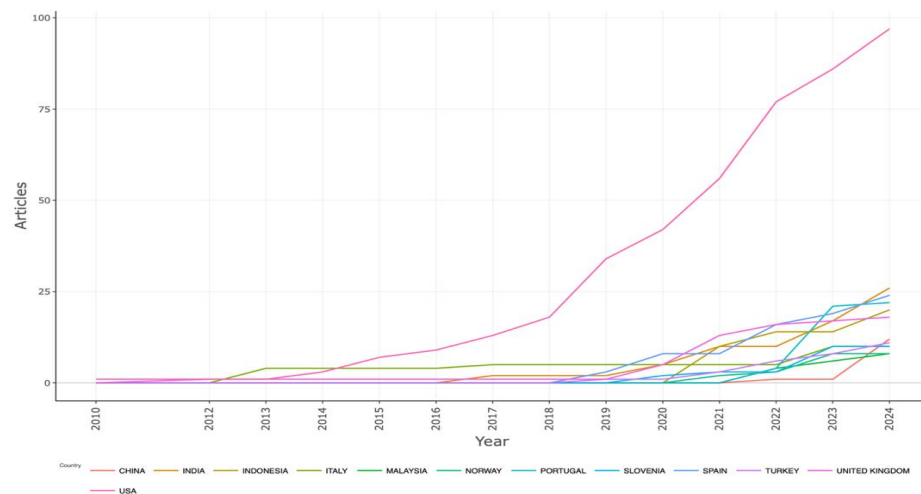


FIGURE 3 - NUMBER OF PAPERS BY REGION

4.3. Most relevant sources

The top five outlets indexed in the Scopus database that published the most papers on the topic of interest between 2010 to 2024 are Sustainability (scholarly journal by MDPI, 5 papers), Lecture Notes in Networks and Systems (book series by Springer, 4 papers), Human Resource Management International Digest (scholarly journal by Emerald, 3 papers), Management for Professionals (book series by Springer, 3 papers) and BMC Nursing (scholarly journal by Springer Link, 2 papers).

4.4. Most influential authors

Based on citation data, the most influential authors were determined using a citation network map. The authors with the highest citations were Holly Schroth with 212 citations, Karine Gabrielova & Aaron A. Buckho with 114 citations and Scott S. Christensen & colleagues with 47 citations.



FIGURE 4 - MOST CITED AUTHORS

4.5. Most frequently co-occurring words

Based on the co-occurrence of authors' keywords at least twice, a network of keywords was created, yielding 62 items and five clusters, as shown in Figure 5. The critical keywords that most frequently appeared in related research topics are generation Z (39 times), followed by leadership (26 times), gen Z (19 times), millennials (12 times), employee engagement (8 times) and digital natives (7 times). These words have formed the foundation for the subject of leadership and generation Z research. Phrases such as human resource management, generational differences, gender, training and retention appeared to a lesser extent. The color clusters and lines in the network map demonstrate the occurrence of keywords in the same research papers. For instance, generation Z was studied with keywords such as employee engagement, training, leader-member exchange, and medical students.

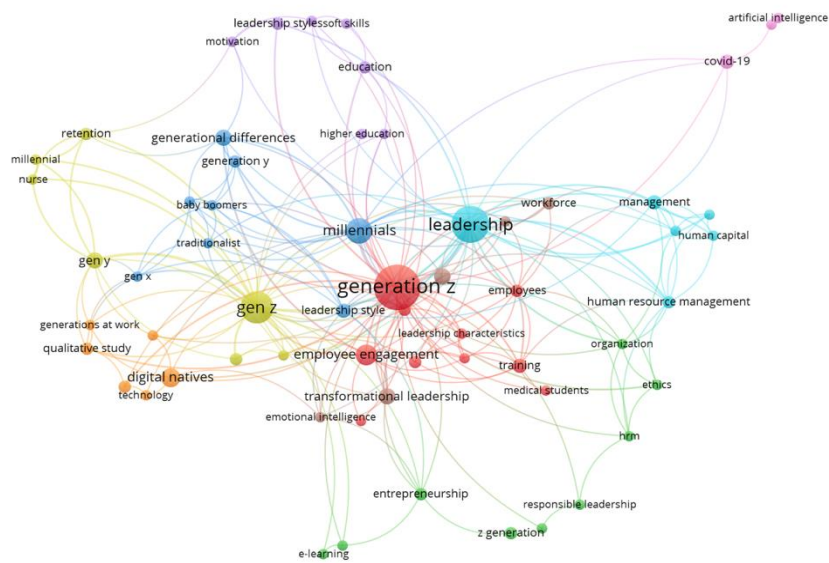


FIGURE 5 - NETWORK OF KEYWORD CO-OCCURRENCE

4.6. Trend topics

Figure 6 illustrates a trend analysis of key topics by year. It shows the rising and fading research themes based on paper abstracts.

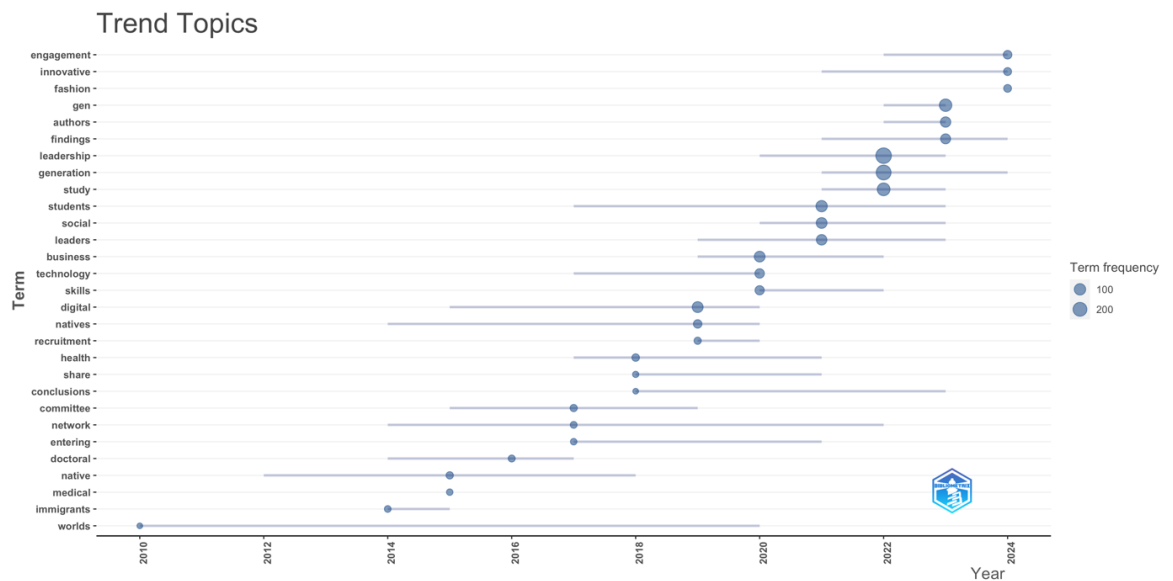


FIGURE 6 - TREND TOPICS

4.7. Co-citation of cited authors and top cited countries

The co-citation analysis highlights the relationships between the academics who are frequently mentioned in studies on leadership and Generation Z, as well as the fundamental knowledge that forms the basis of the literature. Figure 7 shows the citation patterns of the most prominent authors. Colors and lines are used in the co-citation analysis to show the connections between these authors who are frequently mentioned. The green relationship, for example, shows that studies frequently cite both Walumbwa and Avolio's works together.

Of particular note, Bruce J. Avolio and Bernard Morris Bass are important figures in the Generation Z leadership network. Avolio, a University of Washington professor, is well-known for his work in leadership development and for his contributions to numerous leadership models. Bass, a well-known professor at Binghamton University, made important contributions to the fields of leadership studies and organizational behavior (Bass, 1985; Burns, 1978). Together, Bass and Avolio (1994) presented the Full Range of Leadership Model (FRLM), which divides leadership into three categories according to the effectiveness and degree of engagement of the leader: transactional, transformational, and laissez-faire. These theories are now the cornerstones of leadership studies. Other authors who have been heavily cited in research on leadership and Generation Z include Twenge, Goh, Luthans, and Bakker (Bakker & Demerouti, 2007; Bass, 1985; Bass & Avolio, 1994; Burns, 1978; Goh & Okumus, 2020; Luthans & Avolio, 2003; Twenge, 2023). These researchers' works are reliable and influential, making them useful resources for researchers in the future who want to build a strong research framework in this field.

The top cited papers are based in the USA (620 times), UK (45 times), Spain (42 times), Sweden (41 times), Ghana (40 times), China (35 times), Slovenia (34) times and Norway (33 times). It is inspiring that emerging and underdeveloped countries are congenial to original research that is cited by other research. Figure 8 illustrates the bibliographical coupling of countries. When two articles share a reference, they are deemed bibliographically coupled. That is, the more references they have in common, the stronger their bibliographic coupling is. The size of the nodes represents the centrality of a country in a cluster.

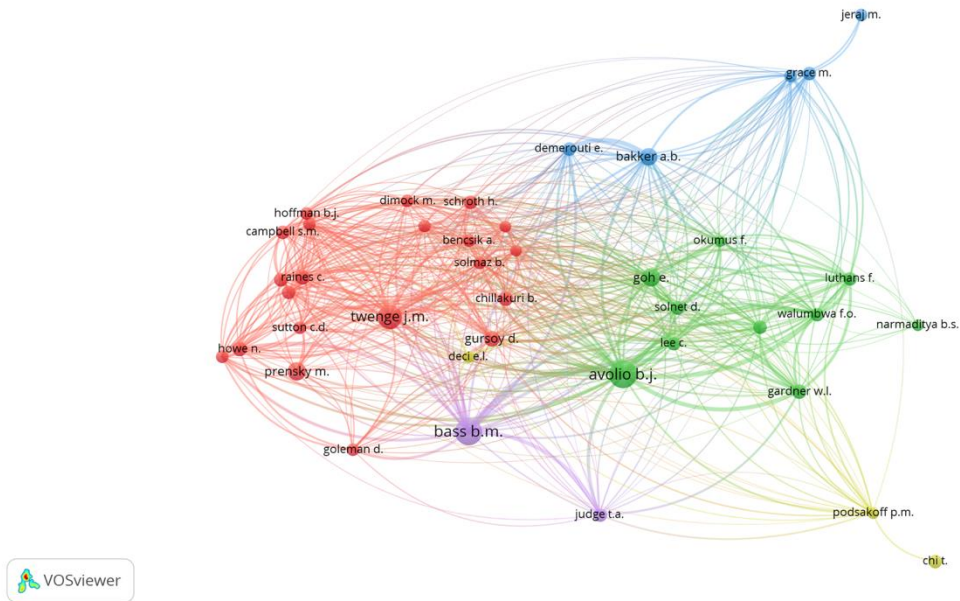


FIGURE 7 - MOST CITED AUTHORS IN RELATED PAPERS

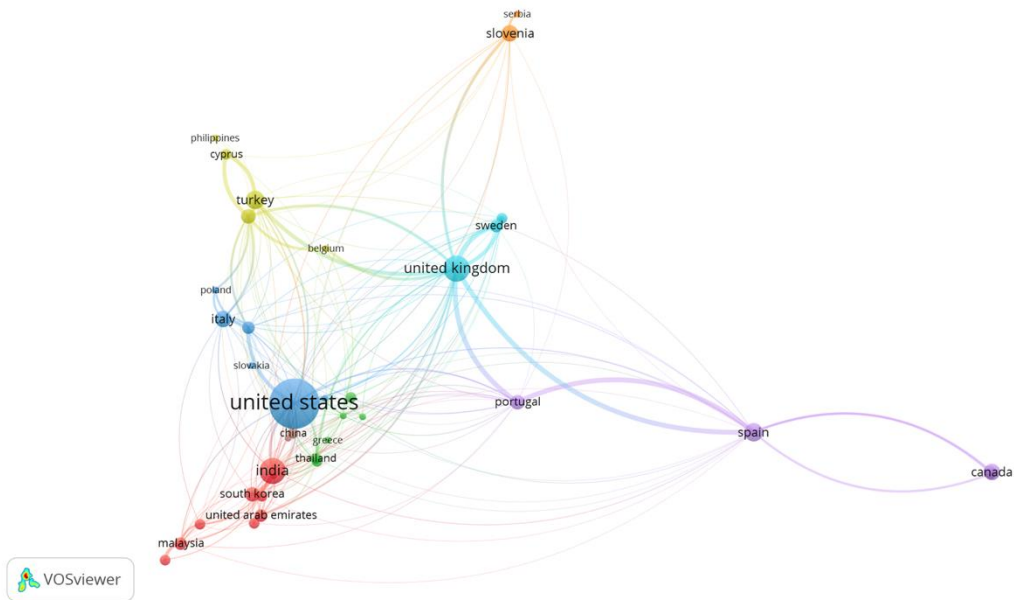


FIGURE 8 - BIBLIOGRAPHIC COUPLING OF COUNTRIES

4.8. Reference spectroscopy

The oldest document referred by the papers reviewed dates back to 1840, whereas the majority of references mentioned (those with over 100 citations) are papers published after the 2000s, according to document analysis on the year of publication of the cited references. Citing newly published studies makes sense given the nature of the topic of interest, which centers around young adults in their 20s. According to the statistics, leadership

studies and Generation Z are mostly integrated into current, practical research projects, whereas theoretical, review, and historical, philosophical, and sociological investigations are largely unrelated to leadership and Generation Z studies.

4.9. Research methods used in studies

As per the analysis as seen in Table 1, most research (N =95) used qualitative methods to investigate the relationship between leadership and Generation Z. In contrast, 41 papers used quantitative methods, and 10 used mixed approach methods to conduct research. Qualitative method has been the most popular method used by scholars to study this research topic. Indeed, most qualitative papers are reviews and are descriptive in nature. According to breakdown of data collection methods, publications have used a review and conceptual development approach (51 entries), survey method (43 entries), interviews (18 entries), case studies (16 entries), systematic reviews (3 entries), bibliometric analyses (2 entries), experiment and interventions (4 entries), machine learning (1 entry), observation (2 entry), focus groups (3 entry), trade publications and industry resources (2 entry), experience coaching by the author (1 entry), written narratives (1 entry), longitudinal pre-experimental research (1 entry), social media analytics (1 entry), panel study (1 entry), longitudinal focus group (1 entry), report/brief (1 entry) and others not specified in the text (3 entries) (Some studies have used multiple methods so the sum total of identified methods are greater than the number of papers analyzed here).

TABLE 1. RESEARCH METHODS USED

Quantitative	Qualitative	Quantitative and qualitative (mixed)
41	95	10

4.10. Thematic analysis on variables of interest

The relationship between Gen-Z and leadership has been studied in relation to several other factors, which we have tried to thematically classify using keywords and abstracts from papers. In order to encompass the range of pertinent studies, we developed four major categories: 1) Leadership styles and leader development; 2) Educational and professional growth; 3) Workplace integration and dynamics; and 4) psychosocial factors.

These categories broadly represent the major areas of investigation that generation researchers have addressed. In identifying these themes, we followed an iterative process of traditional content analysis using the most frequently co-occurring keywords from titles, author keywords, and abstracts. The process began with a review of keywords and abstracts from 146 scholarly papers included in the analysis. We began with an independent open-coding to identify first-order concepts and progressed to axial coding to develop overarching themes. Any discrepancies in coding were resolved through collaborative discussions among the authors. After generating our first-order codes, we proceeded to finalize these codes through multiple rounds of refinement, following continuous discussions and the resolution of disagreements among authors. For instance, terms like “transformational leadership,” “servant leadership,” and “digital fluency” formed visible clusters, suggesting leadership preferences and leadership development as a significant area of focus. In a similar line of thought, recurring mentions of “training programs,” “talent development,” and “curriculum alignment” highlighted another cluster related to educational and professional growth. These keyword clusters provided a preliminary structure for grouping the variables into overarching themes.

We further examined the abstracts of the studies to understand their focus and objectives. Studies that discussed leadership styles, preferences, and the developmental needs of Generation Z leaders were grouped under “**Leadership styles and leader development**”. These studies often explored how Generation Z prefers inclusive, emotionally intelligent leaders who use transformational leadership approaches. Other papers investigated how training programs can cultivate leadership skills in Generation Z, making leadership development a natural fit within this thematic category.

Through a similar process, we identified “**Educational and professional growth**” as a theme. This grouping arose from studies addressing the alignment of educational systems with Generation Z's expectations and learning preferences. The authors came to an agreement that topics such as the integration of digital tools in

professional training, the use of AI and virtual environments, and tailored educational programs resonated strongly within this theme. The focus on equipping Generation Z with skills for the future workplace emphasized the critical role of education in shaping professional growth and leadership potential. In addition, given the research demonstrating that job-enabled growth opportunities stand out as a major source of motivation for Gen Z, along with other components like accountability, interaction, feedback, and organizational support (Dwivedula & Singh, 2020), it becomes essential to probe Gen Z's expectations and preferred learning styles. In light of this, educational systems that are in line with the expectations and learning preferences of Generation Z also emphasize the significance of employee engagement strategies through job analysis, performance management, learning and development, and compensation management in order to effectively manage Gen Z.

The theme titled "**Workplace integration and dynamics**" emerged from studies examining Generation Z's experiences and expectations in organizational settings. This theme encompassed research on mentorship, intergenerational communication, workplace culture, and employee retention strategies. The papers within this category highlighted how Generation Z employees prioritize collaboration, respect, and innovative HR practices, such as gamified training and flexible work environments, to enhance their engagement and retention. These findings differentiated workplace dynamics from educational growth, as they dealt specifically with organizational integration rather than individual skill development. The type of organizational environment that Gen Z prefers becomes a critical issue in addition to the preferred leadership styles, given that they have a strong desire to learn new skills and value learning opportunities and receiving mentorship on the job (Marginean, 2021). Thereby, a workplace that exceeds Gen Z's expectations is also an actual space that creates the conditions for the development of the principles of leadership they anticipate, where management and interpersonal relationships occur in accordance with organizational settings.

Lastly, the theme "**Psychosocial factors**" emerged as a distinct category addressing the emotional, social, and psychological dimensions influencing Generation Z in leadership and workplace settings. This category was developed from studies exploring resilience, emotional intelligence, and stress management. Papers in this area investigated how Generation Z copes with workplace challenges and career uncertainties while highlighting the role of strong support networks and emotional intelligence in enhancing job satisfaction and leadership potential. In this aspect, the "Psychosocial factors" theme emphasizes how leadership styles may be a driving force behind controlling the major psychosocial factors in order to achieve the intended work-related objective in managing Gen Z. This theme also highlights another essential subject domain by pointing to potential explanations for why effectiveness might not always be attained in all circumstances even when envisioned leadership styles have been implemented. Thus, it also stands as a driving category for stressing the importance of identifying the psychosocial factors at function in effective leadership.

1) Leadership styles and leader development. We label the first and broadest area of investigation within the nexus of leadership and Gen Z as leadership styles and development. The theme of leadership styles focuses on the generational shift in preferences and expectations for leaders, specifically among Generation Z. Research highlights a clear preference for transformational leadership, characterized by inclusiveness, emotional intelligence, and a focus on collaboration and inspiration. Studies also explore how Generation Z views other leadership styles, such as authentic, resonant, and servant leadership, emphasizing their relevance in fostering trust, fairness, and positive workplace dynamics. Research on Generation Z's preferences, expectations, and leadership styles has looked at things like their inclination toward transformational leadership as opposed to transactional leadership (Akhras, 2019; Al Amiri et al., 2019; Bommman, 2019; Gašková, 2020), and how Gen Z's leadership expectations differ from previous generations and leadership styles such as authentic, resonant, servant leadership (e.g., from Millennials, Gen X) (Belias et al., 2023; Gaan & Shin, 2023; Sigaeva et al., 2022). Research also investigated leadership potential of Generation Z, such as how incentives and recognition affect their propensity to take charge (Toh et al., 2022). There is ample research on topics such as training programs designed to cultivate leadership skills in Generation Z within specific industries (Guerrero-Velástegui et al., 2024). Studies have looked at possible obstacles to Generation Z's ability to lead, especially in small groups and in certain occupations like nursing (Dunaetz et al., 2022; McClain et al., 2021).

2) Educational and professional growth. This theme examines how educational institutions and professional training programs are evolving to meet the needs and aspirations of Generation Z. With a strong emphasis on

digital fluency, studies highlight the integration of AI tools, VR simulations, and collaborative online platforms as crucial in preparing Gen Z for the workforce. Moreover, the alignment of curricula with Gen Z's pragmatic and entrepreneurial mindset is discussed, with suggestions for fostering adaptability and lifelong learning. Professional growth is another vital aspect of this theme. Research delves into strategies for equipping Generation Z with the skills required for success across diverse professions. Customized training programs in digital environments, such as the metaverse, and the role of mentorship in bridging the gap between academic preparation and workplace demands are explored. How educational institutions, such as colleges and schools, can adapt their curricula to better meet the expectations and learning styles of Generation Z has received significant attention by researchers (Black et al., 2020; Purba et al., 2024). There are studies providing recommendations for enhancing educational programs to align with Gen Z's needs and aspirations (Szlavi et al., 2023). Studies have also been conducted to determine the critical elements that affect Generation Z's success in a variety of professional professions, especially in academia and business (Kanthawongs, 2021; Yohana F. et al., 2021). Studies on talent development and training have looked into the best approaches for Generation Z, which include customized training programs and training in digital environments like metaverse and virtual worlds (Y.-C. Lee et al., 2023; Wyld, 2010), as well as methods to be used both in academic settings and within specific industries for sustainability, enhanced job performance and satisfaction (Capello & Al-Khashti, 2020; Pandita et al., 2023; Ravazzani et al., 2013).

3) Workplace integration and dynamics. This theme captures Generation Z's entry into the workforce and their interaction with existing workplace cultures. The research focuses on their expectations from employers, including mentorship, respect, and open communication. Studies also highlight the role of innovative HR practices, such as flexible work arrangements, mental health support, and diversity initiatives, in enhancing engagement and retention. Extensive research has been conducted on Generation Z's expectations from their employers and work environments. Studies have examined their preferences on mentorship, communication, and respect (Demirbilek & Keser, 2022; Fedock, 2017; Moore & Kirigin, 2022; Zehetner et al., 2022) as well as the impact of digital tools on their work behavior and attitudes (Gerhardt et al., 2021; Goryunova & Jenkins, 2023; Kreta & Bloom, 2017; Tandoh & Ebe-Arthur, 2017). The impact of creative HR strategies on establishing a more favourable workplace for Generation Z (Choudhury et al., 2024; Hirsch et al., 2020; Singh & Shaurya, 2021) and strategies for ensuring their retention have been topics of investigation (Bautista & Cahigas, 2024; C. C. Lee et al., 2022). There are comparative studies focusing on the differences in retention strategies and barriers between Generation Z and other generational cohorts, such as Millennials (McClain et al., 2021). Finally, there are studies on the thematic trends driving research on Generation Z as employees, addressing aspects such as how they adapt to and influence modern workplace dynamics (Nkiko & Okuonghae, 2021; Quyen et al., 2023).

4) Psychosocial factors. This theme addresses the psychological and social dimensions that shape Generation Z's leadership potential and workplace behavior. Resilience emerges as a recurring topic, with studies examining how Generation Z copes with career uncertainties and stress. Emotional intelligence is highlighted as a critical factor for both leadership success and job satisfaction. The theme also includes the influence of psychosocial factors, such as early career experiences and social skills, on long-term career trajectories. The importance of psychosocial elements has been the subject of additional research in the field of Generation Z and leadership studies. This domain has covered issues like the difficulties that Generation Z will encounter in their early and later professions, as well as their resilience and the reasons that led to it (Benítez-Márquez et al., 2022; Gaan & Shin, 2023; Han et al., 2024; Yılmaz et al., 2024). There are studies investigating their social skills and emotional intelligence (Esteves et al., 2024), the influence of psychological factors on Generation Z's career development and leadership potential as well as studies examining the coping mechanisms used by Generation Z to deal with stress and challenges in educational and professional settings (Pandita et al., 2023). Researchers have explored how Generation Z's early career experiences shape their long-term career trajectories and subsequent job satisfaction.

These four themes collectively provide a framework for understanding the nexus between Generation Z and leadership, each highlighting a unique dimension of the generational shift in workplace expectations, leadership preferences, and career development pathways. First, leadership styles and leader development emphasizes the necessity of adapting traditional leadership paradigms to align with Generation Z's preference for inclusive, emotionally intelligent, and collaborative leadership approaches. The demand for transformational leadership

highlights a generational desire for leaders who inspire and foster growth, rather than simply manage. Second, educational and professional growth emphasizes the critical role of tailored education and training programs in preparing Generation Z for leadership roles, calling for the integration of digital tools, experiential learning, and mentorship to bridge the gap between academic preparation and practical application in professional environments. Third, workplace integration and dynamics highlights Generation Z's expectations for equitable, flexible, and purpose-driven workplaces, underlining the importance of fostering intergenerational collaboration, leveraging innovative HR practices, and creating inclusive cultures to retain Generation Z employees. Last but not the least, psychosocial factors theme provides insight into the emotional and social underpinnings of Generation Z's workplace behaviors and leadership potential, with resilience, emotional intelligence, and stress management emerging as critical components within professional settings. These themes together paint a rich and complex picture of Generation Z's unique approach to leadership. As this generation steps into leadership roles,, understanding these themes will have practical implications in shaping the future of organizational success and leadership practices.

5. DISCUSSIONS

In this study, we conducted a bibliometric analysis on the scholarly publications exploring the relationship between Generation Z and leadership. Utilizing VOSviewer and Biblioshiny of RStudio, we analyzed 146 publications indexed in the Scopus database to map the intellectual landscape of this research area. We have identified publication trends, key contributing regions, influential authors, frequently co-occurring keywords, and thematic research clusters. Additionally, we conducted a content analysis to categorize the research variables into four primary themes, including leadership styles and leader development, educational and professional development, workplace integration and dynamics, and psychosocial factors.

The findings of our study also illustrate several important trends and themes in the current research on Generation Z and leadership. First, our analysis reveals that research on Generation Z and leadership has grown substantially, particularly over the past five years. This surge in scholarly activity points to the increasing need to understand the distinct characteristics and expectations of Generation Z as they begin to establish themselves in the workforce. A notable trend within this body of literature is the predominance of qualitative research methods, with many studies focusing on descriptive and review-based analyses. Another key insight is the ongoing emphasis Generation Z's strong preference for contemporary transformational leadership, which is defined by its inspirational, supportive, and collaborative nature, a preference that marks a departure from previous generations who often leaned more toward transactional leadership. However, such general findings should be evaluated with caution and in light of empirical evidence that speaks to the contrary or that emphasizes easily overlooked nuances. Studies conducted across cultures (Jeraj & Aydin, 2021; Zehetner et al., 2022) have shown how cultural context affects Generation Z's preferences for leadership. These results suggest that while transformational leadership is generally favored, the importance of specific leadership attributes can be significantly influenced by one's cultural background. This highlights the need for further cross-cultural research as well as research into specific groups of individuals bracketed as Generation Z. This also warrants attention for HR practices in implementing leadership development and training programs that take into account the cultural diversity of Generation Z.

In order to undertake a content analysis of the data used in the bibliographic study, we have examined the abstracts of all 146 articles and, when necessary, have gone further into the text, an experience that allows us to draw a few conclusions. It has come to our attention, particularly via reading past articles, that terminology like "digital alien, digital natives, and digital immigrants" have been used to refer to generations other than what we currently perceive them to be. As an example, the term "digital natives" has been used to refer to Generation Y in earlier studies (Kidd, 2012; Shenson et al., 2015; Tandoh & Ebe-Arthur, 2017) while it has been employed to refer to both Gen-Y and Gen-Z in some other studies (Nakagawa & Yellowlees, 2020), and yet, only in reference to Gen-Z in some (Akintunde, 2020; Black et al., 2020). This could lead to a hazy picture of the generational divides that research labels using terms and metaphors like nomadism, digital nativism, alienation, refugee, etc. We advise researchers to make it clear from the outset why and how they are using any generational assumptions behind their usage of ideas in order to eliminate any misinterpretation. Additionally, research has employed digital nativism on a meso-level to denote "companies" and "businesses" (instead of

people), and digitally native businesses are those that are digitally transformed or seeking change, transformation and excellence in their digitalization initiatives (Kreutzer et al., 2018; Rizzo, 2017). To encourage readers to use these conceptualizations consistently, it would be beneficial to convey them to them more effectively.

The research also highlights the significance of curriculum modifications by educational institutions to better educate Generation Z for the workforce. Studies show that tailored talent development programs, particularly those that use digital platforms, can significantly increase Gen Z employees' job satisfaction and effectiveness (Akcil et al., 2019; Hasan et al., 2024; Mirakyan & Berezka, 2022). Since this generation was raised in the digital age, emphasising digital fluency is essential. Although research on the connection between leadership and Generation Z is still in its infancy, it can be approached from the perspective of artificial intelligence or by using methods such as machine learning (Bautista & Cahigas, 2024). The ability of Generation Z to bounce back from job-related pressures is a recurrent subject in the literature (Han et al., 2024) with strong support networks and useful coping strategies recommended for ensuring their long-term job satisfaction and retention. Further research into innovative HR tactics across industries is needed (Goh & Okumus, 2020; Thompson, 2023; Yohana F. et al., 2021) especially in high-stress situations like hospitals (Choi et al., 2022).

While a previous bibliometric study by Benítez-Márquez and colleagues (2022) examined Generation Z within the workplace by analyzing thematic trends and key research areas through bibliometric techniques, their focus was on publications from the Web of Science, spanning 2009 to 2020. Their analysis illustrated that the topic of Generation Z in the workplace began to gain significant attention around 2018 and had considerable room for growth. They identified some core themes, including Generation Z, generations, workplace, management, attitudes, leadership, career, and learning-teaching-education. Their study also called for ongoing research to further explore various aspects of Generation Z in the work context with particular emphasis on management and generational diversity. We argue that addressing this call on a periodic basis is crucial to mapping the most recent developments in the research domain.

5.1. Concluding remarks, limitations, and future research

Numerous implications exist for theory and practice based on the study's findings. By offering factual proof of Generation Z's unique preferences and expectations, the study adds to the expanding corpus of research on generational disparities in leadership. The study also emphasizes how important it is to investigate further how this generation's digital fluency and leadership effectiveness interact. The results highlight for practitioners the significance of creating workplace rules and leadership programs that are especially catered to the demands of Generation Z. To help Gen Z employees handle early career obstacles, organizations should prioritize transformational leadership methods, cultivate mentorship and communication-focused settings, and offer strong support networks. However, there is a need for more research and empirical evidence with studies incorporating novel and mixed methods.

Despite providing a thorough summary of the literature on Generation Z and leadership, this study has certain shortcomings. The main foundation of the study is a bibliometric analysis of articles that are indexed in the Scopus database. As such, this analysis might not include all pertinent literature on the subject. Furthermore, the breadth of content interpretation may be constrained by the dependence on abstract and keyword analysis. Subsequent investigations ought to contemplate broadening the range of examination to encompass more databases and literary sources. Longitudinal studies that look at Generation Z's long-term career paths and how their preferences for leadership change over time are also necessary. As the scant research points, investigating how regional and cultural variations affect Generation Z's aspirations for leadership may offer a more complex explanation of the phenomenon. Last but not the least, a nomological network analysis could be useful to further clarify the connections between the leadership choices, work values, and organizational outcomes of Generation Z.

REFERENCES

- Acheampong, N. A. A. (2021). Reward Preferences of the Youngest Generation: Attracting, Recruiting, and Retaining Generation Z into Public Sector Organizations. *Compensation and Benefits Review*, 53(2), 75–97. https://doi.org/10.1177/0886368720954803/ASSET/IMAGES/LARGE/10.1177_0886368720954803-FIG1.JPEG
- Akcil, U., Altınay, Z., Dagli, G., & Altınay, F. (2019). The role of technology leadership: Innovation for school leadership in digital age. *E-Learning and Software for Education Conference*, 323–329. <https://doi.org/10.12753/2066-026X-19-115>
- Akhras, C. (2019). Breaking boundaries: Generational cohorts lead with new work-related mindsets. *Proceedings of the International Conference on Intellectual Capital, Knowledge Management and Organisational Learning, ICICKM, 2019-Decem*, 24–32. <https://doi.org/10.34190/IKM.19.108>
- Akintunde, S. (2020). Digital culture: The dynamics of incorporation. In *Future Directions in Digital Information: Predictions, Practice, Participation*. <https://doi.org/10.1016/B978-0-12-822144-0.00007-0>
- Al Amiri, N., Daradkeh, F., & Al Al Kaabi, A. (2019). Leadership styles and competence among generation z Emirati nursing students. *International Journal of Learning, Teaching and Educational Research*, 18(9), 23–45. <https://doi.org/10.26803/ijlter.18.9.2>
- Alkan, D. P., Özbilgin, M. F., & Kamasak, R. (2023). The Leadership in Tackling the Unforeseen Consequences of the Covid-19 Pandemic: Who Is the Emergent Leader? In *Innovation, Leadership and Governance in Higher Education: Perspectives on the Covid-19 Recovery Strategies*. https://doi.org/10.1007/978-981-19-7299-7_13
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bass, B. M. (1985). *Leadership and Performance beyond Expectations*. Free Press; Collier Macmillan. <https://www.scirp.org/reference/referencespapers?referenceid=1842839>
- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications. <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=895080>
- Bautista, P. Z. N., & Cahigas, M. M. L. (2024). Exploring Employee Retention among Generation Z Engineers in the Philippines Using Machine Learning Techniques. *Sustainability (Switzerland)*, 16(12). <https://doi.org/10.3390/su16125207>
- Belias, D., Rossidis, I., Ntalakos, A., Trihas, N., Mantas, C., & Bakogiannis, D. (2023). Ethics in change management: Current issues and directions for future research in the Post-COVID-19 Era. In *Managing Successful and Ethical Organizational Change*. <https://doi.org/10.4018/979-8-3693-0235-4.ch012>
- Benítez-Márquez, M. D., Sánchez-Teba, E. M., Bermúdez-González, G., & Núñez-Rydman, E. S. (2022). Generation Z Within the Workforce and in the Workplace: A Bibliometric Analysis. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.736820>
- Bernardino, S., & Teixeira, B. (2023). Authentic leadership: Does age influence how leadership is perceived? An empirical study. In *Transformational Leadership Styles, Management Strategies, and Communication for Global Leaders*. <https://doi.org/10.4018/978-1-6684-8822-5.ch011>
- Black, H. G., Dingus, R., & Milovic, A. (2020). Soft Skills as an Assessed Course Component: An Abstract. In *Developments in Marketing Science: Proceedings of the Academy of Marketing Science*. https://doi.org/10.1007/978-3-030-39165-2_179
- Bornman, D. A. J. (2019). Gender-based leadership perceptions and preferences of Generation Z as future business leaders in South Africa. *Acta Commercii*, 19(1). <https://doi.org/10.4102/ac.v19i1.708>

A SCOPING REVIEW ON GENERATION Z'S LEADERSHIP EXPERIENCE AND EXPECTATIONS

- Burns, J. M. (1978). *Leadership*. Harper & Row.
<https://scirp.org/reference/referencespapers?referenceid=1193294>
- Camberos, M. (2023). *Leader Shift: An Examination of Leadership Style Preference Across a Multi-generational Remote Workforce* [University of La Verne].
<https://researchworks.laverne.edu/esploro/outputs/doctoral/Leader-Shift-An-Examination-of-Leadership/991004201159906311>
- Capello, M. A., & Al-Khashti, B. (2020). Considerations and new approaches for talent development of gen-Z in oil and gas. *Proceedings - SPE Annual Technical Conference and Exhibition, 2020-October*.
- Choi, P.-P., Wong, S.-S., Lee, W.-M., & Tiu, M.-H. (2022). Multi-Generational Perspectives on the Competencies Required of First-Line Nurse Managers: A Phenomenological Study. *International Journal of Environmental Research and Public Health*, 19(17). <https://doi.org/10.3390/ijerph191710560>
- Choudhury, S., Dutta, M. G., Routray, P., & Dash, A. K. (2024). Organizational Factors Affecting Innovative HR Practices and Systems: A Way to Creating the New Gen Workplace. In *The Role of HR in the Transforming Workplace: Challenges, Technology, and Future Directions*. <https://doi.org/10.4324/9781003372622-10>
- Christopher Lee, C., & Lim, H. S. (2024). Examining the Relationships between Transformational and Transactional Leadership and Employee Engagement during the Covid-19 Pandemic: The Moderating Effect of Employee Generations. *Studies in Business and Economics*, 19(1), 118–136. <https://doi.org/10.2478/sbe-2024-0007>
- Das, A. K., & Malik, P. (2024). Ascertaining factors inducing engagement and stay intention among Gen Z: a qualitative study in the Indian context. *International Journal of Organizational Analysis*. <https://doi.org/10.1108/IJOA-09-2023-3994>
- de Boer, P., & Bordoloi, P. (2022). Nationality differences in Gen Z work values: an exploratory study. *Journal of International Education in Business*, 15(2), 373–392. <https://doi.org/10.1108/JIEB-09-2021-0088>
- Demirbilek, M., & Keser, S. (2022). Leadership Expectations of Generation Z Teachers Working in Educational Organizations. *Research in Educational Administration and Leadership*, 7(1), 209–245.
- Dunaetz, D. R., Wong, D. T., Draper, A. L., & Salsman, J. P. (2022). Barriers to Leading Small Groups among Generation Z and Younger Millennials: An Exploratory Factor Analysis and Implications for Recruitment and Training. *Christian Education Journal*, 19(1), 152–169. <https://doi.org/10.1177/07398913211018482>
- Dwidienawati, D., Abdinagoro, S. B., Gandasari, D., & Tjahjana, D. (2021). Do generation y and Z really concern about environmental issues? *IOP Conference Series: Earth and Environmental Science*, 729(1). <https://doi.org/10.1088/1755-1315/729/1/012137>
- Dwivedula, R. & Singh, P. (2020). What motivates Gen Z at work? An empirical analysis. *Journal of Human Resource Management*, 23(2), 40-53.
- Esteves, J., de Haro Rodríguez, G., Ballestar, M. T., & Sainz, J. (2024). Gender and generational cohort impact on entrepreneurs' emotional intelligence and transformational leadership. *International Entrepreneurship and Management Journal*, 20(2), 1295–1322. <https://doi.org/10.1007/s11365-024-00955-9>
- Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. *International Journal of Production Economics*, 162, 101–114. <https://doi.org/10.1016/J.IJPE.2015.01.003>
- Fedock, B. (2017). Online Dissertation Chairs' Perceptions on the Role of Reflective Mentoring Practices and Changing Student Cross-Cultural and Generational Worldviews. *SAGE Open*, 7(2). <https://doi.org/10.1177/2158244017705421>
- Gaan, N., & Shin, Y. (2023). Generation Z software employees turnover intention. *Current Psychology*, 42(31), 27344–27359. <https://doi.org/10.1007/s12144-022-03847-9>

- Gašková, J. (2020). Servant leadership and its relation to work performance. *Central European Business Review*, 9(3), 24–37. <https://doi.org/10.18267/j.cebr.236>
- Gerhardt, T., Wallis, A., & Crouch, F. (2021). A critical analysis of multi-logical synergies. In *Applications of Work Integrated Learning Among Gen Z and Y Students*. <https://doi.org/10.4018/978-1-7998-6440-0.ch007>
- Goh, E., & Okumus, F. (2020). Avoiding the hospitality workforce bubble: Strategies to attract and retain generation Z talent in the hospitality workforce. *Tourism Management Perspectives*, 33, 100603. <https://doi.org/10.1016/J.TMP.2019.100603>
- Goryunova, E., & Jenkins, D. (2023). Digital Natives: Shaping the Future of Leadership-Followership Dyad Worldwide. In *Handbook of Global Leadership and Followership: Integrating the Best Leadership Theory and Practice*. https://doi.org/10.1007/978-3-031-21544-5_22
- Grow, J. M., & Yang, S. (2018). Generation-Z Enters the Advertising Workplace: Expectations Through a Gendered Lens. *https://Doi.Org/10.1177/1098048218768595*, 22(1), 7–22. <https://doi.org/10.1177/1098048218768595>
- Guerrero-Velástegui, C.-A., Silva-Arcos, P., Infante-Paredes, R., & Ballesteros-López, L. (2024). Gamification as an Essential Factor for Developing Management Skills. In *Lecture Notes in Networks and Systems: Vol. 900 LNNS*. https://doi.org/10.1007/978-3-031-52667-1_5
- Gungor, A., & Alp, G. (2019). Generational motivation differences at the R&D centers: Gen Y and Gen Z. *Innovations*.
- Hampton, D., & Welsh, D. (2019). Work Values of Generation Z Nurses. *The Journal of Nursing Administration*, 49(10), 480–486. <https://doi.org/10.1097/NNA.0000000000000791>
- Han, P., Sun, Y., Chen, H., Liu, Y., Liu, S., Wang, J., Chi, C., Dai, Z., Chen, J., Zeng, L., Zeng, L., & Jiang, J. (2024). The early career resilience experience of generation Z newly graduated registered nurses in standardized training in the emergency department: a qualitative study in Shanghai. *BMC Nursing*, 23(1). <https://doi.org/10.1186/s12912-024-02043-3>
- Hasan, M., Tiara Hutamy, E., Supatminingsih, T., Ahmad, M. I. S., Aeni, N., & Dzhelilov, A. A. (2024). The role of entrepreneurship education in the entrepreneurial readiness of generation Z students: why do digital business literacy and financial literacy matter? *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2371178>
- Hirsch, S. M., Bueno, E., & Tenure, K. C. (2020). Quick Response Codes: An Innovative Approach to Just-in-Time Education. *Journal of Neuroscience Nursing*, 52(6), 308–310. <https://doi.org/10.1097/JNN.0000000000000550>
- Jeraj, M., & Aydin, G. (2021). Entrepreneurial curiosity among Generation Z: A multi-country empirical research. *Advances in Business Related Scientific Research Journal*, 12(1), 12–33.
- Kanthawongs, P. (2021). Leadership of Future Leaders: A Case Study of Business Schools' Students in Thailand. *6th International Conference on Business and Industrial Research, ICBIR 2021 - Proceedings*, 91–96. <https://doi.org/10.1109/ICBIR52339.2021.9465877>
- Kidd, W. (2012). Utilising podcasts for learning and teaching: A review and ways forward for e-Learning cultures. *Management in Education*, 26(2), 52–57. <https://doi.org/10.1177/0892020612438031>
- Kreta, S. J., & Bloom, K. (2017). Teaching maritime leadership to the millennial generation and beyond. *18th Annual General Assembly of the International Association of Maritime Universities - Global Perspectives in MET: Towards Sustainable, Green and Integrated Maritime Transport, IAMU 2017*, 2, 45–53.
- Kreutzer, R. T., Neugebauer, T., & Pattloch, A. (2018). Best Practices in Building a Digital Business Leadership. In *Management for Professionals: Vol. Part F484*. https://doi.org/10.1007/978-3-662-56548-3_4

- Lee, C. C., Lim, H. S., Seo, D. J., & Kwak, D.-H. A. (2022). Examining employee retention and motivation: the moderating effect of employee generation. *Evidence-Based HRM*, 10(4), 385–402. <https://doi.org/10.1108/EBHRM-05-2021-0101>
- Lee, Y.-C., Nguyen, M. N., & Yang, Q. (2023). Factors Influencing Vietnamese Generation MZ's Adoption of Metaverse Platforms. *Sustainability (Switzerland)*, 15(20). <https://doi.org/10.3390/su152014940>
- Leslie, B., Anderson, C., Bickham, C., Horman, J., Overly, A., Gentry, C., Callahan, C., & King, J. (2021). Generation Z Perceptions of a Positive Workplace Environment. *Employee Responsibilities and Rights Journal*, 33(3), 171–187. <https://doi.org/10.1007/S10672-021-09366-2>
- Ludviga, I., & Sluka, I. (2023). Work values and motivating factors of generation Z—the analysis of empirical research in Poland, Portugal, and Latvia. *Managing Generation Z: Motivation, Engagement and Loyalty*, 31–59. <https://doi.org/10.4324/9781003353935-4/WORK-VALUES-MOTIVATING-FACTORS-GENERATION-Z>
- Luthans, F., & Avolio, B. J. (2003). Authentic Leadership A Positive Developmental Approach. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship* (pp. 241–261). Barrett-Koehler. <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=1359403>
- Maloni, M., Hiatt, M. S., & Campbell, S. (2019). Understanding the work values of Gen Z business students. *International Journal of Management Education*, 17(3). <https://doi.org/10.1016/J.IJME.2019.100320>
- Mannheim, K. (1952). The problem of generations. In P. Kecskemeti (Ed.), *Essays on the sociology of knowledge* (pp. 276–320). Routledge and Kegan Paul. <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=1584004>
- Märginean, A. E. (2021). Gen Z Perceptions and Expectations upon Entering the Workforce. *European Review Of Applied Sociology*, 14(22), 20–30. <https://doi.org/10.1515/ERAS-2021-0003>
- McClain, A. R., Arnold, A., Palokas, M., & Christian, R. (2021). Retention strategies and barriers for millennial nurses: A scoping review protocol. *JBI Evidence Synthesis*, 19(4), 867–873. <https://doi.org/10.11124/JBIES-20-00091>
- McGaha, K. K. (2018). *An Interpretive Phenomenological Study of America's Emerging Workforce: Exploring Generation Z's Leadership Preferences*. University of Phoenix.
- Mirakyan, A., & Berezka, S. (2022). Management and COVID-19: Digital Shift to Remote Work and Remote Management. In *Communications in Computer and Information Science: Vol. 1503 CCIS*. https://doi.org/10.1007/978-3-030-93715-7_32
- Moore, K., & Kirigin, L. (2022). Dynamic Amidst Change: Exploring the Roles of Millennials and Gen Zs. In *Post-Pandemic Leadership: Exploring Solutions to a Crisis*. <https://doi.org/10.4324/9781003171737-22>
- Nakagawa, K., & Yellowlees, P. (2020). Inter-generational Effects of Technology: Why Millennial Physicians May Be Less at Risk for Burnout Than Baby Boomers. *Current Psychiatry Reports*, 22(9). <https://doi.org/10.1007/s11920-020-01171-2>
- Nguyen, M. T., & Petchsawang, P. (2024). Encouraging employees' innovative behavior via the mediating effect of work engagement and the moderating effect of their proactive personality: the case of Generation Z in Vietnam. *Cogent Business and Management*, 11(1). <https://doi.org/10.1080/23311975.2023.2301162>
- Nkiko, C., & Okuonghae, O. (2021). Achieving the 4IR University Library in Sub-Saharan Africa: Trends, Opportunities, and Challenges | Durchführung der vierten industriellen Revolution in der Universitätsbibliothek in Subsahara-Afrika: Trends, Chancen und Herausforderungen | Realizacja czw. *Folia Toruniensia*, 21, 121–140. <https://doi.org/10.12775/FT.2021.006>
- Palalar-Alkan, D. (2020). Changing face of the workforce: generation Z and its perception of leadership. *Business Economics and Management Research Review*, 3(2), 129–140. <https://dergipark.org.tr/en/pub/bemarej/issue/58484/795296>

- Pandita, D., Agarwal, Y., & Vapiwala, F. (2023). Fostering the sustainability of organizational learning: reviewing the role of Gen-Z employees. *Industrial and Commercial Training*, 55(3), 375–387. <https://doi.org/10.1108/ICT-09-2022-0064>
- Purba, M., Hadiana, D., Darraz, M. A., Ariantoni, Hendrawati, S., & Helmy, M. I. (2024). Preventing intolerant understandings, attitudes, and behaviors among Generation Z Muslims in public and Islamic schools. *Indonesian Journal of Islam and Muslim Societies*, 14(1), 31–61. <https://doi.org/10.18326/ijims.v14i1.31-61>
- Quyen, B. T., Huong, N. T. M., Han, D. T., Tung, P. H., Thu, N. T. X., & Dung, T. P. (2023). FACTORS AFFECTING GEN Z TREND OF 'STANDARD WORKING' IN VIETNAM. *Revista de Gestao Social e Ambiental*, 17(5). <https://doi.org/10.24857/rgsa.v17n5-024>
- Ravazzani, S., Mormino, S., & Amicucci, M. (2013). New digital challenges for learning: Training on and by means of web 2.0 with digital natives support. *Proceedings - 2013 IEEE 13th International Conference on Advanced Learning Technologies, ICALT 2013*, 296–298. <https://doi.org/10.1109/ICALT.2013.93>
- Rizzo, D. (2017). The CIO and the digital challenge. In *CIOs and the Digital Transformation: A New Leadership Role*. https://doi.org/10.1001/918-3-319-31026-8_3
- Saracel, N., Bilgiç, E., Topal, F., Kozak, G. T., & Kütükcü, H. (2023). Leadership Expectations of Generation Z Employees from Managers Perspectives. *Journal of Business Research - Turk*, 15(2), 970–987. <https://doi.org/10.20491/ISARDER.2023.1630>
- Scholz, C., Rennig, A., Scholz, C., & Rennig, A. (2019). *Generations Z in Europe*. Emerald Publishing Limited.
- Shenson, J. A., Adams, R. C., Ahmed, S. T., & Spickard, A. (2015). Formation of a new entity to support effective use of technology in medical education: The student technology committee. *JMIR Medical Education*, 1(2). <https://doi.org/10.2196/mededu.4676>
- Sigaeva, N., Arasli, H., Ozdemir, E., Atai, G., & Capkiner, E. (2022). In Search of Effective Gen Z Engagement in the Hospitality Industry: Revisiting Issues of Servant and Authentic Leadership. *Sustainability (Switzerland)*, 14(20). <https://doi.org/10.3390/su142013105>
- Singh, A., & Shaurya, A. (2021). Building generation Z competencies through innovative approaches to quality assurance and recognition of qualifications. *International Journal of Educational Organization and Leadership*, 28(2), 75–81. <https://doi.org/10.18848/2329-1656/CGPV28102/75-81>
- Strauss, W., & Howe, N. (1991). *Generations : the history of America's future, 1584 to 2069 / William Strauss and Neil Howe*. 538. <https://books.google.com/books/about/Generations.html?hl=tr&id=oOztAAAAMAAJ>
- Szlavi, A., Versino, S., Zanardi, I., Bolesta, K., & Jaccheri, L. (2023). Bridging Values: The Inclusion of Young Generations in Computing. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics): Vol. 14020 LNCS*. https://doi.org/10.1007/978-3-031-35681-0_10
- Tandoh, K. A., & Ebe-Arthur, J. E. (2017). Effective educational leadership in the digital age: An examination of professional qualities and best practices. In *Handbook of Research on Digital Content, Mobile Learning, and Technology Integration Models in Teacher Education*. <https://doi.org/10.4018/978-1-5225-2953-8.ch013>
- Thompson, C. W. (2023). Retaining Graduate Nurses Who Experience NCLEX Failure: Recommendations for Supporting Retest Success. *Nurse Leader*, 21(2), 299–302. <https://doi.org/10.1016/j.mnl.2022.11.013>
- Toh, S.-Y., Lim, S.-L., Kaur, R., & Too, C.-T. (2022). Can the Leadership Sense of Duty of Gen Z Be Bought? Evidence from Malaysian Gen Z Students. *Business Perspectives and Research*. <https://doi.org/10.1177/22785337221119589>
- Twenge, J. M. . (2023). *Generations*. Atria Books.

- Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management*, 36(5), 1117–1142. <https://doi.org/10.1177/0149206309352246>
- Utami, A. F., Puji, R., & Suci, N. (2018). Working Values Preferences among Gen-X, Y and Baby Boomers in Indonesia. *Pertanika Social Sciences and Humanities*, 26(T), 95–106. <http://www.pertanika.upm.edu.my/>
- Wyld, D. C. (2010). A virtual explosion or SNAFU is always better than a real one: Exploring the use of virtual worlds for simulation and training...and developing the leaders of tomorrow. *Technological Developments in Education and Automation*, 73–78. https://doi.org/10.1007/978-90-481-3656-8_15
- Yadav, R., & Chaudhari, S. (2024). Do leadership behaviour preferences differ among generations? A qualitative study of Gen X, Y, and Z in India. *Asian Business and Management*, 23(2), 337–365. <https://doi.org/10.1057/s41291-024-00266-5>
- Yavuz-Aksakal, N., & Ulucan, E. (2024). Revealing the Leadership Characteristics of the Modern Age: Generation-Z Perspective. *International Journal of Organizational Leadership*, 13(2024), 22–38. <https://doi.org/10.33844/IJOL.2024.60397>
- Yılmaz, B., Dinler Kısaçtutan, E., & Gürün Karatepe, S. (2024). Digital natives of the labor market: Generation Z as future leaders and their perspectives on leadership. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1378982>
- Yohana F., Y. F., Tan, J. D., Murwani, F. D., Bernarto, I., & Sudibjo, N. (2021). Motivating and retaining generation z faculty members in private universities. *Journal of Educational and Social Research*, 11(1), 245–255. <https://doi.org/10.36941/jesr-2021-0022>
- Zehetner, A., Zehetner, D., Lepeyko, T., & Blyznyuk, T. (2022). Generation Z's Expectations of Their Leaders: A Cross-cultural, Multi-dimensional Investigation of Leadership Styles. *Proceedings of the European Conference on Management, Leadership and Governance, 2022-Novem*, 447–455.