

Engagement Across Generations: Navigating Employee Dynamics in Higher Education Post-COVID-19

I Nyoman Sutapa^{1,*}, Magdalena Wullur², Isanti A. I. Edi³, Soeharjadi³

^{1,*} Industrial Engineering Department, Petra Christian University; mantapa@petra.ac.id

² Management Department, Sam Ratulangi University; wullurmagdalena@unsrat.ac.id

³ Bureau of General & Personnel Administration, Petra Christian University; isanti@petra.ac.id

Abstract

Introduction: The study examines academic support staff engagement at a private university in Surabaya, Indonesia, from baby boomers to Gen Z. After COVID-19, managing multigenerational employees has been challenging. Older workers fear schedule and method changes. Online communication between academic support staff and lecturers is difficult. Different generations' ICT skills affect self-scheduling. The elderly have health and family responsibilities, while younger generations lack institutional commitment, causing exhaustion, monotony, and mental and physical health issues post-pandemic. We must address physical, social, and technological disparities and their effects on mental and physical health across generations.

Objectives: This study seeks to investigate the impact of generational disparities on employee engagement amidst considerable changes in work practices and increased health concerns.

Methods: An online survey of 375 employees yielded a 44.8% response. Based on Maslach and Leiter's Vigor, Dedication, and Absorption, the survey used a Likert scale. A structured methodology, consent, and Google Forms data collection ensured anonymity and confidentiality in the study. The study's goals and significance were also explained. One-way ANOVA was used to compare generational engagement and Cronbach's alpha for reliability.

Results: Gen Z engages least and Baby Boomers most. These differences show age cohorts' work motivations and expectations. Baby Boomers are more resilient and dedicated than Gen Z, requiring customized engagement. Low participation in Generation X and Millennials suggests different workplace preferences, job satisfaction, and work-life balance.

Conclusions: The findings show how life, technology, and workplace expectations affect generational work styles. Many boomers work hard and loyally. Resilience, role dedication, and institutional duty motivate them. Early workforce entry, inexperience, and hybrid work paradigm issues may explain Generation Z's low engagement. Lower Gen Z employee engagement suggests they need more inclusive and supportive engagement strategies like work flexibility, technological integration, and fast, professional advancement. For Generation X and Millennials, moderate engagement suggests work-life balance and meaning.

Keywords: Engagement Strategies, Multigenerational Workforce, Post-COVID-19 Work Environment, Higher Education Institutions.

1. Introduction

Supervising personnel from different generations in one organization has distinct difficulties, particularly in the uncertain post-pandemic COVID-19 work environment [1, 2]. Within higher education, academic support staff from all generations adjust to a novel situation in which physical and social limitations influence work practices. Offline work involving direct physical and social interaction is restricted, necessitating a shift towards online completion of tasks. This has resulted in modifications to work schedules and methodologies [3, 4, 5, 7].

The recent change has caused uncertainty and distress among the workforce, notably impacting the older demographic [6]. The presence of communication obstacles is apparent, as demonstrated by the issues experienced by academic support personnel when engaging with the lecturers they assist, which is now predominantly limited to online contact [4, 5]. Today, employees from different generations adapt to autonomously organizing their work schedules [8].

Competence in information and communication technology (ICT) has become essential in these transformations [9]. Nevertheless, there is a discernible disparity in the aptitude for communication and utilization of information and communication technology (ICT) among different age cohorts. Usually, institutions involve the collaboration of four different generations: Baby Boomers (born before 1960), Generation X (1960-1975), Millennials (1975-1995), and Generation Z (born after 1995) [11]. Generation Y and Z demonstrate a high level of skill in multitasking and effectively using information and communication technology (ICT), while Baby Boomers and Generation X exhibit lower proficiency in these domains [12]. The discrepancy in skills and capabilities might make it difficult for institutions to manage performance properly.

Following the COVID-19 pandemic, employees from different generations face exhaustion, monotony, and apprehensions over their mental and physical well-being [13, 14, 15]. The elderly population, who frequently have several dependents, experience concerns about deteriorating health and growing familial responsibilities [16]. In contrast, the younger generations, particularly Millennials and Gen Z, demonstrate a lack of commitment towards their institutions and frequently pursue possibilities elsewhere [17]. To effectively manage the involvement of all four generations [18], it is necessary to consider the restricted physical and social gatherings, the unequal ICT capabilities among generations, and the loss of physical and mental health caused by the extended epidemic. To formulate suitable solutions, it is imperative to comprehensively analyze the variations in employee engagement levels [19].

Prior research has demonstrated inconsistent findings concerning the relationship between age and employee engagement. Although some argue that younger generations exhibit lower levels of involvement than older generations, with variations in engagement patterns across different age groups [20, 21, 22, 23, 24], other research has shown no substantial disparities [25-27]. The COVID-19 pandemic has exacerbated this situation, with research revealing alterations in employee engagement because of factors such as remote work and evolving work conditions [28-31].

Within the Indonesian setting, research has examined employee engagement across different generations, considering the effects of remote work and anxiety associated with the pandemic [32-34]. Research conducted on the Millennial generation in Indonesia emphasizes their propensity to change jobs frequently and their struggle to maintain a healthy work-life balance [35, 36]. Nevertheless, a thorough analysis of generational traits inside educational institutions remains to be accomplished. Additional investigation is necessary to enhance our comprehension of employee involvement levels after the COVID-19 pandemic, specifically with variations among different generations within higher education institutions in Indonesia. Emphasis should be placed on any modifications that occurred throughout this timeframe, particularly among the academic support personnel.

2. Literature Reviews

Employee engagement, which refers to the extent of employees' participation, Dedication, and allegiance to their firm, significantly differs among various generations in the workforce. Engaged employees exhibit elevated pride and drive, perceiving themselves as essential contributors to their organization's achievements. Kahn (37) outlines four key aspects of employee engagement: a perception of significance, security, accessibility, and interpersonal bonds. Meaningfulness pertains to the relevance and importance of employment, whereas safety incorporates the aspects of security and comfort. Availability refers to the mental state of being present and prepared, whereas connection relates to the interpersonal interactions with individuals and responsibilities. In addition to Kahn's paradigm, Maslach and Leiter [38] establish a connection between employee involvement and emotional weariness and depersonalization in the workplace. They propose three dimensions: Vigor, Dedication, and Absorption. Vigour covers vitality and elation, Dedication entails devotion and allegiance, and Absorption relates to focus and complete attentiveness. Ryan and Deci [39] provide additional details on the connection between engagement, satisfaction, and fulfilling fundamental needs for autonomy, competence, and interpersonal relationships.

Within the workplace, these participation characteristics are expressed in distinct ways among different generational groups. Baby Boomers, born between 1946 and 1964, are frequently characterized as diligent and content with ongoing progress. The advent of television shaped their outlook, and they are typically referred to as an optimistic generation. They commonly have a high level of loyalty and show respect for the hierarchical structure inside the organization [48], along with a great dedication to work [54]. Generation X, born between 1965 and 1980, came of age during the initial stages of information technology. They were known for their strong inclination towards autonomy, independence, and healthy work-life balance. They can adjust, take charge of their duties, and prioritize positive professional connections [50].

Millennials, also known as Generation Y and born between 1980 and 1994, prioritize achieving a harmonious equilibrium between their professional and personal lives. They possess a high level of education and aspire to engage in work that holds significance and purpose. They focus on preserving their personal life and highly regard open and straightforward communication [66]. Generation Z, often known as the i-generation, refers to individuals born between 1995 and 2010. This generation is characterized by their strong internet connection, creativity, and emphasis on social activities. They are attracted to start-up environments, adept at multitasking, and have a strong commitment to environmental sustainability. Examining employee involvement by generation demonstrates varied levels of engagement among various cohorts [55, 56]. Discrepancies in values and objectives are responsible for these discrepancies [57, 58]. For example, Generation X prioritizes perks and flexible work schedules, but Baby Boomers place greater importance on success and positively impacting society [55]. Although Millennials share Gen X's appreciation for work-life balance, they tend to prioritize their lifestyle and are likelier to quit jobs that do not correspond with their objectives [60]. According to White (61), despite their differences, all generations have comparable motivators, such as sustainable work and promotion chances, and they have similar expectations of organizational leaders.

The engagement model proposed by Maslach and Leiter [38], which examines Vigor, Dedication, and Absorption, is commonly employed to analyze employee engagement among academic support personnel [42, 43]. Vigour pertains to the combination of vitality and tenacity [44], Dedication refers to a feeling of intense connection and pride [45], and

Absorption denotes focused attention and active engagement [46]. Metrics used to assess these aspects encompass physical prowess, zeal, professional satisfaction, engagement, focus, and integration within the work setting [47].

When analyzing levels of engagement among different generations, a notable discovery is that most employees exhibit passive involvement. The highest levels of active engagement are observed among Baby Boomers, while the lowest levels are found among Gen Y and Z [55, 56]. They propose the necessity of customized engagement tactics to cater to the distinct requirements and incentives of each generational group. Understanding the disparities in employee involvement across different generations is essential for formulating efficient management tactics. Organizations should acknowledge and accommodate each generation's varied values, objectives, and expectations to cultivate an efficient and harmonious work environment.

3. Methods

3.1. Participants

The study examined the degree of employee engagement among academic support staff at a private university in Surabaya, Indonesia. The study included individuals from different generations, namely Baby Boomers, Gen X, Gen Y, and Gen Z. This group of employees represents a diverse workforce that has adjusted to a hybrid work model, combining office and remote work, in the aftermath of the COVID-19 pandemic. The study included an extensive online survey administered using Google Forms, specifically targeting 375 workers to assess their level of involvement using 32 indicators that cover three essential aspects: Vigor, Dedication, and Absorption. The survey was fully completed by 168 employees, which accounts for a response percentage of 44.8%. The respondents' ages ranged from 24 to 65 years, offering a comprehensive viewpoint across different generations. The breakdown consisted of 19 Baby Boomers (11.3%), 91 Gen X (54.2%), 45 Gen Y (26.8%), and 13 Gen Z personnel (7.7%). Significantly, the female respondents accounted for 52.8% of the total, providing valuable perspectives on the gender dynamics present in this diverse workforce spanning multiple generations. The study's extensive demographic coverage and high response rate yield a valuable dataset for comprehending how various generations interact with their employment in a swiftly changing professional environment following the epidemic.

3.2. Questionnaires

According to Maslach and Leiter [38], the employee engagement questionnaire classifies questions into three dimensions: Vigor, Dedication, and Absorption. The Vigor dimension, designed to assess employee excitement and energy, consists of 12 items divided into three sub-scales. The mentioned factors consist of "possessing a fervour for work" (V1, comprising five elements), "striving for excellence in work" (V2, consisting of three elements), and "maintaining focus despite difficult circumstances" (V3, comprising four elements). The Dedication dimension aims to evaluate the level of commitment and persistence. It consists of ten items that are divided into four sub-scales: "have the responsibility" (D1, two items), "proud of the job done" (D2, three items), "feel challenged with things on task" (D3, three items), and "useful for others" (D4, two items). The Absorption dimension assesses focus and concentration using ten items divided into three sub-scales: "Difficulty in disengaging from work" (A1, three items), "Enjoyment of work; losing track of time" (A2, four items), and "Ability to concentrate on tasks" (A3, three items).

Participants were given explicit instructions to evaluate each item according to their own experiences during both the pandemic and post-pandemic periods, utilizing a Likert scale ranging from 1 (indicating strong disapproval) to 5 (indicating strong agreement). The alpha values ranging from 0.821 to 0.882 indicate that each dimension or indication block is reliable and legitimate, ensuring the reliability of all measurement items. The instrument's validity and reliability are consistent with the Utrecht Work Engagement Scale (UWES) [38], as demonstrated by including all measuring instruments in Table 2.

3.3. Procedure

The research methodology employed in this study carried out both during and after the COVID-19 pandemic, was meticulously structured and implemented in multiple phases. The study was situated within the university's implementation of a hybrid work paradigm, which combines both in-office work (WFO) and remote work (WFH) in response to the influence of the pandemic on work settings. Before starting the research, we got the methodology and ethics approval, ensuring that the study followed the required academic and ethical guidelines. The study sought the agreement of the university's head of academic support units to participate. The unit heads were notified privately about the research goals and the process for filling out the questionnaire. Following the acquisition of consent, the unit leaders effectively communicated the research aims and the questionnaire technique to their personnel, ensuring that the material was provided clearly and thoroughly to potential participants. The researchers subsequently disseminated the questionnaire to the staff via an online platform utilizing Google Forms. This approach enabled convenient participant access and optimized data collection. The questionnaire was intentionally created to ensure anonymity and preserve the confidentiality of responses. In addition, participants were obligated to sign a consent form confirming their voluntary involvement in the study. After finishing the questionnaire, participants were given a concise informational pamphlet. This booklet highlighted the cruciality of preserving and augmenting staff engagement, emphasizing its relevance for

strengthening institutional performance. The project aims to systematically collect extensive data on employee engagement in a hybrid work environment, providing valuable insights into the field.

3.4. Data Analysis

The study carefully evaluated the reliability and validity of the chosen questionnaires using Cronbach's alpha coefficient, a widely acknowledged statistical measure for assessing the internal consistency of survey instruments. This methodology guarantees that the questionnaires are dependable and accurate in measuring the constructs they are designed to evaluate. In order to analyze the data further, the study utilized one-way ANOVA (Analysis of Variance) [67] as a statistical technique to investigate the variation within various generational groups and compare it to the variation between these groups. The main purpose of employing One-way ANOVA was to detect any significant disparities in employee engagement among different generational cohorts. This method is especially advantageous for comprehending the variations in employee engagement levels among different groups in the organizational context, such as Baby Boomers, Generation X, Millennials, and Generation Z. All statistical analyses, including the calculation of Cronbach's alpha and the implementation of One-way ANOVA, were performed using IBM® SPSS® Statistics version 23.

4. Results

The demographic characteristics of the participants, as outlined in Table 1, indicate an evenly balanced gender distribution, with an equal number of male and female individuals participating in the research. Approximately 44% of the sample comprises married individuals with two to three dependents. Subsequently, there is a cohort of 23.8% who are married individuals without any dependents, while 14.3% are married individuals with a single child. The remaining 6% are married individuals with four or more children considered dependents.

Concerning their positions inside the organization, a substantial proportion of the respondents (79.2%) occupied the post of section heads. In comparison, only 10.1% of individuals serve as administrative personnel, while a smaller percentage hold unit chiefs' and field officers' positions. Regarding the primary source of family income, the majority (63.1%) reported depending on a single company, while 35.7% indicated a shared income between husband and wife. Merely 1.2% indicated that sources or enterprises other than their own were their main source of income.

Table 1. Demographic Characteristics of the Study Population (n = 168)

Variables	Characteristics	n (%)	Employee Engagement Mean ± Std	Sig.
Gender	Male	81 (48.2%)	4.23 ± 0.45	0.57
	Female	87 (52.8%)	4.10 ± 0.41	
Marital status and family burden	Single	40 (23.8%)	4.01 ± 0.40	0.03*
	Married without the family burden	20 (11.9%)	4.22 ± 0.48	
	Married with one family burden	24 (14.3%)	4.07 ± 0.49	
	Married with 2-3 family burden	74 (44.0%)	4.22 ± 0.40	
	Married with > 3 family burdens	10 (6.0%)	4.40 ± 0.41	
Position	Head of the unit	12 (7.1%)	4.53 ± 0.39	0.01*
	Head of division	133 (79.2%)	4.13 ± 0.44	
	Administration staff	17 (10.1%)	4.09 ± 0.23	
	Field officer	6 (3.6%)	4.33 ± 0.51	
The main source of income	Only from one income	106 (63.1%)	4.15 ± 0.45	0.35
	Husband and wife's income	60 (35.7%)	4.16 ± 0.39	
	Other income	2 (1.2%)	4.61 ± 0.56	

Further examination using the independent sample t-test and ANOVA demonstrated noteworthy disparities in employee involvement depending on marital status, number of dependents, and job position. Education staff who are married and have four or more children had notably higher levels of engagement in comparison to those with different marital statuses. Unit heads exhibited the highest level of engagement among all roles when seen from a positional standpoint. Notably, the study revealed no substantial disparities in employee involvement based on gender or the primary source of income.

The employee engagement construct consists of 32 question items, which are divided into three dimensions: Vigor (12 items), Dedication (10 things), and Absorption (10 items). The validity and reliability of these items were thoroughly tested, as outlined in Table 2. The validity test findings revealed that all question items were legitimate. Each of the three dimensions showed a Cronbach's Alpha coefficient of over 0.7, suggesting strong reliability. The Vigor, Dedication, and Absorption coefficients were 0.856, 0.882, and 0.824, respectively. The mean score for each item varied from 3.39 to 4.68, with the greatest mean observed in the Vigor dimension, followed by Dedication and then Absorption. The coefficient of variation, the ratio of the standard deviation to the mean of the item scores, exhibited minimal variability, ranging from 11% to 30%.

The variations in participation levels among the four generations were analyzed using a one-way ANOVA test (Table 3). The results revealed that Gen Z demonstrated the least amount of employee engagement, which was notably lower than that of Gen X. Gen Y's engagement was marginally higher than that of Gen Z but still significantly lower than both Gen X and Baby Boomers, with Baby Boomers displaying the highest levels of engagement.

Table 2. Statistical Descriptive of Employee Engagement Scale

Dimension	Indicators	Items (score scale 1-5)	Mean	Std.	
Vigor, Cronbachs Alpha=0.856	Have a passion for work.	Enthusiasm when starting/going to work	4.18	0.81	
		Easy to collect energy while working	3.83	0.77	
		Enthusiasm to do the given task	4.20	0.79	
		Not quickly tired in completing work	3.82	0.86	
		Trying to maintain enthusiasm in completing work	4.45	0.62	
	Try your best at work.	Try your best to get the job done	4.68	0.50	
		Seriously solve work-related problems	4.64	0.53	
		Always try to maintain the quality of work	4.54	0.61	
	Stay on task even under challenging circumstances	Do not complain about work despite having difficulties	3.80	0.75	
		Trying various alternatives when facing difficulties at work	4.52	0.58	
		Choose to persist so that the work is completed even though it is difficult	4.57	0.57	
		Do not leave work to others, even if it is difficult	4.22	0.74	
	Cronbachs	Have responsibility	Feeling uncomfortable when leaving the task/responsibility	4.55	0.76
			When given a responsibility, be responsible for completing it	4.53	0.62
Proud of the job done		Proud of the work/tasks assigned	4.10	0.79	
	Take pride in achieving a performance that can inspire others	4.24	0.72		
Dedication, Alpha=0.882	Feel challenged with things on task	The work done is appreciated by others	4.17	0.80	
		Assigned tasks/jobs, providing challenges to complete	4.29	0.79	
		The assigned job is a challenge to be conquered	4.27	0.73	
	Useful for others	There is always something new in the job that makes it challenging	4.46	0.64	
		Through this work, it feels like a good influence on others	4.02	0.79	
	Cronbachs	Find it difficult to get away from work	This work can provide benefits to others	4.14	0.74
			Willing to spend much time to get the job done	4.08	0.82
		Enjoy work; forget the time	It is hard to stop when doing work	3.71	0.79
			It is hard not to think about the work to be done	4.04	0.81
	Absorption, Alpha=0.824	Concentrate on doing the task	When working, time flies so fast	3.85	0.93
Often, they do not realize work time is almost over when at work			4.08	0.89	
Get carried away when doing work			4.15	0.80	
Happy with the work that must be done at work		Happy with the work that must be done at work	4.26	0.80	
		Do not let personal matters affect your mind at work	4.37	0.86	
Minor problems at work do not interfere with work concentration	Do not think about anything else outside of work when working	3.39	1.02		
	Minor problems at work do not interfere with work concentration	3.52	0.85		

Upon conducting a more detailed examination of the engagement construct, specifically examining the dimensions of Vigor, Dedication, and Absorption, it was found that Vigor, which is characterized by high energy, resilience, a strong work ethic, and perseverance in the face of challenges, did not show any significant differences among the four generations (as shown in Table 3). Across different generations, several indicators, such as 'exhibiting exceptional effort in the workplace' (V2) and 'maintaining focus and productivity even in difficult situations' (V3), displayed commonalities within the Vigor framework. The concept of 'Trying the best at work' (V2) encompassed actions such as striving for excellence in job performance (V21), resolving work-related challenges (V22), and upholding high standards of work quality (V23). The measurement of 'Staying on task even under hard conditions' (V3) involved assessing behaviours such as attempting different approaches when encountering work obstacles (V32), demonstrating perseverance in completing tasks despite difficulties (V33), and not delegating work to others even when it is arduous (V34). Nevertheless, the measure of 'having a passion for work' (V1) was shown to be highest among those from the Baby Boomer generation and lowest among those from Generation Z. This conclusion is supported by observations related to factors such as the level of enthusiasm displayed while commencing work (V11), the ability to acquire energy while working (V12) rapidly, the enthusiasm exhibited towards assigned tasks (V13), and the ability to sustain work without tiring fast (V14).

Table 3. Vigor, Dedication, Absorption and Engagement Difference Across Generations

Generation	Engagement	Vigor	Dedication	Absorption					
(i)	(j)	Mean diff. (i-j)	Sig.	Mean diff. (i-j)	Sig.	Mean diff. (i-j)	Sig.	Mean diff. (i-j)	Sig.
Gen Z	Gen Y	-0.06	0.97	-0.11	0.84	0.17	0.70	-0.22	0.52
	Gen X	-0.34	0.03*	-0.30	0.07	-0.19	0.56	-0.53	0.00*
	Baby Boom	-0.36	0.07	-0.33	0.13	-0.22	0.61	-0.53	0.02*
Gen Y	Gen Z	0.06	0.97	0.11	0.84	-0.17	0.70	0.22	0.52
	Gen X	-0.28	0.00*	-0.19	0.06	-0.36	0.00*	-0.31	0.00*
	Baby Boom	-0.30	0.04*	-0.22	0.22	-0.39	0.03*	-0.31	0.10
Gen X	Gen Z	0.34	0.03*	0.30	0.07	0.19	0.56	0.53	0.00*
	Gen Y	0.28	0.00*	0.19	0.06	0.36	0.00*	0.31	0.00*
	Baby Boom	-0.02	1.00	-0.03	0.99	-0.03	0.99	0.00	1.00
Baby Boom	Gen Z	0.36	0.07	0.33	0.13	0.22	0.61	0.53	0.02*
	Gen Y	0.30	0.04*	0.22	0.22	0.39	0.03*	0.31	0.10
	Gen X	0.02	1.00	0.03	0.99	0.03	0.99	-0.00	1.00

The Dedication dimension of employee involvement exhibited diverse patterns across different generations. The level of commitment exhibited by Generation Z was determined to be comparable to that of the other three generations. Nevertheless, Generation Y exhibited notably lower Dedication levels than Generation X and the Baby Boomers. There was no notable disparity in the levels of commitment between Gen X and Baby Boomers. Upon closer analysis of Dedication, as depicted in Figure 1, several areas of divergence were observed. The disparity was notably evident in the 'Proud of the job done' (D2) metric, encompassing factors such as satisfaction with the allotted work/tasks (D21) and perception of recognition from others for the completed work (D23).

On the other hand, we noticed parallels in the level of Dedication across different generations in the 'Have responsibility' (D1) category. This was determined by assessing factors such as feeling uneasy when leaving a task or responsibility (D11) and taking responsibility for completing a particular task or obligation (D12). Similarities were also observed in the 'Feel challenged by things on task' (D3) indicator, evaluated through items such as perceiving the assigned job as a conquerable problem (D32) and discovering new obstacles inside the job (D33).

Gen Z displayed notably lower levels on the Absorption dimension than Gen X and Baby Boomers. Gen Y exhibited a notably lower level of Absorption compared to Gen X. A thorough examination of Figure 1 revealed that this disparity in Absorption between generations is apparent in the 'Find it challenging to get away from work' (A1) indicator, which includes factors such as struggling to stop working (A12) and facing difficulties in not thinking about work (A13). The indicator 'Enjoy work, forget the time' (A2), which includes items such as being aware that work time is nearly finished (A22) and becoming absorbed in work (A23), showed variability. Similarly, the indicator 'Concentrate on doing the task' (A3), which includes items such as not allowing thoughts about anything unrelated to work (A32), also exhibited variation. Meanwhile, the absorption patterns of Baby Boomers were distinct from those of Gen X and Y, whereas the absorption levels of Gen Y and Z did not exhibit a notable disparity.

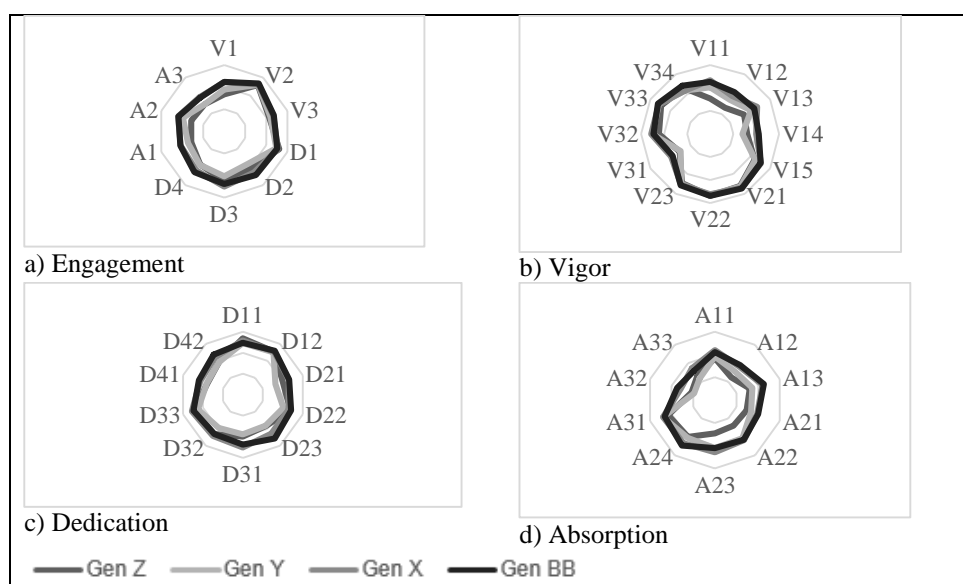


Figure 1. Differences in (a) Engagement, (b) Vigor, (c) Dedication, (d) Absorption across Generations

5. Discussion

The study's comprehensive examination of employee engagement among various generations reveals fascinating observations regarding the distinct attitudes and behaviours of Baby Boomers, Generation X, Millennials (Gen Y), and Generation Z. This investigation is crucial for understanding the complex dynamics of a workforce of multiple generations. It emphasizes the impact of generational diversity on aspects such as enthusiasm for work, satisfaction with job duties, involvement in work activities, and overall commitment.

The study's findings demonstrate a range of excitement, vitality, and endurance among different generations. Remarkably, Baby Boomers demonstrate an exceptional enthusiasm for work, likely due to their strong work ethic and profound loyalty. In contrast to Gen Z's perspective, although they start work enthusiastically, maintaining high levels of energy and focus throughout the day seems more difficult for them. The disparity in work enthusiasm among generations can be ascribed to divergent job expectations and life experiences.

An essential facet of the study involves investigating the phenomenon of job satisfaction. Older generations, namely Baby Boomers and Gen X, frequently exhibit a profound sense of satisfaction in their work, potentially due to their longer periods of employment and a stronger emotional attachment to their roles. In contrast, Millennials and Gen Z necessitate increased external acknowledgement and admiration to cultivate comparable levels of job satisfaction.

The study also examines the way different generations interact with their employment. Baby Boomers frequently encounter difficulties while attempting to detach themselves from professional responsibilities, highlighting their strong devotion and Dedication. The younger generations typically embrace a more equitable approach, placing importance on achieving a harmonious work-life balance, facilitating their ability to detach from work.

Another crucial discovery pertains to the disparity in concentration levels among different generations. Experienced personnel typically demonstrate an enhanced capacity to concentrate intensely on work assignments, possibly developed from years of practice. This capability differs from younger generations, who may encounter more diversions or emphasize multitasking more.

The study uncovers notable differences between generations in terms of their levels of participation (as seen in Table 4), which are categorized as active engagement, passive engagement, and active disengagement. Significantly, Baby Boomers exhibit the highest level of active engagement at 36.8%, with Gen X trailing behind. This indicates that seasoned employees gain more satisfaction and involvement from their positions than their younger peers. Conversely, Generation Y and Generation Z, comprising fewer than 10% of the workforce who are actively involved, seek work environments that are more dynamic and focused on advancement. The prevalence of actively disengaged employees is highest among Baby Boomers and Gen Z, suggesting possible discrepancies between their aspirations and the conditions of their workplaces.

These observations emphasize the intricacy of employee involvement in the contemporary and varied workforce. They stress the importance of companies creating engagement strategies specifically designed to meet each generational group's distinct needs and goals. By comprehending and resolving these disparities, organizations can foster a peaceful and efficient workplace where everyone feels appreciated, comprehended, and driven, improving overall organizational performance and employee contentment.

Table 4. Engagement level across generation

Generation	Actively Disengaged <i>n</i> (%)	Passive Engaged <i>n</i> (%)	Actively Engaged <i>n</i> (%)
Gen Z	2 (15.4%)	10 (76.9%)	1 (7.7%)
Gen Y	5 (11.1%)	36 (80.0%)	4 (8.9%)
Gen X	3 (3.3%)	62 (68.1%)	26 (28.6%)
Baby Boomer	3 (15.8%)	9 (47.4%)	7 (36.8%)
All Generations	13 (7.7%)	117 (69.7%)	38 (22.6%)

6. Conclusion

This comprehensive study provides valuable insights into the dynamics of employee engagement within higher education institutions in the post-COVID-19 era, with a particular focus on the generational cohorts of Baby Boomers, Generation X, Millennials (Gen Y), and Generation Z. The findings present a nuanced picture of how each generation engages with their work environment, influenced by distinct life experiences, technological familiarity, and workplace expectations. The research finds that Baby Boomers, traditionally defined by their strong work ethic and loyalty, display the highest levels of involvement. This high engagement can be linked to their resilience, devotion to their roles, and obligation towards their institution. Generation Z shows the lowest engagement levels on the other end of the scale, presumably due to their embryonic entry into the workforce, lesser working experience, and the problems created by the hybrid work paradigm. This lower engagement among Gen Z employees highlights a need for more inclusive and supportive engagement tactics that resonate with their values and expectations, such as work flexibility, technological integration, and possibilities for quick, professional progress. The moderate engagement levels reported by Generation X and

Millennials reflect a balancing act between professional aspirations and personal life, suggestive of their emphasis on work-life balance and a desire for meaningful employment. This understanding is vital for higher education institutions to establish an environment that resonates with the expectations of these generations.

Moreover, the study underscores the necessity of recognizing the variety within the workforce and the need for individualized approaches to employee engagement. It highlights that more than a one-size-fits-all strategy is needed to satisfy the specific demands and motivational drives of distinct generational groups. Institutions that identify and cater to these various demands are likelier to establish a harmonious and productive work environment. Going forward, our research opens the door to deeper inquiries into the complicated landscape of multigenerational employee engagement. Future research should utilize qualitative approaches to delve deeper into the personal narratives and experiences of employees from different generational cohorts. This approach would offer a better, more nuanced knowledge of the elements impacting involvement. Additionally, longitudinal research tracking engagement trends over time and comparative studies across different cultural and geographical contexts provide a broader view. Research could significantly contribute to developing successful engagement strategies that increase institutional performance and personal well-being in the shifting world of higher education.

References

1. Kumar, S. S., Subramanian, N. Generational diversity in the workplace: Challenges and opportunities in the aftermath of COVID-19. *Global Business Review*. 2021, 22(1), 214-231.
2. Murphy, M. P. Cross-generational conflict in the workplace: A review of the literature. *Journal of Management, Spirituality & Religion*. 2020, 17(4), 353-367.
3. Kalra, S., Sood, S. Impact of COVID-19 on the workplace: The way forward. *Journal of Health Management*, 2020, 22(2), 157-161.
4. Nausheen, S.; Shah, M. Understanding employee engagement during social distancing: A study of Indian service sector organizations. *Journal of Human Resource Management*. 2020, 8(4), 33-43.
5. Szabó, R. Z.; Almási, A. Leadership in the home office: A new challenge in the COVID-19 pandemic. *Journal of Applied Economic Sciences*. 2020, 15(6), 1179-1186.
6. Zhang, Y.; Ma, Z. Impact of COVID-19 on mental health and personal well-being among employees in the workplace. *Journal of Psychosocial Research*. 2020, 15(2), 295-302.
7. Chua, R. Y. J.; Roth, Y. Rethinking the boundaries of control and communication during COVID-19. *Academy of Management Discoveries*. 2021, 7(1), 89-93.
8. Farris, G. F.; Hutchison, E. L. Flexibility, work-life balance, and job satisfaction during COVID-19. *Journal of Vocational Behavior*. 2021, 125, 103504.
9. Bhattacharjee, A.; Bhowal, S. Impact of COVID-19 on ICT-enabled teaching-learning in higher education. *Education and Information Technologies*. 2021, 26(1), 1-24.
10. Kalaraj, P.; Krishnaswamy, K. N. Role of ICT in higher education during COVID-19 pandemic: A study of Indian students' perception. *Education and Information Technologies*. 2020, 25(6), 5527-5545.
11. Basic, L. Examining Generational Differences in The Workplace: Employee Engagement Practices and their Impact on Retention of Different Generations of Human Resources Employees in Higher Education. *Dissertations*. 2018, 207. https://digitalcommons.brandman.edu/edd_dissertations/207.
12. Mishra, S.; Dwivedi, Y. K.; Rana, N. P. Digital transformation during a global pandemic: A review of the enabling role of ICT. *Journal of Business Research*. 2020, 118, 360-368.
13. Berman, M. G.; Nir, Y. Covid-19, fear, and the future: An essay by Michael G. Berman and Yair Nir. *Social Science & Medicine*. 2021, 278, 113965.
14. Chong, Y. Y.; Cheng, H. Y.; Chan, H. Y.; Chien, W. T. Knowledge, attitudes, and practices towards COVID-19 among young adults with mental health disorders: A qualitative study. *International Journal of Mental Health Nursing*. 2021, 30(1), 111-120.
15. Ren, Y.; Qian, W.; Li, Z.; Li, J.; Chen, Z.; Guo, J. Public mental health under the long-term influence of COVID-19 in China: Geographical and temporal distribution. *Journal of Affective Disorders*. 2020, 277, 893-900. <https://doi.org/10.1016/j.jad.2020.08.045>.
16. Karayannis, G.; Awuah, A. The impact of COVID-19 on Generation X and baby boomers in the United States: A research agenda. *Journal of Business Research*. 2020, 117, 511-514.
17. Dutta, M. J.; Basu, R. COVID-19 pandemic and the emergence of the "digital generation". *Journal of Creative Communications*. 2021, 16(1), 1-5.
18. O'Neill, V.; Xiao, Q. Ensuring engagement during a crisis: How leaders can motivate and sustain employee engagement during COVID-19. *Journal of Business and Psychology*. 2020, 35(4), 409-415.
19. Bhatnagar, N.; George, B.; Pang, A. Examining remote work and work-life balance in the context of COVID-19. *Journal of Workplace Learning*. 2021, 33(1), 65-81.
20. Ferreira, P. Exploring employee engagement across generations in hospitality: A cross-sectional study of European countries. In *2nd International Conference on Tourism Research*. 2019, p. 110.

21. Suomäki, A.; Kianto, A.; Vanhala, M. Work engagement across different generations in Finland: A Qualitative Study of Boomers, Yers and Xers. *Knowledge and Process Management*. 2019, 26(2), 140-151. <https://doi.org/10.1002/kpm.1604>.
22. Brightenburg, M. E.; Whittington, J. L.; Meskelis, S.; Asare, E. Job engagement levels across the generations at work. In *Global applications of multigenerational management and leadership in the transcultural era*. 2020, pp. 108–137. IGI Global. <https://doi.org/10.4018/978-1-5225-9906-7.ch004>.
23. Atieq, M. Q. Comparative analysis of employee engagement in employees Generation X, Y, and Z. *Al-Amwal: Jurnal Ekonomi dan Perbankan Syariah*. 2019, 11(2), 285-299.
24. Lapoint, P. A.; Liprie-Spence, A. Employee Engagement: Generational Differences in the Workforce. *Journal of Organizational Psychology*. 2017, 17(5).
25. Pankowska, M.; Kalka, A. The influence of generational diversity on work engagement: The role of age, tenure, and job satisfaction. *Journal of Business Research*. 2018, 88, 372-379.
26. Gruman, J. A.; Saks, A. M.; Zweig, D. I. *Organizational Behavior*. Cengage Learning, 2021.
27. Kanfer, R.; Chen, G. *Motivation in organizational behaviour: History, advances and prospects*. Routledge, 2016. <https://doi.org/10.1016/j.obhdp.2016.06.002>.
28. Wang, X.; Yang, C.; Liu, Y. From work-family conflict to work-family enrichment: The role of employee engagement in the context of COVID-19. *Journal of Business Research*. 2021, 125, 142–151.
29. Alghamdi, M. G.; Alqarni, A. S.; Al-Rashdi, M. A.; Alharthi, M. S. The impact of COVID-19 on employee engagement: An empirical study from Saudi Arabia. *Sustainability*. 2021, 13(1), 88.
30. Adeyeye, O. A.; Adeyeye, B. O. Work from home: Implications for employee engagement and organizational performance. *European Journal of Business and Management Research*. 2020, 5(3), 16-27.
31. Den Hartog, D. N.; Boselie, P.; Paauwe, J. Employee well-being and the COVID-19 crisis: Introduction to the special issue. *Journal of Organizational Behavior*. 2020, 41(4), 309-315.
32. Hidayati, N.; Ardiningsih, P. Employee engagement pada work from home di tengah pandemi COVID-19. *Jurnal Manajemen dan Kewirausahaan*. 2021, 13(1), 15-24.
33. Nurlina, N.; Saputra, R. Pengaruh work from home dan kecemasan terhadap employee engagement pada masa pandemi COVID-19. *Jurnal Manajemen dan Pemasaran Jasa*. 2020, 13(2), 178-191.
34. Arumsari, T.; Yudiarso, A. Dampak pandemi COVID-19 terhadap employee engagement di sektor bisnis. *Jurnal Bisnis dan Manajemen*. 2020, 3(2), 198-210.
35. Larasati, D. P.; Hasanati, N. The effects of work-life balance towards employee engagement in the millennial generation. In *4th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2018)* (2019, pp. 390-394). Atlantis Press. <https://doi.org/10.2991/acpch-18.2019.93>.
36. Frian, A.; Mulyani, F. Millenials employee turnover intention in Indonesia. *Innovative Issues and Approaches in Social Sciences*. 2018, 11(3), 90-111. <https://doi.org/10.12959/issn.1855-0541.IIASS-2018-no3-art5>.
37. Kahn, W. A. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*. 1990, 33(4), 692-724. <https://doi.org/10.5465/256287>.
38. Maslach, C.; Leiter, M. P. Early predictors of job burnout and engagement. *Journal of Applied Psychology*. 2008, 93(3), 498-512. <https://doi.org/10.1037/0021-9010.93.3.498>.
39. Ryan, R. M.; Deci, E. L. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*. 2000, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>.
40. Shuck, B.; Reio, T. G. Employee engagement and well-being: A moderation model and implications for practice. *Journal of Leadership & Organizational Studies*. 2014, 21(1), 43-58. <https://doi.org/10.1177/1548051813494240>.
41. Saks, A. M. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*. 2006, 21(7), 600-619. <https://doi.org/10.1108/02683940610690169>.
42. Sultana, N.; Hoque, K. E. 2021 Exploring employee engagement of academic staff in private universities of Bangladesh: An empirical investigation. *Journal of Public Affairs*. 2006, e2662.
43. Rahman, S. M.; Hossain, M. M. Employee engagement in the higher education sector of Bangladesh: an empirical study. *International Journal of Higher Education*. 2020, 9(3), 106-118.
44. Schaufeli, W. B.; Bakker, A. B.; Salanova, M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*. 2006, 66(4), 701-716. <https://doi.org/10.1177/0013164405282471>.
45. Schaufeli, W. B.; Salanova, M.; González-Romá, V.; Bakker, A. B. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*. 2002, 3(1), 71-92. <https://doi.org/10.1023/A:1015630930326>.
46. Schaufeli, W. B.; Bakker, A. B. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*. 2004, 25(3), 293-315. <https://doi.org/10.1002/job.248>.
47. Schaufeli, W. B.; Bakker, A. B. *Utrecht Work Engagement Scale: Preliminary manual*. Occupational Health Psychology Unit. 2003, Utrecht University and Academic Medical Center. <https://doi.org/10.1037/t07164-000>.

48. Kupperschmidt, B. R. Multigenerational employees: Strategies for effective management. *Health Care Management*. 2000, 19(1), 65-76. <https://doi.org/10.1097/00126450-200019010-00011>.
49. Basic, L. Examining Generational Differences in The Workplace: Employee Engagement Practices and their Impact on Retention of Different Generations of Human Resources Employees in Higher Education. Dissertations. 2018, 207. https://digitalcommons.brandman.edu/edd_dissertations/207.
50. Pew Research Center. Millennials overtake Baby Boomers as America's largest generation. 2016. Retrieved from <http://www.pewresearch.org/fact-tank/2016/04/25/millennials-overtake-baby-boomers/>.
51. Tsai, M. Human resources management solutions for attracting and retaining millennial workers [e-book]. 2017. <https://doi.org/10.4018/978-1-5225-2044-3>.
52. Lancaster, L.C.; Stillman, D. When Generations Collide Who They Are. Why They Clash. How to Solve the Generational Puzzle at Work. 2002. New York: Harper Business.
53. Arsenault, P.; Patrick, M. Are the shoes appropriate to wear?: A study of cohort values. *J Target Meas Anal Mark*. 2008, 16, 99–107. <https://doi.org/10.1057/jt.2008.6>.
54. Zemke, R.; Raines, C.; Filipczak, B. Generations at work: Managing the clash of veterans, boomers, Xers and nexters in your workplace. 1999, (2nd ed.). New York, NY: American Management Association.
55. Dogan, G.; Gen-Qing, C.; Ersem, K. Generational differences in work values and attitudes among frontline and service contract employees. *International Journal of Hospitality Management*. 2012. <https://doi.org/10.1016/j.ijhm.2012.04.002>.
56. Jeongdo, P.; Dogan, G. Generation Effect on Work Engagement among U.S Hotel Employees. *International Journal of Hospitality Management*. 2012, 31, 1195 – 1202. <https://doi.org/10.1016/j.ijhm.2012.02.007>.
57. Pech, R. J.; Slade, B. Employee disengagement: Is there evidence of a growing problem? *Handbook of Business Strategy*. 2006, 7(1), 21-25. <https://doi.org/10.1108/10775730610618585>.
58. Shuck, B. Four emerging perspectives of employee engagement: An integrative literature review. *Human Resource Development Review*. 2011, 10, 304–328. <https://doi.org/10.1177/1534484311410840>.
59. Murphy, M. M. Exploring generational differences among Millennials, Gen Xers, and Baby Boomers: Work values, manager behaviour expectations, and the impact of manager behaviours on work engagement. Doctoral dissertation, 2011. Available from ProQuest Dissertations & Theses Global. (UMI No. 3487758).
60. Weingarten, R. M. Four generations, one workplace: A Gen X-Y staff nurse's view of team building in the emergency department. *Journal of Emergency Nurse*. 2009, 35, 27–30. <https://doi.org/10.1016/j.jen.2008.02.017>.
61. White, M. Rethinking generational gaps in the workplace: Focus on shared values. 2011. Retrieved from <https://www.kenan-flagler.unc.edu/executive-development/about/~media/C8FC09AEF03743BE91112418FEE286D0.ashx>.
62. Akhavan Sarraf, A. R.; Abzari, M.; Nasr Isfahani, A.; Fathi, S. Generational differences in job engagement: a case study of an industrial organization in Iran. *Industrial and Commercial Training*. 2017, 49(3), 106-115. <https://doi.org/10.1108/ICT-10-2016-0068>
63. Strauss, W.; Howe, N. Millennials rising: The next great generation. 2000. New York, NY: Random House.
64. Tulgan, B. Trends point to a dramatic generational shift in the future workforce. *Employee Relations Today*. 2004, 30, 23–31. <https://doi.org/10.1002/ert.10105>.
65. Lyons, S. An exploration of generational values in life and at work. ProQuest Dissertations and Theses. 2004, pp. 441–441. Retrieved from <http://ezproxy.um.edu.my/docview/305203456?accountid=28930>.
66. Tulgan, B.; Martin, C. A. Managing Generation Y, Global Citizens Born in the Late Seventies and Early Eighties. 2011. Massachusetts: HRD Press.
67. Cooper, D.R.; Schindler, P.S. *Business Research Methods*. 2014, 12th ed., New York: Irwin/McGraw-Hill.