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Workforce Diversity on Educational Sustainability in Nigerian University

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Abstract: The study examined the effect of workforce diversity on educational sustainability among the Faculty of Management Sciences academic staff in Nnamdi Azikiwe University, Awka. The population of the study was 297 lecturers, with a sample size of 170, arrived at by applying Taro Yamane's formula. The data was analyzed using multiple regression analysis and hypotheses tested at a 5% level of significance using the Statistical Package for Social Sciences [SPSS]. Findings reveal a significant positive effect of age diversity on educational sustainability among the academic staff of Management Sciences at Nnamdi Azikiwe University, Awka. The result of age diversity ($\beta = 0.751$, $F = 439.191$, and p-value < 0.05), Age diversity accounted for 56.5%, highlighting the value of intergenerational knowledge sharing and inclusivity. There is a significant positive effect of Gender diversity on educational sustainability among the academic staff of the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka. The result of Gender diversity ($\beta = 0.750$, $F = 541.191$, and p-value < 0.05), explaining 66% of the variation, confirms that gender balance promotes fairness, participation, and institutional growth. The management of the institution needs to embrace employee diversity management strategies as this can contribute to the performance of the institution through enhanced decision-making and problem-solving by providing a range of perspectives, a broad spectrum of expertise and a more robust process for critical evaluation. Universities should integrate a diversity strategy into their long-term educational sustainability plans. Diverse staff should be engaged in designing and executing sustainability initiatives, including research, community engagement and infrastructural development.

Keywords: *workforce diversity, age diversity, gender diversity, educational sustainability.*

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Introduction

In today's globalized and interconnected business environment, organizations are increasingly recognizing the value of a diverse workforce for the long-term success of the educational system in tertiary institutions. Diversity, which is the representation of different individuals in the workplace, became prominent as a result of the continuous multiplicity of the workforce in organizations and the presence of globalization. Workforce diversity has increasingly become a cornerstone in discussions on educational sustainability within Nigerian universities. Diversity in gender, age, and educational background among faculty members is now widely acknowledged as a catalyst for innovation, inclusivity, and institutional resilience. In the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka, the composition of the academic workforce directly influences teaching quality, research output, and the institution's ability to align with global academic standards. According to Nwagbala, Okafor and Ani (2023) Universities worldwide are regarded as citadels of learning and fountains of intellectual development, playing a pivotal role in human capital formation, research advancement, and technological innovation. Investment in university education, therefore, remains a critical driver of national development (Nwagbala, Okafor & Ani, 2023).

Recent studies emphasizes the value of diversity in enhancing problem-solving and decision-making by integrating multiple perspectives. For example, Nwafor and Mbazuigwe (2024) demonstrate that workforce diversity significantly strengthens organizational sustainability and innovation, an insight particularly relevant to higher education institutions. Similarly, Salau (2023) finds that gender and ethnic diversity positively influence sustainability outcomes, suggesting that universities with diverse faculties are better positioned for resilience and competitiveness. Udoyiu and Uko (2023) further emphasize that inclusion strategies are essential for harnessing diversity to achieve equality and long-term institutional growth. In the same vein, Bada, Adedayo, and Olufemi (2024) argue that leadership and policy innovation are critical in fostering educational equity, which serves as a foundation for sustainability. Edu (2025) adds that faculty development and capacity building are indispensable pillars of quality assurance, reinforcing the importance of diverse academic backgrounds in sustaining excellence. Collectively, these perspectives affirm that workforce diversity is not merely a social imperative but a strategic necessity for maintaining educational quality and institutional growth in Nigerian universities.

However, decades of research also caution that diversity can yield both positive and negative outcomes within teams and small groups (Stella, Kekeocha & Musa, 2024). While diversity fosters creativity and innovation, it may also generate conflict or hinder cohesion if not properly managed. The Labour Act provides a comprehensive legal framework for regulating employment relationships, ensuring fairness, and defining the rights and responsibilities of employers and employees. Within this context,

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minority workers, those belonging to racial, ethnic, or other underrepresented groups, often face disparities in employment opportunities, wages, and working conditions compared to majority groups (Umeh, Cornelius & Wallace, 2024; Stella, Kekeocha & Musa, 2024). These workers may encounter systemic barriers such as discrimination, limited access to training, and biases in hiring, promotion, and salary progression. Such challenges impede equal representation and advancement, underscoring the need for deliberate policies and practices that promote inclusivity and equity in the academic workforce (Stella, Kekeocha & Musa, 2024).

Educational sustainability refers to the capacity of educational institutions to maintain and continually improve their quality, relevance, and effectiveness over time. It emphasizes not only meeting the immediate needs of generations but also anticipating and addressing the evolving demands of future generations, ensuring that education remains both impactful and enduring. Educational Sustainability cannot happen by chance without effective management. It is the function of university administrators to manage the available diverse workforce to attain the university's goal of quality education delivery and sustainability.

The study aims to contribute to the existing body of knowledge by systematically investigating the effect of workforce diversity on educational sustainability, examining how specific components such as age and gender shape the viability and long-term success of the educational system, as well as the academic performance of the students. This research seeks to provide actionable insights for educational practitioners and leaders of universities, leading to a more productive and successful organizational environment for the diverse workforce and prospective students.

Statement of Problem

Despite the recognized importance of workforce diversity in organizational sustainability, Nigerian universities, including the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka, continue to face challenges in fully leveraging diversity for educational sustainability. While studies such as Nwafor and Mbazuigwe (2024) demonstrate that workforce diversity enhances innovation and organizational resilience, there is limited empirical evidence on how these dynamics translate into the academic environment of Nigerian higher institutions. Many universities still struggle with issues of underrepresentation, unequal opportunities, and inadequate inclusion strategies. Leadership and policy innovations, identified by Bada, Adedayo, and Olufemi (2024) as critical for fostering equity, are often inconsistently implemented, thereby weakening the potential benefits of diversity. This gap raises concerns about whether workforce diversity in Nigerian universities is being adequately harnessed to achieve long-term educational sustainability.

The problem lies in the insufficient exploration of how workforce diversity specifically influences educational sustainability within the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka. Despite efforts to address these challenges the university's system of operation, characterized as bureaucratic where operations are viewed as routinized, static or as termed a sterile mode of operation, the management till date fail to recognize the benefits present in the diversity of workforce in an organization, thus, resulting in organizations risking the creation of a toxic work environment, losing talented employees and ultimately compromising their long- term success and reputation. Studies have revealed that where management is not inclusive, flexible, equitable and non-discriminatory and does not promote diversity values, there is increased conflict, tension, a high rate of employee turnover and absenteeism, a reduction in social engagement leading to employee dissatisfaction, which in turn affects the overall sustainability of the organization's operations with education as its focus. Hence, this study intends to determine the effect of workforce diversity management practices of inclusion, prevention of discrimination, accommodation and equal opportunity among the faculty of management sciences academic staff on the educational sustainability of Nnamdi Azikiwe University, Awka, Nigeria, as well as attempting to fill this management gap through the findings and recommendations.

Objectives of the Study

1) To examine the effect of age diversity on educational sustainability among faculty of management sciences academic staff, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.
2) To ascertain the effect of gender diversity on educational sustainability among faculty of management sciences academic staff, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

Research Questions

1. How age diversity affects educational sustainability among faculty of management sciences academic staff, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

2. What way do gender diversity affects educational sustainability among faculty of management sciences academic staff, Awka, Anambra State, Nigeria?

Significance of the study

1. **The Management**: The findings will help the management understand the role of gender balance in faculty composition and how it contributes to inclusive decision-making and curriculum development. Insights into age diversity will highlight the importance of blending experience with fresh perspectives, ensuring adaptability and innovation in academic practices.
2. **Academic Staff**: Academic staff will benefit from this study because it will increase their diversity awareness and enable them express their opinion on workforce diversity and how it affects them thereby leading to organizational cooperation and commitment. When diversity is effectively managed lecturers will be more willing to discharge their duties more professionally and cooperatively this leads to an improved learning environment, employee satisfaction and organizational sustainability
3. **For Faculty and Students**: Faculty members will benefit from improved inclusion strategies that recognize the value of diverse contributions across gender and age. Students will experience enriched learning environments that reflect multiple perspectives, preparing them for diverse workplaces and global challenges.
4. **For Policymakers**: The study will provide evidence-based recommendations for policies that promote equitable recruitment, retention, and professional

development opportunities across gender and age groups. It will support strategies aimed at strengthening institutional sustainability through inclusive workforce planning.

Conceptual review

Workforce Diversity

A thorough definition of workforce diversity encompasses the presence of variety and distinctions among an organization's employees, encompassing factors such as race, age, ethnicity, cultural heritage, physical capabilities, religious beliefs, gender, sexual orientation, language, educational background, and way of life, personal conviction, appearance, and economic standing (Seliverstova, 2021). Workplace diversity is a vital concept that emphasizes the inclusion of individuals from different cultural, social, and demographic backgrounds within organizations. It is increasingly seen as a strategic tool for fostering innovation, equity, and long-term sustainability. Diversity in the workplace enhances creativity, improves responsiveness, and strengthens organizational legitimacy by ensuring that multiple perspectives are represented in decision-making processes. Recent research underscores that diversity is not only a moral imperative but also a driver of sustainable development. For example, Etalong, Chikeleze, and Okwueze (2024) found that workforce diversity significantly improves employee responsiveness in Nigerian public organizations, which is critical for institutional sustainability.

The link between workplace diversity and educational sustainability lies in the shared goal of inclusivity and equity. Educational sustainability refers to practices that ensure long-term access to quality education while promoting social and cultural responsibility. Diversity enriches curricula by incorporating multiple perspectives, supports equitable access to training and lifelong learning, and fosters innovation in teaching and learning. Croitoru et al. (2022) argue that workplace diversity is a cornerstone of sustainable company development, directly influencing educational institutions to adopt inclusive policies that benefit marginalized groups. Similarly, James, Davis, and Alqaseer (2024) highlight that diversity, equity, and inclusion (DEI) remain integral to sustainability reporting, reinforcing the connection between organizational diversity and educational sustainability. Workforce diversity is a concept that involves acknowledging, understanding, respecting, appreciating and embracing employee differences, focusing on both the unique qualities and commonalities (Adu & Mensah, 2019). Organizations use diversity management as a strategic tool to maximize the advantages of a varied workforce while fostering an inclusive and equal culture. It acknowledges that individuals from varied backgrounds may contribute to the success of an organization by bringing their unique perspectives, experiences and talents. In the educational context, diversity exists among staff, faculty and students. Hence, it could be argued to have a higher impact and consequently great importance in a particular setting, which leads to the proposition that research on diversity management in education is highly relevant and needed (Ikemefuna, 2020).

Age Diversity

Age diversity has increasingly become recognized as a vital component of organizational life, particularly since the early 2000s. Scholars remain divided on its impact: while some argue that, when managed constructively, age diversity enhances workforce performance, others contend that it may undermine employee commitment and engagement, thereby threatening long-term sustainability. Younger employees often demonstrate flexibility, innovation, and a willingness to take risks, adapting more readily to environmental changes. In contrast, older employees bring deep knowledge and expertise, serving as essential conduits for skill transfer. Broadly defined, age diversity refers to the variation in age among employees and reflects the generational composition of an organization. Oyeleye (2024) emphasizes that age diversity contributes to sustainability by combining the creativity and adaptability of younger cohorts with the wisdom and experience of older colleagues. This intergenerational mix spanning Generation X, Millennials, and Generation Z can foster collaboration, mentorship, and knowledge exchange. For example, seasoned faculty members may mentor younger colleagues, offering guidance grounded in years of professional practice. In return, younger employees can introduce contemporary teaching strategies, technological innovations, and insights into the evolving needs of today's students.

Samuel, Stella, Nkechi, and Ifeanyi (2025) observe that age-related biases in recruitment and promotion practices often contribute to discrepancies in remuneration across professions. Older employees are frequently perceived as more reliable and experienced, which can translate into higher pay. Conversely, younger workers tend to encounter challenges in negotiating salaries or securing promotions, largely due to limited experience and underdeveloped professional networks. These dynamics reinforce the persistence of the age-related pay gap. Regardless of these benefits, challenges can arise as a result of the work preferences of these diverse employees, their attitudes toward technology and differences in the styles of communication used. Filling up these gaps requires a proactive approach to fostering a culture of mutual respect and understanding (Guirdham & Guirdham, 2017). When considering age diversity within universities, it is important to acknowledge that diversity itself extends far beyond generational differences. It encompasses dimensions such as gender, ethnicity, and cultural background, all of which shape the richness of the academic workforce. A comprehensive approach to diversity and inclusion creates an environment in which employees of all ages feel valued and empowered to contribute their distinct skills and perspectives. Such inclusivity strengthens the collective capacity of the institution to achieve long-term sustainability.

Gender diversity

Gender diversity refers to the equitable representation and participation of both male and female faculty members in academic activities, decision-making, and leadership roles. In the Nigerian educational context, gender diversity is seen as a critical factor in reducing disparities and promoting inclusive learning environments (Adepoju, Ibhawoh, & Fayomi, 2020). The National Policy on Gender in Education emphasizes that balanced gender representation enhances institutional sustainability by fostering inclusivity and equity (Federal Ministry of Education, 2021). In addition, the gender pay gap remains a pressing issue. Defined as the difference in compensation between men and women performing equivalent work with similar qualifications and status, it is typically expressed as a percentage. Samuel, Stella, Nkechi, and Ifeanyi (2025) highlight that this disparity is shaped by multiple factors, including discrimination, variations in work experience, educational attainment, and occupational segregation.

Together, these influences perpetuate inequities in earnings between male and female employees. In this study, gender diversity focuses on the proportion and roles of male and female faculty members in the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka, and how this balance influences educational sustainability**.** Creating a gender inclusive university setting for workforce goes beyond numerical representation it involves cultivating a culture that actively promotes gender equity, inclusiveness and equal opportunities (Olowookere, 2021). These includes addressing any existing gender biases, ensuring fair hiring and promotion practices and providing support systems for career development irrespective of gender.

Educational Sustainability

Educational sustainability refers to the ability of an institution to maintain quality teaching, research, and community engagement over time, despite challenges such as resource constraints and policy changes. It involves practices that ensure long-term institutional growth, inclusivity, and adaptability to global academic standards (Edinoh, Asemota, Oche, & Omolabake, 2025**).** The concept of sustainability, as Stella, Priscillia, and Ifeoma (2022) note, involves achieving success in the present without undermining the needs of future generations. Chinelo and Ejike (2022), as cited in Stella, Musa, Samuel and Chimamkpa (2024) describe sustainable development as the pursuit of social and economic progress without depleting a nation's natural resources. Expanding on this, Nwagbala, Harrieta, Obijiaku, and Ejiogu (2024) argue that sustainable development is a dynamic and multifaceted process that integrates economic, social, and environmental dimensions into a holistic framework. At its core, this approach prioritizes equity, justice, and human well-being, striving to balance present needs with the capacity of future generations to meet their own needs. In this study, educational sustainability is defined as the capacity of the Faculty of Management Sciences at Nnamdi Azikiwe University to sustain academic excellence and institutional resilience through gender and age diversity.

Theoretical Framework

Resource Based View Theory

The Resource-Based View by Barney (1991) argues that organizations achieve competitive advantage by effectively utilizing unique internal resources. Workforce diversity, particularly in gender and age, is a strategic resource that enhances innovation and adaptability. Gender diversity provides varied perspectives that enrich decision-making. Age diversity ensures a mix of experience and fresh ideas, positioning the institution to respond to evolving educational challenges. RBV highlights that leveraging diversity as a resource contributes directly to educational sustainability.

Human Capital Theory

Human Capital Theory by Becker (1993) posits that individuals' skills, knowledge, and experiences are valuable assets that contribute to organizational growth and sustainability. In the context of the Faculty of Management Sciences at Nnamdi Azikiwe University, gender and age diversity among faculty members represent different forms of human capital. Gender diversity ensures that both male and female faculty contribute unique perspectives and skills, enriching teaching and research. Age diversity blends the innovative approaches of younger faculty with the experience and wisdom of older colleagues, creating a balanced workforce that sustains educational quality. This theory supports the idea that diverse faculty composition enhances institutional resilience and long-term sustainability.

Methodology

This study adopted a descriptive survey research design to determine the effect of workforce diversity on educational sustainability in faculty of Management Sciences, Nnamdi Azikiwe University, Awka, the area of the study which is the faculty of management sciences, Nnamdi Azikiwe Awka consists of 297 academic staff.

Table 1

Serial Number	Departments	Number of teaching Staff
1)	Accounting	89
2)	Business Administration	55
3)	Banking and Finance	40
4)	Cooperative Economics and Management	29
5)	Entrepreneurship	22
6)	Marketing	22
7)	Public Administration	40
	Total	**297**

Source: The office of the Dean of the faculty of Management Sciences.

Sample and Sampling Technique

The population of the study was 297 academic staff and the sample size was 170 arrived by applying Taro Yamanne's Formula for a finite population. Simple random sampling technique was used. A structured questionnaire was designed and administered to a sample of 170 faculty of management sciences academic staff. The questionnaire was administered through online google forms while some were printed to match the preferences of the respondents, face and content validity were used to ensuring that it accurately measures. The reliability of the instrument was done using Cronbach Alpha which tested for internal consistency of the

questionnaire. A total of 20 copies of the questionnaire were distributed to 7 the department in the faculty of management sciences, Nnamdi Azikiwe University_Awka, Anambra State. In the end, 20 copies were returned, coded and fed into SPSS which helped in running the analysis. The data was analyzed using Multiple Regression analysis (as it is used to not only test relationships but also used to test effect) and hypotheses tested at a 5% (0.05) level of significance using the Statistical Package for Social Sciences (SPSS) version 23. Accept the Alternate Hypotheses (H1) if P-value is less than 0.05 (P-value < 0.05); otherwise the Null hypotheses (H0) will be accepted.

Presentation of Data

Table 2: Demographic Respondents Distribution Schedule

Gender	**Frequency**	**Percentage**
Male	86	59.3%
Female	59	40.7%
Total	145	100%
Age		
Below 25	0	-
25-34	32	22.1%
35-44	72	49.7%
45-55	18	12.4%%
56 and above	23	15.9%
	145	100%
Marital Status		
Single	50	34.5%
Married	95	65.5%
Widowed	-	-
	145	100
Level of Appointment		
Graduate Assistant	4	2.8%
Assistant Lecturer	10	6.9%
Lecturer II	26	17.9%
Lecturer I	55	37.9%
Senior Lecturer	22	15.2%
Associate Professor	14	9.7%
Professor	9	7%
	145	100%
Department		
Accountancy	32	22.1%
Banking and Finance	28	19.3%
Business Administration	40	27.6%
CEM	12	8.3%
Entrepreneurship	5	3.4%
Marketing	18	12.4%
Public Administration	10	6.9%
Total	145	100%
Years of Service		
1-5	36	24.8%
6-10	64	44.1%
11-15	23	15.9%
16-20	10	6.9%
21-25	8	5.5%
26 and above	4	2.8%
Total	145	100%

Source: Field Survey, 2026

From table 2 above out of the 145 respondents, 86 were male, making up 59.3% of the total, while 59 were female, representing 40.7%. This indicates that male participants were more prevalent in the study sample compared to female participants. The majority of respondents (49.7%) were aged

between 35 and 44, followed by 22.1% in the 25–34 age group. Respondents aged 56 and above made up 15.9%, while those between 45 and 55 accounted for 12.4%. Notably, there were no respondents below the age of 25. This suggests that the survey predominantly attracted participants in their mid-career stage.

Among the 145 respondents, the majority 95 individuals (65.5%) were married, while 50 (34.5%) were single. There were no widowed participants recorded in the survey. This indicates that the respondent group was largely composed of married individuals.

The largest group of respondents were Lecturer I**,** accounting for 37.9% of the total, followed by Lecturer II at 17.9%**,** and Senior Lecturers at 15.2%**.** Associate Professors and Professors made up 9.7% and 7% respectively. Lower academic ranks such as Assistant Lecturers and Graduate Assistants comprised 6.9% and 2.8%**.** This distribution shows that most respondents were mid-level academics, with a smaller representation from both junior and senior academic ranks.

Among the 145 respondents, the Business Administration department had the highest representation with 40 individuals (27.6%), followed by Accountancy with 32 (22.1%), and Banking and Finance with 28 (19.3%). Other departments included Marketing (12.4%), CEM (8.3%), Public Administration (6.9%), and Entrepreneurship, which had the fewest respondents at 5 (3.4%). This suggests that the responses were primarily gathered from key business-related fields, with relatively less input from emerging or specialized areas like Entrepreneurship.

The majority of respondents, 118 individuals (81.4%), held a PhD, indicating a highly educated participant group. Those with Master's-level qualifications (MSc/MBA/MA) made up 12.4%, while only 9 respondents (6.2%) had a HND or BSc. This shows that the vast majority of participants were at the peak of academic qualification, reflecting a highly scholarly sample.

Most respondents had between 6 to 10 years of service, making up 44.1% of the total. This was followed by those with 1 to 5 years of experience at 24.8%, and 11 to 15 years at 15.9%. Fewer participants had longer tenures: 16–20 years (6.9%), 21–25 years (5.5%), and 26 years and above (2.8%). This suggests that the majority of the respondents were in the early to mid-stages of their academic careers.

Research Question One: How age diversity affects educational sustainability among faculty of management sciences academic staff, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

Table 3 Age Diversity on Educational Sustainability

S/N		Items	SA [5]	A [4]	N [3]	D [2]	SD [1]	Total	Mean	Remark
1.		Do you believe that age diversity among staff contributes positively to the achievement of educational sustainability goals	38	69	18	11	9	145	3.80	Accept
2.		I do not have difficulties while collaborating with individuals from diverse age group.	52	58	13	12	10	145	3.90	Accept
3		The institution support age-inclusive practices (for instance, mentorship programs, continuous professional development for all ages)	31	64	27	13	10	145	3.64	Accept
4		A balanced mix of younger and older staff contributes to long-term sustainability in education delivery and policy implementation.	73	58	14	-	-	145	4.41	Accept
5.		Every age group is often seen as a valuable asset to the sustainability of the educational system in tertiary institution.	60	58	15	7	5	145	4.11	Accept
6.		Provisions are often made to pair old as well as the younger staff when assigning duties by the university's administration.	19	72	32	13	9	145	3.54	Accept
7.		The age diversity of lecturers can result in	61	50	21	9	4	145	4.07	Accept

		different teaching styles and approaches.								
8.		Institutions that value and reflect age diversity signal a commitment to life-long educational administration and management.	54	62	20	6	3	145	4.09	Accept

Table 3 presents the analysis of responses on age diversity on educational sustainability

Each item was measured using a five-point Likert scale, allowing respondents to express their level of agreement. The frequencies and mean scores offer hint into how workforce diversity in Nnamdi Azikiwe university, Awka contribute to educational sustainability. The data strongly supports the hypothesis that age diversity among staff contributes positively to the achievement of educational sustainability goals in tertiary institutions. Respondents generally agree that having a range of ages within the workforce fosters an environment conducive to sustainable educational practices. With a mean score of 3.80, it is evident that the majority believe age diversity positively impacts educational sustainability goals. This belief is further reinforced by the finding that collaboration across age groups is largely smooth and effective, as indicated by a mean score of 3.90. This suggests that age diversity does not hinder teamwork but rather enhances the capacity of staff to work together harmoniously toward common goals. Institutional support for age-inclusive practices, such as mentorship programs and professional development for staff of all ages, is also recognized, with a mean of 3.64. This indicates that institutions value inclusivity and actively implement policies that encourage continuous growth for employees regardless of age. Furthermore, the highest mean score of 4.41 highlights the strong conviction that a balanced mix of younger and older staff is essential for long-term sustainability in education delivery and policy implementation. Such a balance is perceived as a strategic advantage, allowing the institution to combine the energy and innovation of younger staff with the experience and wisdom of older staff. Additionally, respondents view every age group as a valuable asset to the sustainability of the educational system, scoring this statement at 4.11 on average. While the pairing of younger and older staff when assigning duties scored slightly lower at 3.54, it still reflects a positive acceptance of administrative efforts to promote age diversity. The recognition that age diversity enriches teaching styles and approaches (mean 4.07) further supports the hypothesis by showing how varied experiences and perspectives can enhance educational delivery. Lastly, institutions that value age diversity are seen as demonstrating a commitment to lifelong educational management, with a mean score of 4.09. Overall, the data clearly affirms that age diversity is a critical factor for fostering educational sustainability, enhancing collaboration, enriching teaching, and reflecting institutional commitment to inclusive and sustainable practices.

Research Question Three: What way do gender diversity affects educational sustainability among faculty of management sciences academic staff, Nnamdi Azikiwe university, Awka, Anambra State, Nigeria.

Table 4 Gender Diversity on Educational Sustainability

	Items	SA [5]	A [4]	N [3]	D [2]	SD [1]	Total	Mean	Remark
1	A balanced gender representation among lecturers improves the inclusiveness of decision-making process.	55	60	22	5	3	145	4.10	Accept
2	The university hires based on competence and not based on gender.	52	56	24	9	4	145	3.99	Accept
3	Gender diversity in academic teams promotes innovation in teaching methods and research.	51	49	35	6	4	145	3.94	Accept
4	Gender-inclusive policies at the faculty level contributes to a more sustainable academic environment.	46	61	28	6	4	145	3.96	Accept
5	I believe that having a gender-diverse teaching staff improves the mentorship opportunities for younger academics.	50	47	24	18	6	145	3.81	Accept
6	Gender diversity management enhances the institution's reputation and attractiveness to the students.	48	58	29	6	4	145	3.97	Accept
7	Promoting gender equality among academic staff is essential	55	60	20	6	4	145	4.08	Accept

	for long term educational sustainability in this institution.								
8	Opportunities for leadership positions are equally accessible to male and female staff in the institution.	49	63	23	6	4	145	4.01	Accept

The data strongly supports the hypothesis that gender diversity among lecturers positively influences various aspects of tertiary education, including decision-making, innovation, mentorship, and institutional reputation. Respondents overwhelmingly agree that balanced gender representation enhances the inclusiveness of the decision-making process, as evidenced by a high mean score of 4.10. This suggests that having both male and female lecturers involved in governance and academic discussions fosters a more comprehensive and representative approach to institutional policies and practices. Further, there is a strong consensus that hiring decisions are made based on competence rather than gender, with a mean score of 3.99. This reflects an encouraging commitment to meritocracy while still recognizing the importance of maintaining gender balance. Gender diversity within academic teams is also believed to promote innovation in teaching methods and research, with a mean of 3.94, indicating that diverse perspectives contribute to creative and effective educational practices.

The acceptance of gender-inclusive policies at the faculty level (mean 3.96) highlights that institutional efforts to support gender equality are seen as instrumental in creating a sustainable and supportive academic environment. Similarly, the belief that gender-diverse staff improve mentorship opportunities for younger academics (mean 3.81) points to the role of diversity in fostering professional growth and career development. Additionally, respondents agree that gender diversity management enhances the institution's reputation and attractiveness to students (mean 3.97), and that promoting gender equality is essential for long-term educational sustainability (mean 4.08). Lastly, there is a strong perception that leadership opportunities are equally accessible to both male and female staff (mean 4.01), reinforcing the view that the institution is committed to fairness and inclusion in its leadership structures. Overall, the data confirms that gender diversity is not only valued but essential for building an innovative, inclusive, and sustainable educational environment.

Table 5 Respondent of Educational Sustainability

	Items	SA [5]	A [4]	N [3]	D [2]	SD [1]	Total	Mean	Remark
1	I believe in the importance of individual actions for sustainability.	62	65	9	9	-	145	4.24	Accept
2	I support institutions that prioritizes sustainability practices.	67	70	8	-	-	145	4.41	Accept
3	The university's leadership prioritizes sustainability initiatives.	67	30	30	12	6	145	3.97	Accept
4	Limited resources in the education sector functions as a constraint to sustainability.	68	52	6	19	-	145	4.17	Accept
5	The university's infrastructure is well-maintained and sustainable.	10	20	27	62	26	145	2.49	Reject
6	My practices as a staff of the institution are geared towards continuity and sustainability of the educational system.	88	57	-	-	-	145	4.61	Accept
7	We regularly review and update our sustainability goal and initiative.	36	52	45	6	6	145	3.73	Accept
8	Our institution has opportunities to collaborate with external parties to support sustainability initiatives.	22	11	5	5	-	145	4.05	Accept

The data clearly supports the hypothesis that both individual and institutional actions are critical to achieving sustainability in the educational sector. Respondents strongly agree on the importance of individual responsibility towards sustainability, with a mean score of 4.24. This demonstrates a widespread personal commitment among staff to contribute actively to sustainable practices within their roles. Similarly, there is strong support for institutions that prioritize sustainability, reflected in the highest mean score of 4.41, indicating that respondents value and favor organizations with clear sustainability commitments. Leadership within the university is also perceived to prioritize sustainability initiatives, as shown by a mean of 3.97, although this is slightly lower than personal commitment scores, suggesting room for stronger leadership emphasis. Limited resources in the education sector are widely recognized as a significant constraint to sustainability (mean 4.17), acknowledging the challenges institutions face in maintaining sustainable operations. Interestingly, respondents largely reject the idea that the university's infrastructure is well-maintained and sustainable, with a low mean of 2.49. This points to a critical area requiring improvement, indicating that physical resources and facilities may not yet meet sustainability standards.

Despite this, staff strongly believe their personal practices contribute to the continuity and sustainability of the educational system, scoring a very high mean of 4.61. This personal dedication is complemented by the institution's efforts to regularly review and update sustainability goals (mean 3.73) and to collaborate with external partners to support sustainability initiatives (mean 4.05).

Overall, the data confirms a strong commitment at both the individual and institutional levels toward promoting sustainability, even as challenges in infrastructure maintenance persist.

Test of Hypothesis

Decision Rule: Reject the null hypothesis and accept the alternate hypothesis if P-value < 0.05; if otherwise accept the null hypothesis.

Hypothesis One

H_0: There is no significant effect of age diversity on educational sustainability.

Table 6: Model Summary for Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.751	.565	.562	.34111

a. Predictors: (Constant), age diversity

The model summary in Table 6 shows the relationship between age diversity and educational sustainability. The correlation coefficient (R) of 0.751 indicates a strong positive relationship, suggesting that increases in age diversity are associated with improvements in educational sustainability. The R Square value of 0.565 reveals that age diversity explains about 56.5% of the variation in educational sustainability. This is a substantial proportion, highlighting the importance of age diversity as a predictor.

The adjusted R Square of 0.562 further supports the robustness of the model, with only a slight reduction from the R Square value, meaning the model generalizes well to the population. Additionally, the standard error of the estimate (0.34111) is relatively low, suggesting that the model's predictions are close to the observed values, and thus reliable.

Based on these results, the null hypothesis that age diversity has no significant influence on educational sustainability is rejected, while the alternative hypothesis is accepted. This confirms that age diversity plays a significant role in shaping educational sustainability, implying that embracing age differences within educational environments contributes positively to inclusivity, collaboration, and long-term sustainability.

Table 7: F-Statistics Output for Hypothesis one

ANOVA[a] Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.419	1	51.419	439.191	0.000[b]
	Residual	33.581	169	0.095		
	Total	85.000	170			

a. Dependent Variable: educational sustainability

b. Predictors: (Constant), age diversity

The ANOVA results in Table 7 show that the regression model for the effect of age diversity on educational sustainability is statistically significant. The regression sum of squares is 51.419, while the residual sum of squares is 33.581, indicating that a large portion of the total variance in educational sustainability (85.000) is explained by age diversity.

The F-statistic of 439.191 with a significance value of 0.000 ($p < 0.05$) confirms that the regression model is highly significant. This means that age diversity contributes meaningfully to explaining changes in educational sustainability, and the likelihood of this result occurring by chance is extremely low. Based on this evidence, the null hypothesis that age diversity has no significant effect on educational sustainability is rejected, while the alternative hypothesis is accepted. This establishes that age diversity plays an important role in promoting educational sustainability.

Table 8: Regression Analysis Coefficients

Table 8: Regression Coefficients[a] output for Hypothesis Two.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.113	14.191		5.128	.000
	age diversity	.751	.0025	543	20.953	.000

a. Dependent Variable: educational sustainability

Source: Field Survey, 2025.

The regression coefficients in Table 8 indicate that age diversity is a strong and significant predictor of educational sustainability. The unstandardized coefficient (B) of 0.751 shows that for every one-unit increase in age diversity, educational sustainability increases by 0.751 units, holding other factors constant. This positive value demonstrates a direct relationship between the two variables.

The standardized coefficient (Beta = 0.543) suggests that age diversity makes a moderate-to-strong contribution to explaining variations in educational sustainability relative to other possible predictors. The t-value of 20.953 with a significance level of 0.000 ($p < 0.05$) further confirms that this effect is statistically significant and unlikely to have occurred by chance.

Thus, the null hypothesis that age diversity has no significant effect on educational sustainability is rejected, and the alternative hypothesis is accepted. This implies that embracing age diversity in educational environments enhances sustainability by fostering inclusivity, collaboration, and the sharing of intergenerational knowledge and perspectives. In order To establish the moderating role of age diversity, a multiple linear model of the form was used. The predictive and prescriptive multiple regression models are thus expressed:

$WD = Y + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$.....1

$WD = Y + \beta_2X_2$----------2

$WD = 2.113 + 0.751X_2$…….....3

Hypothesis Two

H0: There is no significant effect of gender diversity on educational sustainability.

Table 9: Model Summary for Hypothesis Three

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812	.660	.657	.23111

a. Predictors: (Constant), gender diversity

The model summary in Table 9 shows a strong relationship between gender diversity and educational sustainability. The correlation coefficient (R) of 0.812 indicates a very strong positive association, suggesting that higher gender diversity is linked with greater levels of educational sustainability.

The R Square value of 0.660 reveals that gender diversity explains about 66% of the variation in educational sustainability, which is a substantial proportion. The adjusted R Square of 0.657 further confirms the reliability of the model, with only a slight adjustment from the R Square value, showing that the model is stable and generalizable.

The standard error of the estimate (0.23111) is low, meaning that the predicted values are very close to the observed values. This indicates that the model has a strong explanatory power and a good fit. Based on these results, the null hypothesis that gender diversity has no significant influence on educational sustainability is rejected, while the alternative hypothesis is accepted. This demonstrates that gender diversity plays a significant role in promoting educational sustainability, emphasizing the importance of inclusivity and gender balance in educational environments.

Table 10: F-Statistics Output for Hypothesis Three

ANOVA[a] Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	110.151	1	120.151	541.191	0.000
	Residual	30.849	169	0.113		
	Total	141.000	170			
a. Dependent Variable: educational sustainability						
b. Predictors: (Constant), gender diversity						

The ANOVA results in Table 10 confirm that the regression model examining the effect of gender diversity on educational sustainability is statistically significant. The regression sum of squares (110.151) compared to the residual sum of squares (30.849) shows that a large portion of the total variance in educational sustainability (141.000) is explained by gender diversity.

The F-statistic of 541.191 with a significance value of 0.000 ($p < 0.05$) indicates that the model is highly significant. This means the variation explained by gender diversity is not due to chance but represents a real and meaningful effect.

Based on this evidence, the null hypothesis (H_0) that gender diversity has no significant effect on educational sustainability is rejected, while the alternative hypothesis (H_1) is accepted. This confirms that gender diversity significantly contributes to shaping educational sustainability.

Table 11: Regression Coefficients[a] output for Hypothesis Three.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.500	.123		16.573	.000
	gender diversity	.750	.031	.812	23.411	.000
a. Dependent Variable: educational sustainability						
Source: Field Survey, 2026.						

The regression coefficients in Table 11 show that gender diversity is a strong and significant predictor of educational sustainability. The unstandardized coefficient (B = 0.750) indicates that for every one-unit increase in gender diversity, educational sustainability increases by 0.750 units, holding other factors constant. This positive relationship suggests that improving gender diversity contributes directly to higher levels of educational sustainability.

The standardized coefficient (Beta = 0.812) further demonstrates the strength of this relationship, showing that gender diversity has a very strong relative impact compared to other potential predictors. The high t-value (23.411) with a significance level of 0.000 confirms that this effect is statistically significant and unlikely to have occurred by chance.

Based on these results, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted. This confirms that gender diversity has a significant and positive effect on educational sustainability. This suggests that promoting gender balance and inclusivity within to establish the moderating role of workforce diversity, a multiple linear model of the form was used. The predictive and prescriptive multiple regression models are thus expressed:

$$WD = Y + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad \text{.....1}$$

$$WD = Y + \beta_3 X_3 \quad \text{----------2}$$

$$WD = 2.500 + 0.750 X_3 \quad \text{.....3}$$

$$\mathbf{WD} = 5.490 + 0.664\,\mathbf{X_1} + 0.751\,\mathbf{X_2} + 0.750\,\mathbf{X_3} \quad \text{.....4}$$

(Predictive Model)

Discussion of Findings

The results from Hypothesis One show that age diversity plays a significant role in promoting educational sustainability. The model shows a strong correlation (R = 0.751) and explains about 56.5% of the variation in sustainability outcomes. The F-statistic (439.191, $p < 0.05$) and regression results (B = 0.751, $p < 0.05$) demonstrate the robustness of this relationship. This implies that intergenerational diversity enriches the educational environment by encouraging knowledge transfer, collaboration, and inclusivity across age groups. Educational institutions benefit from leveraging both younger and older individuals' perspectives to foster long-term sustainability.

The test of Hypothesis Two revealed that gender diversity has the strongest effect on educational sustainability among the

predictors studied. The model ($R = 0.812$, $R^2 = 0.660$) indicates that gender diversity explains 66% of the variation in sustainability outcomes. With a highly significant F-statistic (541.191, $p < 0.05$) and a positive regression coefficient ($B = 0.750$, $p < 0.05$), the results confirm that gender balance and inclusivity substantially enhance sustainability. This highlights the importance of creating equitable educational environments where both genders can contribute fully, thus strengthening participation, fairness, and long-term institutional development.

Overall, the two hypotheses confirm that diversity across age, and gender positively and significantly affects educational sustainability. Rejecting all null hypotheses, the study demonstrates that embracing diversity is essential for building inclusive, resilient, and future-oriented educational system. Age diversity also showed a strong effect ($R = 0.751$, $R^2 = 0.565$, $F = 439.191$, $B = 0.751$, $p < 0.05$), accounting for 56.5%. Gender diversity had the strongest impact ($R = 0.812$, $R^2 = 0.660$, $F = 541.191$, $B = 0.750$, $p < = 0.789$, $R^2 = 0.623$, $F = 458.100$, $B = 0.664$, $p < 0.05$), explaining 62% of variation.

Summary of Findings

The test of hypotheses revealed significant positive effect of workforce diversity on educational sustainability among faculty of management sciences academic staff in Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

The following are the summaries of the finding of this study;

1. There is a significant positive effect of age diversity on educational sustainability among faculty of management sciences academic staff in nnamdi azikiwe university, awka The result of age diversity ($\beta = 0.751$, $F = 439.191$, and p-value < 0.05), Age diversity accounted for 56.5%, highlighting the value of intergenerational knowledge sharing and inclusivity.
2. There is a significant positive effect of Gender diversity on educational sustainability among faculty of management sciences academic staff in Nnamdi Azikiwe University, awka. The result of Gender diversity ($\beta = 0.750$, $F = 541.191$, and p-value < 0.05), explaining 66% of the variation, confirming that gender balance promotes fairness, participation, and institutional growth. The results demonstrate that embracing diversity is vital for building inclusive, resilient, and sustainable educational systems.

Conclusion

Based on the findings, it has been observed that diversity management exerts a positive effect on the sustainability of the educational system. The aims of the study were successfully achieved, and the analyses yielded thorough responses to the research inquires. In the aspect of age diversity within the institution may significantly influence its long-term viability. A younger employee, due to their physical vigour and capabilities may exhibit higher levels of awareness of recent developments and how it can be integrated in the system to foster continued growth. In contrast the more senior or advanced lecturers is capable of effectively delivering due to their acquired skills and aptitudes. Based on the research findings, the promotion of gender diversity within the institution tacitly acknowledges the existence of distinct cognitive and behavioral patterns across both genders, hence, embracing the unique perspectives and styles that male and female lecturers may contribute or introduce. Workforce diversity management plays an important role in educational sustainability among faculty lecturers, particularly within the Faculty of Management Sciences at Nnamdi Azikiwe University, Awka. The diversity being present in age, and gender directly impacts the long-term continued success of the educational system. A properly managed diversified workforce fosters a committed team, collaboration and mutual respect and open communication which are essential for the continued growth of the educational system.

Recommendations

1. Management has to actively promote the collaboration of individuals from diverse age groups. Younger individuals have more proficiency in managing advanced corporate technologies and have vast knowledge as a result of the presence of digitization. The sharing of these talents or knowledge has the potential to enhance the performance of both groups and the institution as a whole.
2. The management of the institution needs to embrace employee diversity management strategies as this can contribute to the performance of the institution through enhanced decision-making and problem-solving by providing a range of perspectives, a broad spectrum of expertise and a more robust process for critical evaluation.
3. Universities have to integrate diversity strategies into the long-term educational sustainability plans. Diverse staff should be engaged in designing and executing sustainability

Suggestion for further studies

1. The researcher recommends that this same study be conducted again but on a wider scope. That is, it should include more institutions and increase the population size.
2. The study can also be done comparatively by studying one institution and another institution. This will provide deeper understanding on diversity issues.
3. The study focused on few diversities, however similar study can be conducted focusing on how different dimensions of diversity affects educational performance and longevity also the dependent variable of this study being educational sustainability can be further looked into as well as an extensive sourcing and reviewing of available literatures so as to gather information and as well create the consciousness of the need for actions to be carried out with sustainability in mind.
4. There can also be a comparative study between organizations that embrace diversity (that is, a heterogeneous organization) and those that do not practice diversity (homogeneous organization). The difference between the two will help show the importance of workforce diversity.

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