Gender Diversity in Real Estate Education: Evidence from an African Higher Education Institution

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Abstract
Workspace inclusivity remain critical in promoting diversity and dynamism across all sectors of the economy. Despite recent progress, gender disparities persist in the real estate sector, including education and training programmes. This study employs a quantitative research design to investigate gender diversity in real estate education at Federal Polytechnic Ede, Nigeria. The study focuses on female students' enrolment in real estate programmes from 2009 to 2022, their experiences, perceptions and career prospects. A self-administered questionnaire was used to collect data from 138 out of all the 150 female students currently enrolled in the programmes. The findings indicate that the gender structure of real estate student enrolments is inclusive. Female enrolments have steadily increased and are stable below 50 per cent over the last thirteen years. However, female students face a lack of mentorship opportunities and perceive gender discrimination and bias in the real estate industry. These factors influence female students' self-esteem, motivation, and career opportunities in the real estate industry. This paper contends that the real estate sector must become more diverse. A proactive dedication to inclusivity, mentorship and the willingness to challenge existing norms and biases in the industry is needed to enable women to pursue real estate career.

Keywords: Career decision; equity and inclusivity; female student enrolments; real estate industry.

Introduction

Inequalities along gender lines are critical concerns in today's global educational and professional environments. These issues have gained prominence recently as women face challenges in employment (Wieczorek-Szymanska, 2020), including education and social activities (Lombardi, 2017). Workspace equality and inclusivity remain essential in promoting diversity and dynamism across all sectors of the economy. Norberg and Johansson (2021) demonstrated that an environment with diverse teams and perspectives outperforms those that need to implement gender-related strategies effectively. Diversity and inclusion are priorities for high-performing organisations because they foster innovation (Ritter-Hayashi and Vermeulen, 2019), reduce interpersonal bias (Nishii, 2012), improve decision-making and outcomes (Clack and Gabler, 2019) and lead to the establishment of sustainable societies (Ceylan, 2020). However, despite a growing appreciation for diversity and inclusivity in various sectors, the real estate industry is still one of the most segregated worldwide (Mosimanegape and Ijasan, 2022). According to Oladapo (2017), the real estate sector has been predominantly male-dominated, with limited representation and participation of women. Poon and Brownlow (2016) also submitted that women are under-represented and lack career prospects in the construction industry. Ugwulebo (2011) noted that the gender gap in the workplace began during the training phase. Adogbo et al. (2015) and Bigelow et al. (2015) have shown that the percentages of female enrolments in construction-related disciplines

are mostly less than 10 per cent. As a result, the development of a genuinely inclusive and diverse real estate sector is hampered.

According to Castellano and Rocca (2014), ensuring equal educational opportunities for women should be the first step in addressing their unfavourable employment conditions. Higher education institutions are critical in developing the next generation of professionals and can influence change (Ekene and Oluoch-Suleh, 2015). Patterson et al. (2009) also observed that women face harassment and discrimination in education and training programmes, limiting their career advancement opportunities. Education institutions are responsible for more than just selecting the brightest students; they are also responsible for assisting women and underrepresented groups in breaking down social barriers (Lenaers, 2010). Unfortunately, Bradley et al. (2009) observed that women's representation issues in higher education need more attention.

Real estate is one of the fields taught in polytechnics and universities and is critical in preparing students for careers in property development, investment, valuation, management, and related aspects. It also has a direct impact on future real estate professionals' demographics. Gender exclusion, from a woman's perspective, can have several negative consequences for women and the growth of the real estate industry and society. It restricts women's access to the resources, experience, and skills required to succeed in the real estate industry and stifles role models and mentors for future generations. It fosters the belief that women are less significant and capable than men or less capable and better suited for certain professions. It also preserves traditional gender norms and prejudices. This limits women's prospects and impacts societal norms and beliefs, cementing gender disparities in society and the real estate industry. Because women are underrepresented in the real estate industry, which is critical to economic growth, the industry loses out on talent and new ideas, hampering long-term economic growth and sustainability. Regrettably, real estate education has received little attention in gender diversity research, particularly in the context of African higher education institutions. This study seeks to address this gap by investigating the gender diversity of real estate education at the Federal Polytechnic Ede (FPE) in Nigeria, eminizatio female students' enrolment in the real estate programme, their experiences in real estate education, perceptions of the real estate industry and career prospects. The study acknowledges the different social, cultural, and economic dynamics that influence gender roles and possibilities for women in the African context. This study will add to the knowledge of gender equality in higher education by providing valuable insights into the dynamics and implications for the sustainable increase of female students in real estate programmes in Nigeria and other African countries. This study seeks to address the following questions: What are the total enrolments of real estate students at Federal Polytechnic Ede, Nigeria, between 2009 and 2022? What are the percentages of female students' enrolments between 2009 and 2022? What are the experiences of female students in real estate education? How do female students perceive the real estate industry? What are the female students' career prospects? The remainder of this paper is structured as follows: the introductory section is followed by the study area in section two.

Sections three and four present the literature review and methodology, while section five discusses the study's results. The paper closes with a conclusion.

Theoretical Framework and Literature Review

Tokenism Theory

The phenomenon of tokenism, a derivative of gender discrimination, is the foundation for this investigation. Kanter (1977)'s theory of tokenism defined groups with a representation rate of less than 15% as "tokens". Strohine and Brandl (2011) noted that tokens are expected to face difficulties and hardships, such as a lack of opportunities. Kanter developed the theory to explain the effects of token status on women's career development in male-dominated environments. The tokens are the minority individual in their group and are said to face various limitations and restrictions due to their numerical inadequacy. Kanter drew attention to the numerical inequality of token individuals within the group and mention'd four different groups according to their numerical representation ratios. These are the uniform groups (with a typical ratio of 100: 0), skewed groups (with a typical ratio of 85:15), tilted groups (with a typical ratio of 65:35) and balanced groups (with a typical ratio of either 60:40 or 50:50). This study employs Kanter's theory of tokenism to investigate the numerical inequality in real estate students' enrolment at Federal Polytechnic Ede in Nigeria. Tokenism is evident in career paths where one gender predominates over the other (Mosimanegape and Ijasan, 2022).

Female Student Enrolments in Higher Education

Women lag far behind men in global literacy and higher education statistics in scientific and technological disciplines (Ahmad, 2009; Williams, 2006; Adeyemi & Akpotu, 2004). Female students enrolled in higher education institutions at a lower rate than male students (Almelhem et al., 2022; Wieczorek-Szymanska, 2020; Shayan, 2015). Even if the participation trend has favoured women in advanced countries, it is still being determined whether the same trend exists in emerging countries (Ahmad, 2009). Dada (2017) posited that the proportion of women enrolled in higher education in developing countries is frequently less than half that of men. While many women enrolled in higher education, Odaga (2020) discovered this was only true in a few faculties. According to Adeyemi and Akpotu (2004), there is a significant separation between the sciences and science-based fields. Women are underrepresented in built environment courses, so changes must be made (Dada, 2017). The built environment disciplines, including real estate, are "male-dominated" and lack diversity and inclusion (Soo-Cheen, Sanmargaraja and Soon-Ham, 2020). Research has confirmed that men predominate among real estate students enrolled in Nigerian universities (see Ayodele, 2018; Peter et al., 2017). Oladapo (2017) remarked that from the commencement of the real estate profession in the early 1970s to the present day in Nigeria, there had been a gender disparity in the enrolments of pupillage estate surveyors and valuers and students in all universities offering the course. Dainty and Edwards (2003) observed a decline in female enrolment in building-related courses in the UK. Ahmad (2009) discovered that there were

more males in technical courses such as engineering, architecture, town planning, quantity surveying, and real estate management in Malaysia.

Existing studies have shown that the recorded percentages of female enrolments in the UK and US are mostly less than 10 per cent (see, Adogbo et al., 2015; Bigelow et al., 2015; Sewalk and Nietfeld, 2013; Shane et al., 2012; Del Puerto et al., 2011). In a recent Nigerian study, Dada (2017) reported that the percentage of female enrolment in construction-related programmes remains below 30 per cent on average. Studies of female enrolments in other fields reveal varying patterns. For example, Adeyemi and Akpoku (2004) discovered that female enrolment in the Humanities (education, arts, and social sciences) ranged between 35.60 per cent and 48.86 per cent. Faleye and Dibu-Ojerinde (2006) reported that the average female student enrolment in education/economics programmes is 40.5 per cent. Agu and Omenyi (2013) found an average of 50.8 per cent for female enrolment in management sciences, including accountancy, banking and finance, business administration, marketing and public administration. However, Momoh et al. (2020) found that female student enrolment in the business is below 30 per cent.

Meanwhile, there are pieces of evidence suggesting an improvement in female students' enrolment in construction-related courses. Oo and Widjaja (2018) examined the enrolments of female students in construction management programs at three universities in Australia from 2006 to 2015. The universities studied are the University of New South Wales (UNSW), the University of Newcastle (UON), and Western Sydney University (WSU). The results revealed a steadily increasing trend in three Australian universities' female enrolments in CM programs in the study period. At the same time, the percentages of female student enrolments for the WSU were relatively stable at below 5 per cent. UON and UNSW, on the other hand, had recorded percentages greater than 10 per cent. Ahmad (2009) earlier reported an increasing trend in the percentage of female enrolment in technical courses in Malaysia.

Female Students' Experiences, Perceptions and Career Prospects

Many factors influence a woman's career path, including personal characteristics, experiences and perspectives on the discipline and working environments (Dainty et al., 2000). According to previous research, female students studying construction-related disciplines face challenges such as male-dominated instructors (Adogbo et al., 2015; Shane et al., 2012), limited networking opportunities, difficulty finding female role models and mentors (Chiwuzie et al., 2022), discrimination (Dada, 2017; Lombardi, 2017; Francis and Prosser, 2014), male culture in the classroom (Ling and Pei Poh, 2004), intimidation by the male counterpart and gender-based harassment (Dada, 2017). Existing studies on female graduates' perceptions of the industry have found that the profession is perceived to be male-dominated; roles are also perceived to be competitive, demanding, stressful, and require long hours (e.g., Oladapo, 2017; Adogbo et al., 2015; Ling et al. 2016). Male culture, gender stereotypes, the glass ceiling, and the lack of professional female mentors and role models are all issues in the sector (Chiwuzie et al., 2022; Astor et al., 2017). Other perceptions about the industry include a lack of infrastructure that allows

women to resume work after taking time off to care for family responsibilities (Ling et al., 2014) and restrictive and extended work schedules (Barreto et al., 2017); work-life balance concerns (Barreto et al., 2017), bullying and harassment (Dainty et al., 2000), unequal career opportunities for men and women (Phathara-on et al., 2016), and a higher risk of unemployment for female real estate graduates (Poon and Brownlow, 2016). These graduates' perspectives align with studies on professional women in the real estate industry (e.g., Olawunmi et al., 2020; Oladapo, 2017; Ling et al., 2016). It has been argued that women generally "build their career trajectories based on their previous experiences and perceptions of the real estate practice environment" (Chiwuzie et al. 2022, 158). Studies have shown that women lack career prospects in the industry (Poon and Brownlow, 2016). The lack of professional opportunities and possibilities for women in the construction-related industry is attributable to "an atmosphere of dominant masculinity" (Sagebiel, 2003) and anti-women attitudes (Dada, 2017). However, Chiwuzie et al. (2022) found that 63.4 per cent of graduating female students surveyed expressed a desire to work in professional real estate firms after graduation. Oo and Widjaja (2017) also discovered that many female construction management and real estate students confirmed their intention to remain in the industry for at least the next ten years.

From the preceding, previous research results on gender diversity and female enrolment are inconsistent. Furthermore, most gender diversity research has focused on a specific built environment discipline, such as construction (Dainty et al., 2000; Francis and Prosser, 2014; Ling et al., 2016; Oo and Widjaja, 2017; Dada, 2017) or on group disciplines (Dainty and Edwards, 2003; Ahmad, 2009). Similar studies in real estate have focused on gender diversity in the industry (Mosimanegape and Ijasan, 2022; Poon and Brownlow, 2016; Oladapo, 2017). However, studies on gender and enrolment issues in real estate education are scarce. Ahmad (2009) investigated the gender and enrolment of estate management students in Malaysia, but the paper classified estate management students as one of five technical course groups, which included engineering, architecture, town planning, quantity surveying, and real estate management. There have yet to be studies on gender and real estate student enrolment in Nigeria, particularly in the Polytechnic context, hence, the need for this study. It is worth noting that the lack of gender diversity in real estate education due to low female enrolment limits the pipeline of qualified female professionals entering the industry, thus, stifling its overall growth and potential.

Methodology

This research employed a case study method using a Polytechnic. The Federal Polytechnic in Ede, Nigeria, was founded in 1992 as a public higher education institution. The Polytechnic has eight schools and thirty-one departments, each offering two-year programmes leading to National Diploma (ND) and Higher National Diplomas (HND) awards. The School of Environmental Studies (SES) now has five active departments: architectural technology, building technology, estate management and valuation, fashion and textile technology, quantity surveying and surveying and geo-informatics. The estate management and valuation department launched ND

and HND programmes in 2000 and 2009, respectively. The ND program is the first step, after which interested and eligible diplomats can reapply to pursue the HND. Obtaining an HND is a five-year course occurring at different levels, including two-time industrial training. To begin, students enrol in ND and, at the end of their first year, proceed on a three-month industrial training through the "Students' Work Experience Scheme" (SIWES). The second industrial training lasts one year and begins once the ND programme is completed. This field training aims to expose students to the actual world of work while also providing a platform for students to gain a sense of what the course entails. Evidence of one year of industrial training is mandatory for admission into the HND programme.

This study was conducted in two phases. For the study's first phase, secondary data on students' enrolment in the Department of Estate Management and Valuation, FPE, from 2009 to 2022 were acquired from the department's examination officer. It should be mentioned that the Polytechnic's 2014 academic year was cancelled. In the second phase of the study, all 150 female students currently enrolled in Estate Management and Valuation programmes were asked to fill out a questionnaire on a five-point Likert scale (1 = strongly disagree – 5 = strongly agree). A total of 138 copies of the questionnaire were returned, representing a 92 per cent response rate. The questions in the questionnaire were drafted based on the various influencing factors identified in the literature (Chiwuzie et al., 2022; Oo and Widjaja, 2018; Dada, 2017; Oladapo, 2017; Poon and Brownlow, 2016; Ling and Pei Poh, 2004). These factors impact female students' carrier decisions regarding construction management and other construction-related disciplines. The questions were slightly modified to assess female students' experiences, perceptions and career expectations in the context of the real estate profession. Table 1 contains the questionnaire items, which are essentially grouped into three categories: students' experiences in real estate education, perceptions of the real estate industry and career prospects.

Descriptive statistics (percentages and mean scores) and a one-sample t-test were eminiza for the data analysis. First, data on students' enrolments for ND and HND programmes in the Department of Estate Management and Valuation, FPE, from 2009 to 2022 were analysed using percentages. The analysed data were presented in bar charts and line graphs to determine the total enrolment trends and the percentages of female student enrolment trends, respectively. Second, the mean scores and standard deviations for students' responses to the individual measurement items were calculated. Third, a one-sample t-test was employed to determine the significance of the mean scores and, by extension, the student's responses. The sample's mean scores were compared to a test value of 3 (i.e., the neutral score) to determine if students at least agreed (mean score statistically greater than 3), disagreed (mean score statistically less than 3) or were neutral (mean score statistically equal to 3). Oo and Widjaja (2018) suggested that this test, in contrast to simple averaging, provides an objective assessment in selecting the item(s) that must be addressed. Before the analysis, the internal consistency of t'e scales employed in the questionnaire was confirmed using reliability analysis. Table 2 displays Cronbach's alpha coefficients for each questionnaire construct, indicating that all variables are reliable.

Table 1: Measurement items on female students' experiences, perceptions and career prospects

Category	
Students' Experiences	
E1	Male-dominated Lecturers and Instructors
E2	There is no discrimination against female students
E3	Male culture exists in the classroom
E4	Female students are intimidated by their male fellow students
E5	Female students face gender-based harassment
E6	Gender biases influence female students' self-esteem, motivation, and academic performance.
E7	There is a lack of networking and mentorship opportunities
Students' Perceptions of the real estate industry	
P1	The real estate industry is male-dominated
P2	Women are less likely to be employed in the real estate industry
P3	The real estate industry operates restrictive and long working hours
P4	Real estate practice is competitive and stressful
P5	Gender biases and stereotypes exist in the real estate industry
P6	Lack of women role models and mentors in the real estate industry
P7	Women face harassment and bullying in the real estate industry
P8	I feel that real estate practice is "masculine."
Students' Career prospects	
C1	I plan to work in real estate firms after graduation
C2	I intend to remain in the industry for the next ten years.
C3	Females have equal access to the same career opportunities as men.
C4	The prospects are equal for men and women
C5	Women receive adequate career support, such as career planning and mentoring.

Table 2: Cronbach's alpha coefficient for the constructs of the questionnaire

Construct	Number of Items	Cronbach's Alpha
Students' experiences	7	.972
Students' perceptions	8	.986
Students' career prospects	5	.977

Findings

This first section of the results discusses the enrolment patterns for ND and HND programmes in Estate Management and Valuation Department at Federal Polytechnic Ede, Nigeria, from 2009 to 2022. Figure 1 depicts the total enrolments over the study period, demonstrating the consistent upward trends for both programmes. In comparison, enrolment in the ND has gradually increased over the last thirteen years, whereas enrolment in the HND soared between 2020 and 2022. The department's success in securing approval to admit two streams (each with 40 students) for the HND programme explains the observed trends. These rising enrolment rates in real estate diplomas

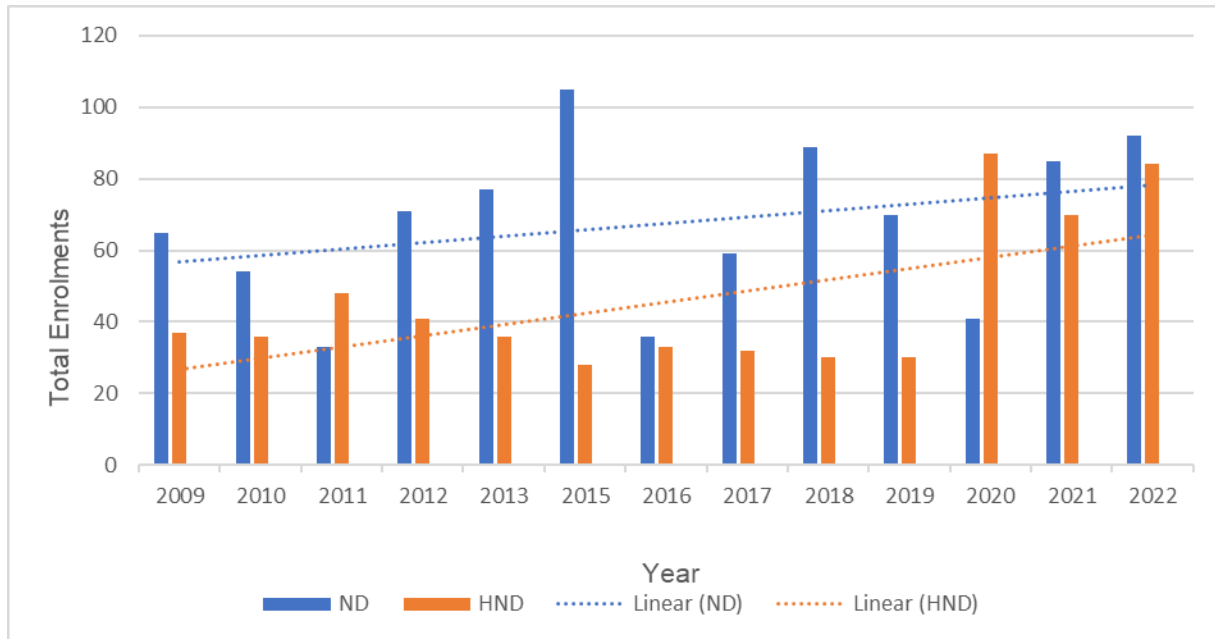contrast the declining patterns in the UK's building-related courses reported in Dainty and Edwards (2003).

Figure 1: Total Enrolment in Estate Management and Valuation Programmes, 2009-2022
Source: Analysis of survey data

Next, the percentages of female student enrolment trends were investigated, and the results are presented in Figure 2. According to the trend lines in Figure 2, the percentages of female student enrolments for ND and HND are stable below 50 per cent in the past thirteen years. Enrolments in both programmes peaked in 2021; while the recorded rate for HND is just under 60 per cent, ND is slightly above 60 per cent. Surprisingly, the observed percentages of more than 30% in ND and HND for most of the study years contradict the findings in Dada (2017) and statistics from other universities, as noted in the literature review. The analysis results reveal a balanced gender structure of real estate student enrolments, suggesting that the real estate education at FPE is inclusive. There are several advantages to achieving gender inclusivity in real estate education student enrolment. First, it promotes diversity within the field by fostering an inclusive learning environment where all students feel valued and respected. It creates a safe space for open discussion and collaboration, enabling students to learn from each other's unique experiences and perspectives. It enables women to acquire the knowledge and skills to navigate and succeed in a traditionally male-centric field. It will also help to dispel societal stereotypes about gender roles and expectations, as well as challenge the notion that certain professions are only appropriate for one gender. This shift in perception may encourage more women into real estate and related disciplines and inspire role models and mentors for future generations. The real estate industry is typically male-dominated, but with gender parity in enrolment, women can gain the knowledge

and confidence required to pursue careers in the industry. Bigelow et al. (2016) in a study of construction management students suggested that an increase in women earning construction management degrees will lead to increase the number of women in the construction industry. The following section presents the analysis of responses from the questionnaire regarding students' experiences in real estate education, perceptions of the real estate industry and career prospects.
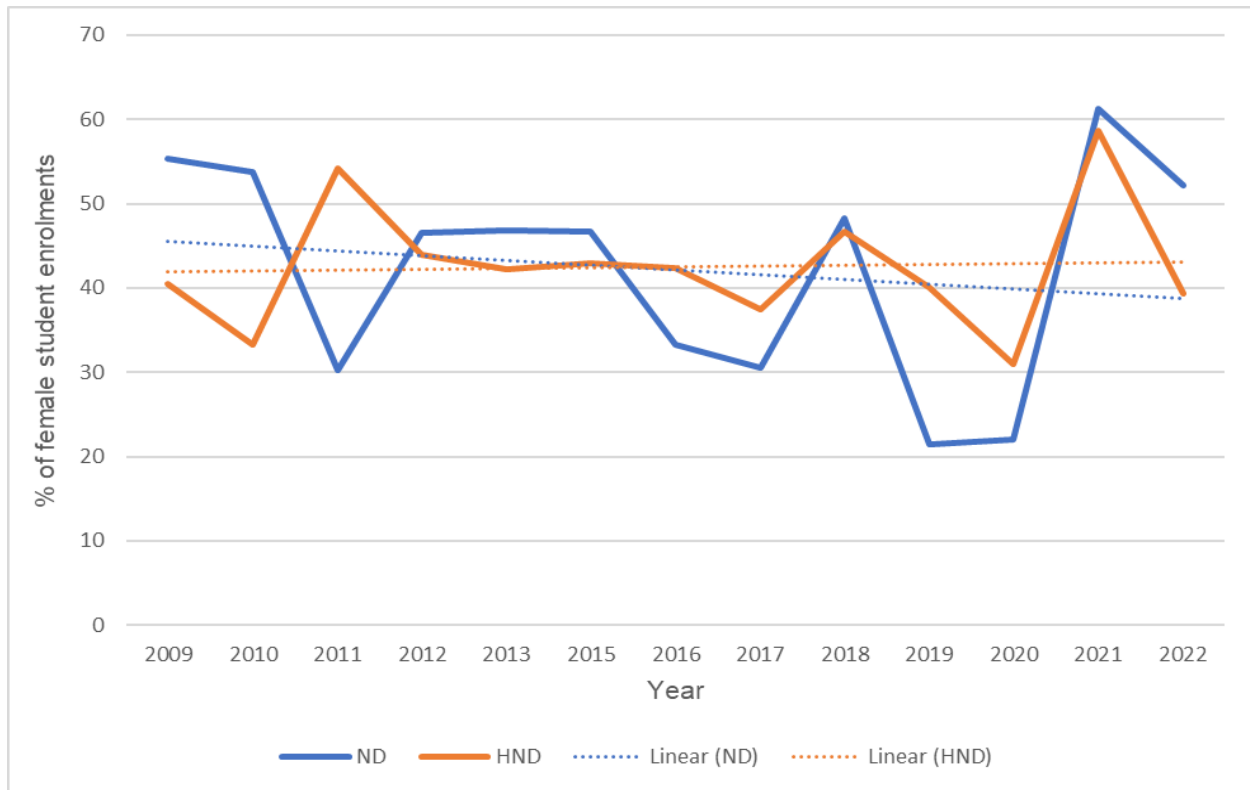

Figure 2: Percentage of female enrolment in Estate Management and Valuation programmes, 2009-2022.
Source: Analysis of survey data.

In this second section, the survey results are discussed. Table 3 shows the profiles of 138 surveyed female students in the ND and HND Estate Management and Valuation Department at Federal Polytechnic Ede, Nigeria. Table 3 reveals that ND II students comprised 31.2 per cent of the study's sample. One group of the students (71.0%) had prior work experience in the real estate industry, with most of their employment during their industrial training. Although 54.3 per cent of the surveyed students moved to estate management due to a change in the course during the admission process by the institution or academic incapacitation, 88.4 per cent of them found estate management interesting. The survey includes first-year (ND I) students and students with prior real estate work experience. The ND I students have just been in their programme for two months and are barely halfway through their first semester. Other students (ND II, HND I, and HND II) had worked in the real estate industry for at least three months while enrolled in their studies;

hence, their responses about their real estate education experiences, perceptions of the real estate industry, and career prospects were considered reliable. As a result, only these student groups were employed in the subsequent analysis, the results of which are presented in Table 4.

Table 3. Profiles of current female students in the Estate Management and Valuation programmes (n = 138)

Characteristic	Frequency	Percentage
Age group		
18-20	26	18.8
21-23	56	40.6
24-26	45	32.6
27+	11	8.0
Level of study		
ND I	40	29.0
ND II	43	31.2
HND I	26	18.8
HND II	29	21.0
Work experience in the real estate industry		
Yes	98	71.0
No	40	29.0
Type of work		
Full time	5	3.6
Part-time	0	0.0
Industrial training	93	67.4
Years of work experience in the real estate industry		
< 1 year	43	31.2
1–2 years	50	36.2
>2 years	5	3.6
Incidence of enrolling in the Estate Management and Valuation ND programme		
Personal Choice	63	45.7
Change in course during the admission process by the institution	71	51.4
Change due to Academic incapacitation	4	2.9
Rating of interest in Estate Management and Valuation		
Interesting	122	88.4
Neutral	13	9.4
Not interesting	3	2.2

Source: Analysis of survey data.

Table 4 displays the one-sample t-test outcomes for the measurement items. Regarding students' real estate education experiences, the respondents strongly disagreed that the faculty was male-dominated (E1). Indeed, the estate management and valuation department is one of the most

gender-diverse at Federal Polytechnic Ede. The department comprises sixteen faculty members, nine of whom are female. The students did, however, agree that there is a male culture in classrooms (E3) and a lack of networking and mentorship possibilities (E7). These factors influence female students' self-esteem, motivation, and academic performance (E6), which may affect their career opportunities in the real estate industry. Chiwuzie et al. (2022) reported limited networking opportunities and difficulty finding female role models and mentors as impacting female students' experiences in real estate education. The presence of diverse role models fosters inspiration, motivation, and confidence in pursuing real estate careers, regardless of gender. When young aspiring real estate professionals see individuals of all genders succeeding in the field, they are more likely to believe they can achieve the same success. Furthermore, the findings show a lack of agreement on female students being intimidated by male fellow student counterparts (E4) and the occurrence of gender-based harassment (E5). These findings imply that some female students would have considered these items a significant challenge. Meanwhile, earlier research (Barreto et al., 2017; Adogbo et al., 2015; Francis and Prosser, 2014) has identified each factor as a significant challenge.

Table 4: One-sample t-test results for female students' experiences, perceptions and career prospects

Item	Mean	SD	t-value	Sig (2-tailed)	Remark
E1	1.67	.756	-20.602	.000	Sig.
E2	3.24	1.370	2.051	.042	Sig.
E3	3.68	1.399	5.721	.000	Sig.
E4	3.03	1.377	.247	.805	Not Sig.
E5	2.89	1.327	-.962	.338	Not Sig.
E6	3.86	1.233	8.214	.000	Sig.
E7	3.72	1.367	6.165	.000	Sig.
P1	3.95	1.069	10.429	.000	Sig.
P2	3.75	1.238	7.080	.000	Sig.
P3	3.86	1.179	8.593	.000	Sig.
P4	2.93	1.412	-.603	.548	Not Sig.
P5	3.88	1.217	8.464	.000	Sig.
P6	3.72	1.367	6.165	.000	Sig.
P7	3.06	1.464	.465	.642	Not Sig.
P8	1.90	1.048	-12.342	.000	Sig.
C1	3.56	1.430	4.585	.000	Sig.
C2	3.51	1.441	4.194	.000	Sig.
C3	2.30	1.223	-6.753	.000	Sig.
C4	2.56	1.351	-3.844	.000	Sig.
C5	2.80	1.476	-1.615	.109	Not Sig.

Source: Analysis of survey data

On the female students' perceptions of the real estate industry, the results show that female students agree that the real estate industry is male-dominated (P1), that women are less likely to be employed in the real estate industry (P2), that the real estate industry operates with inflexible and

long working hours (P3), that gender biases and stereotypes exist in the real estate industry (P5), and that there is a lack of female role models and mentors in the real estate industry (P6). Women experiencing harassment and bullying in the real estate industry were also identified (P7), with a mean score of 3.06 which was not statistically significant. Furthermore, while female students agreed that real estate work is competitive and demanding (P4), they disputed that real estate practice is masculine (P8). These findings align with responses from graduating real estate students who reported their likelihood of working in real estate firms and recent female graduates in real estate practice in Chiwuzie et al. (2022) as well as professional women working in the real estate industry in Olawunmi et al. (2020). These industry factors appear not to negatively impact the respondents' decision to pursue a career in real estate. This assertion is supported by their responses to career prospects items C1 and C2, in which they agreed with the stated intention to work in real estate firms after graduation and would likely remain in the industry for an extended period. However, students disagreed with items C3 (females have equal access to the same career opportunities as men) and C4 (the prospects are equal for men and women), while responses to item C5 (women receive adequate career support, such as career planning and mentoring) were mixed and not significantly greater than the neutral.

Overall, the analysis of female students' perceptions indicate that there is a lack of diversity and inclusivity in the real estate industry. As a result, for long-term economic growth to be sustained, the real estate sector must become more diverse. Promoting diversity in the real estate industry necessitates a proactive strategy, a commitment to inclusivity, and the willingness to challenge existing norms and biases. It is critical to create an environment in which everyone, regardless of gender, has an equal opportunity for success and development. It is also critical to provide mentorship, training, and a network of support for women in real estate to further their careers. This can help to dispel gender stereotypes and encourage more women to enter, remain and succeed in the field, resulting in a more equal and diverse real estate professional community. Studies such as Norberg and Johansson (2021), Ceylan (2020), Ritter-Hayashi and Vermeulen (2019) and Nishii (2012) have shown that diverse teams outperform homogeneous teams in terms of performance, creativity, and problem-solving abilities.

Conclusion

This study examined gender diversity in real estate education at Federal Polytechnic Ede, Nigeria, focusing on female students' enrolment, experiences, perceptions, and career prospects. According to enrolment data, the gender structure of real estate student enrolments is balanced, suggesting that the real estate education at FPE is inclusive. Female enrolments in ND and HND programmes have steadily increased and are stable below 50 per cent over the last thirteen years. The survey results also revealed that female students face a lack of networking and mentorship opportunities, which impact their self-esteem. Furthermore, female students perceived gender discrimination and anti-women attitudes as prevalent in the real estate sector; however, these industry elements would

not deter female students' decision to pursue a career in the real estate industry. Historically, real estate, like other construction-related disciplines, has been male-dominated, with women facing barriers and biases that have restricted their participation and advancement. By promoting equal gender representation in real estate sector, these barriers can be dismantled. Gender parity in enrolment and an inclusive learning environment can improve female students' experiences. This will, in turn, encourage women to pursue real estate careers, provide them with the necessary skills and knowledge to succeed. Consequently, the real estate industry must become more diverse. A proactive dedication to inclusivity, mentorship and the willingness to challenge existing norms and biases is needed to enable women to pursue real estate careers. This will ensure a steady stream of female professionals into the industry, leading to more innovative and sustainable real estate professional community. The results of this research are significant for academic Institutions, policymakers and industry stakeholders interested in creating a more diverse and inclusive real estate sector. This study adds to the knowledge of gender diversity in African higher education institutions, particularly within the Polytechnic context. This study has limitations. We acknowledge that the study focuses on female real estate students in just one institution, which could constitute bias; consequently, eminization the results is difficult. Nonetheless, it does leave potential for more research in this area. Longitudinal and qualitative studies involving participants from several higher education institutions, cultural circumstances, Alumni and the industry are needed to improve the results. Furthermore, including male participants to provide their experiences and perceptions would give fair assessments.

Disclosure Statement

The authors reported no potential conflict of interest.

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