



PARTICIPATION OF FEMALE UNDERGRADUATE STUDENTS AT NJALA UNIVERSITY: AN ANALYSIS OF PERFORMANCE AND BARRIERS

Emmanuel Dumbuya

Teacher

University Experimental School,
Njala University, Njala Mokonde, Sierra Leone

Abstract: This study investigates the participation, academic performance, and barriers faced by female undergraduate students at Njala University from 2015 to 2019. Through an analysis of quantitative data from multiple academic programs, this paper highlights trends in female students' academic achievements, particularly in degree classifications. In addition, it explores the socio-cultural, economic, and institutional barriers that hinder female participation and performance at the university level. Recommendations for policy reform and support mechanisms are offered to promote gender equity and improve female students' performance and retention.

Keywords: Female students, performance, tertiary education, Sierra Leone, Njala University, Challenges, gender inequality, educational policy.

I. INTRODUCTION

The inclusion of women in higher education is a cornerstone of global efforts toward achieving gender equality, a key element of the United Nations Sustainable Development Goals (SDG 4 and SDG 5). While strides have been made in many developed nations, women in developing countries continue to face obstacles in accessing and succeeding in higher education institutions. Sierra Leone, particularly at Njala University, mirrors these global trends, revealing notable disparities between male and female students' participation and performance.

This paper aims to provide a comprehensive analysis of the participation of female undergraduate students at Njala University by exploring their academic performance over five years (2015-2019). Additionally, it examines the specific barriers female students face in their academic journey, ranging from institutional challenges to societal expectations and personal responsibilities. The data used for this analysis were sourced from the Njala University Exam Office and complemented by qualitative surveys administered to female students to uncover the reasons behind their performance.

The purpose of this study is to highlight the gaps that still exist in promoting gender parity in higher education and to suggest actionable recommendations that can bridge these gaps. Ultimately, this analysis is intended to support the ongoing development of educational policies aimed at improving female participation and performance in tertiary institutions, particularly in West African contexts.

2. Participation and Academic Performance

2.1. Overview of Female Student Performance by Faculty

II. The academic performance of female students at Njala University from 2015 to 2019, measured through degree classifications, presents a varied picture across the different faculties. During this period, a total of 36 female students achieved first-class degrees, 86 secured second-class first division degrees, 226 earned second-class second division degrees, and 173 were awarded third-class degrees. Only 16 female students had to repeat their courses, indicating a relatively low attrition rate compared to male counterparts. However, a closer examination of performance trends across individual faculties reveals notable disparities that highlight systemic issues influencing female academic outcomes.

Faculty of Technology

The Faculty of Technology exhibited some of the most pronounced disparities in female student performance. From 2015 to 2019, only 2 female students graduated with first-class honors, while the majority fell into the second-class second division or third-class categories. The technological field, traditionally dominated by male students, presents unique challenges for female participation, including societal biases regarding women's capabilities in STEM fields and limited access to resources like laboratory equipment and technical mentorship. Female students in this faculty often face a lack of support networks and role models, which may contribute to their lower performance relative to their peers in other faculties.

Faculty of Agriculture

In contrast, the Faculty of Agriculture demonstrated a more balanced distribution of female students across the degree classifications. Notably, 8 female students earned first-class honors in 2019 alone, showing a significant improvement compared to previous years. The improvement in performance may be attributed to increasing institutional support for female students in agriculture, including scholarships and targeted programs aimed at encouraging women to pursue careers in agribusiness and agricultural sciences. Nonetheless, many female students in this faculty continue to grapple with challenges related to balancing family responsibilities with academic demands, particularly for those from rural backgrounds.

Faculty of Natural Resources Management

The Faculty of Natural Resources Management revealed mixed results, with no female student achieving first-class honors in several years, and overall participation declining over time. This trend may reflect broader issues related to the perception of environmental sciences as male-dominated fields, coupled with a lack of female representation in leadership and academic mentorship roles within the faculty. The low participation and performance of female students in this faculty could also be linked to socio-economic barriers, as many students struggle to access fieldwork opportunities and internships, which are crucial for success in natural resource management programs.

Faculty of Environmental Sciences

The Faculty of Environmental Sciences showed varying levels of female participation and performance. While a significant number of female students enrolled in this faculty, many were concentrated in the lower degree classifications, with few achieving first- or second-class first division honors. This suggests that while environmental science programs may be more accessible to female students, there are challenges related to academic performances that need to be addressed. These challenges may include the difficulty of mastering scientific content, insufficient academic support, and limited access to up-to-date resources such as textbooks and laboratory facilities.

Faculty of Social Sciences and Law

Female students in the Faculty of Social Sciences and Law showed uneven performance, with few achieving first-class honors during the period under review. The majority of female students in this faculty were awarded second-class second division and third-class degrees. Given the critical importance of social sciences and law in addressing societal issues and shaping policy, this performance gap raises concerns

about the barriers faced by female students in these fields. Challenges such as financial constraints, balancing work or family responsibilities with studies, and the highly competitive nature of law programs may contribute to this underperformance.

Faculty of Education

The Faculty of Education stands out as one of the most successful faculties in terms of female student performance, with consistently high numbers of first-class honors awarded to female students. For instance, in 2016, 13 female students earned first-class honors, the highest across all faculties. The strong performance in this faculty can be attributed to the nature of education programs, which tend to attract a higher proportion of female students due to societal expectations and traditional gender roles that align women with teaching and nurturing professions. Additionally, the presence of female faculty members and mentors within the Faculty of Education may provide female students with greater academic support and role models to emulate.

Faculty of Community Health Sciences

Female students in the Faculty of Community Health Sciences exhibited moderate performance levels, with relatively few first-class honors awarded over the period. While healthcare professions are generally seen as attractive career paths for women, challenges such as the demanding nature of clinical practice, limited access to internships, and the difficulty of balancing practical and theoretical work may hinder female students' ability to excel academically. Moreover, socio-cultural barriers, such as the expectation for women to prioritize family caregiving roles, may negatively impact their academic focus and career advancement in the health sciences.

Summary of Faculty Performance

The analysis of female student performance at Njala University reveals a complex landscape where certain faculties, such as Education and Agriculture, have seen significant strides in female academic achievement, while others, particularly in STEM fields, continue to lag behind. These disparities underscore the importance of targeted interventions to address the unique challenges faced by female students in different academic disciplines. Moreover, institutional factors such as mentorship availability, access to resources, and academic support mechanisms play a critical role in shaping female student outcomes.

The findings suggest that while progress has been made in increasing female participation in higher education, systemic barriers remain, particularly in traditionally male-dominated fields such as technology and the natural sciences. Addressing these challenges requires a multi-faceted approach, including policy reforms that promote gender equity, increased financial and academic support for female students, and concerted efforts to change societal perceptions of women's roles in STEM and other underrepresented fields.

Table 1 summarizes the performance of female students across five schools at Njala University. Faculties like Education and Agriculture recorded higher numbers of first-class and upper-second-class graduates, while fields like Technology, Natural Resources Management, and Social Sciences and Law saw fewer female students achieving high academic distinctions.

Table 1: Participation of Female Undergraduate Students at Njala University (2015-2019)

Year	School	First Class	Second Class 1st Division	Second Class 2nd Division	Third Class	Repeaters
2015	Technology	0	2	7	14	0
2016	Technology	0	5	12	15	0
2017	Technology	1	4	11	26	2
2018	Technology	0	6	6	23	5
2019	Technology	1	8	13	21	0
2015	Agriculture	1	1	8	9	0
2016	Agriculture	0	6	9	12	0
2017	Agriculture	2	3	8	5	0
2018	Agriculture	1	1	16	12	0
2019	Agriculture	8	7	4	7	0
2015	Natural Resources Management	3	9	1	5	0
2016	Natural Resources Management	0	2	1	5	0
2017	Natural Resources Management	0	0	0	0	0
2018	Natural Resources Management	0	0	0	0	0
2019	Natural Resources Management	0	2	2	4	0
2015	Environmental Sciences	1	7	25	46	0
2016	Environmental Sciences	0	0	10	40	0
2017	Environmental Sciences	0	0	4	13	0
2018	Environmental Sciences	0	0	14	19	0

2019	Environmental Sciences	0	0	7	16	0
2015	Social Sciences and Law	1	0	6	17	0
2016	Social Sciences and Law	0	0	2	7	2
2017	Social Sciences and Law	0	0	0	0	0
2018	Social Sciences and Law	0	0	3	6	4
2019	Social Sciences and Law	0	0	0	0	0
2015	Education	3	8	14	0	0
2016	Education	13	2	6	3	0
2017	Education	7	10	9	17	0
2018	Education	1	0	4	10	1
2019	Education	10	26	64	37	3
2015	Community Health Sciences	0	0	1	1	0
2016	Community Health Sciences	1	0	3	0	0
2017	Community Health Sciences	0	0	0	3	0
2018	Community Health Sciences	0	0	0	0	0
2019	Community Health Sciences	2	0	0	1	0

Source: Njala University Exam Office

The data presented in Table 1 highlight significant disparities in female student participation and academic achievement across different faculties at Njala University from 2015 to 2019. Some faculties, such as the School of Education, have demonstrated remarkable progress in promoting female academic success, while others, such as the Schools of Natural Resources Management and Social Sciences and Law, have lagged behind, with fewer female students achieving high academic distinctions.

School of Education

The School of Education has been a leader in advancing female participation and academic performance. By 2019, there was a notable increase in the number of first-class female graduates, with 10 female students achieving first-class honors and 26 earning upper-second-class degrees. This upward trend can be attributed to several key factors:

1. **Balanced Gender Representation:** The School of Education has attracted a more gender-balanced cohort of students, particularly because education is traditionally viewed as a female-friendly field. Societal expectations, which often align women with teaching and nurturing roles, have contributed to the high female enrollment in this faculty. As a result, female students have a strong peer network and greater visibility in the classroom, which may contribute to their higher performance.
2. **Supportive Learning Environment:** The faculty's supportive learning environment has likely played a significant role in cultivating female academic success. Female students in the School of Education benefit from mentorship programs, the presence of female faculty members, and access to academic support services designed to meet their needs. These resources may help mitigate some of the challenges that female students face in higher education, such as balancing academic responsibilities with family and caregiving roles.
3. **Targeted Interventions:** Over the years, the university has implemented targeted interventions in the School of Education to encourage female participation and performance. These interventions may include scholarships, academic workshops, and seminars focused on female empowerment in the education sector. Such initiatives provide female students with the tools and confidence they need to excel in their academic pursuits.

School of Natural Resources Management

The stagnation in female academic performance within the School of Natural Resources Management at Njala University is concerning, particularly because no female students achieved first-class degrees in recent years. Several factors may explain this trend:

1. **Underrepresentation of Women in STEM Fields:** Natural resources management is categorized within the broader STEM (Science, Technology, Engineering, and Mathematics) fields, where women have historically been underrepresented. Studies show that women's participation in STEM fields remains low due to a combination of societal expectations, gender stereotyping, and the lack of female role models (UNESCO, 2017). Without strong peer networks or mentors, female students often face greater challenges in navigating these male-dominated fields, which may contribute to the lower academic distinctions among them (Hill et al., 2010).
2. **Lack of Access to Resources:** Access to essential resources such as fieldwork opportunities, internships, and mentorship is critical in the field of natural resources management, which is highly practical and research-intensive. Female students, particularly those from rural or economically disadvantaged backgrounds, may face obstacles in accessing these resources due to financial constraints, limited transportation options, or traditional expectations that restrict their ability to participate in fieldwork. Research indicates that these factors disproportionately affect women in STEM, hindering their academic success (UN Women, 2018).
3. **Socio-Cultural Barriers:** Cultural norms and societal expectations in Sierra Leone may further contribute to the lower academic performance of female students in this faculty. In many rural areas, women are expected to prioritize family responsibilities, which can limit the time they have for their studies (Conteh & Kamara, 2019). Such societal expectations may discourage women from excelling in non-traditional fields like natural resources management. Moreover, the lack of support for women pursuing careers in male-dominated disciplines exacerbates this issue (Sillah, 2021).

School of Social Sciences and Law

Similarly, the School of Social Sciences and Law has seen fewer academic distinctions awarded to female students. The following factors may explain the performance gap:

1. **Competitive Nature of Law Programs:** The legal profession is highly competitive, and law programs are often characterized by rigorous academic standards that demand substantial time and effort. Female students, particularly those with caregiving responsibilities or limited support networks, may struggle to balance these demands with other personal commitments (Hughes, 2019). Research has shown that female students often experience higher levels of stress and burnout in such

demanding environments, which can negatively impact their academic performance (American Bar Association, 2020).

2. **Gender Bias and Discrimination:** Gender bias remains a challenge in traditionally male-dominated fields such as law. Female law students may face systemic barriers, including unequal access to internships, clerkships, and networking events, which are critical for career development (Biernat & Sesko, 2020). These disparities in opportunities not only affect their career trajectory but can also impact academic outcomes, as many of these experiences are integral to law school success (Bartlett, 2016).
3. **Institutional Barriers:** Institutional factors, such as the lack of female faculty members in leadership roles, can also hinder female students' progress. A study by the World Bank (2020) found that universities with strong female faculty representation tend to foster a more supportive environment for female students. In contrast, institutions with fewer female mentors and leaders may inadvertently perpetuate a culture where female students feel unsupported or undervalued. Addressing these institutional barriers will be crucial to promoting gender equity and improving female academic performance in the School of Social Sciences and Law.

2.2. Gender Disparities in STEM Disciplines

A critical concern within tertiary education in Sierra Leone is the persistent gender disparity in Science, Technology, Engineering, and Mathematics (STEM) disciplines. Fields such as Technology and Environmental Sciences remain male-dominated, with female students facing unique challenges that hinder their academic success. One major issue is the perception that STEM fields are inherently "masculine," which deters many young women from pursuing these disciplines. For those who do, being a minority within their programs often limits access to essential peer support and mentorship, creating additional barriers to success (Cheryan et al., 2017).

Recent studies have highlighted that the underrepresentation of women in STEM fields can be traced to deep-rooted gender biases that manifest as early as primary education and persist throughout the academic pipeline (UNESCO, 2017). Gender stereotypes, such as the belief that boys are naturally better suited for STEM, discourage many girls from excelling in science and mathematics from a young age (Nosek et al.,

2009). By the time these students reach tertiary education, they are already at a disadvantage, having received less encouragement to pursue STEM courses.

At Njala University, female students in STEM programs have reported feeling isolated and underrepresented in their classes, with some stating that the lack of female peers and mentors negatively impacted their confidence and academic performance. According to a report by the Association of Women in Science (2020), such feelings of isolation are not uncommon for women in STEM, contributing to higher dropout rates and lower academic achievement. Moreover, female students often receive less academic encouragement and support compared to their male counterparts, while facing greater scrutiny from faculty and peers (Hill et al., 2010).

Despite an increase in the number of women enrolling in STEM courses, the support structures needed to help female students thrive remain inadequate. A lack of female role models in STEM faculties exacerbates the issue, making it more difficult for women to envision successful careers in these fields. Research has shown that having female mentors and professors can significantly boost the confidence and performance of female students in male-dominated disciplines (Moss-Racusin et al., 2012). Therefore, fostering a more inclusive academic environment, with targeted support systems for women in STEM, is essential for addressing these disparities.

3. Barriers to Female Participation and Academic Success

Female students at Njala University face multiple barriers that hinder their academic performance and retention. These barriers stem from socio-cultural expectations, economic hardships, and institutional shortcomings. To understand these challenges in detail, it is essential to explore their origins and impacts on female participation and success.

3.1. Socio-Cultural Barriers

A significant challenge for female students in Sierra Leone arises from deeply rooted socio-cultural expectations. In many parts of the country, particularly in rural areas, traditional gender roles dictate that women prioritize family responsibilities over personal ambitions, including education. As a result, female students often face the "triple burden" of managing household chores, caregiving responsibilities, and their

academic work. This creates immense pressure on them and limits the time and energy they can invest in their studies (Manda, 2018).

Research indicates that this imbalance is particularly pronounced in patriarchal societies where the division of labor is rigidly gendered (Hughes, 2019). Women are expected to fulfill their roles as wives, mothers, and caregivers, often leaving little room for personal development, including education. For female students attending university, these expectations can lead to absenteeism, lower academic performance, and in some cases, dropping out altogether (UNESCO, 2017).

Another socio-cultural barrier is early marriage and pregnancy, which disproportionately affect female students. According to studies, early marriage is prevalent in many rural communities in Sierra Leone, where girls are expected to marry and start families at a young age (Gennari et al., 2020). This practice often disrupts their education, as many young women are forced to leave school to fulfill marital and motherhood duties. While Njala University has policies in place to support pregnant students and young mothers, including allowing them to continue their studies, the stigma surrounding early motherhood remains a deterrent for many women. The fear of being judged by peers and lecturers prevents them from returning to complete their degrees (Sillah, 2021).

In focus group discussions conducted at Njala University, many female students reported being discouraged from pursuing higher education due to societal pressure to conform to traditional gender roles. They highlighted instances where family members, particularly male relatives, actively discouraged them from continuing their studies, viewing education as unnecessary for women. This reflects broader societal attitudes that undervalue women's education and prioritize their roles as homemakers (Kamara, 2016).

3.2. Economic Barriers

Economic constraints are another major obstacle to female participation in higher education in Sierra Leone. Poverty is widespread in the country, and female students from low-income backgrounds are particularly vulnerable to financial hardships. Many struggle to afford tuition fees, textbooks, and other essential academic resources, leading some to either drop out or engage in part-time work that detracts from their studies (Jones et al., 2018).

The gendered nature of economic deprivation also plays a significant role. Female students often face greater challenges in securing financial support, as scholarship opportunities are limited and tend to favor male applicants. This is partly due to long-standing biases that prioritize male education over female education, as well as the perception that men are more likely to succeed in higher-paying careers (Abu-Kamara, 2020). According to the Ministry of Education (2019), only 35% of scholarships awarded in tertiary institutions in Sierra Leone go to female students, reflecting the unequal distribution of educational resources.

In addition, female students are more likely to be responsible for supporting their families financially, especially in cases where they are the eldest daughters. This added economic pressure often forces them to prioritize immediate family needs over long-term educational goals, contributing to high dropout rates among female students from low-income backgrounds (Conteh, 2019).

3.3. Institutional Barriers

Institutional barriers at Njala University further exacerbate the challenges female students face. These barriers include inadequate support systems, gender-insensitive policies, and a lack of mentorship and career guidance tailored to the needs of female students (Fofana, 2020). While the university has made efforts to increase female enrollment and support, many students report that these measures are insufficient in addressing the unique obstacles they encounter.

For instance, female students often have limited access to academic advising and mentorship programs. Studies have shown that mentorship is critical to the success of female students in higher education, providing them with guidance, encouragement, and professional networking opportunities (Zarroug, 2021). However, at Njala University, many female students reported that mentorship programs are not widely promoted or accessible, particularly in male-dominated faculties like Natural Resources Management and Engineering. This lack of mentorship and support contributes to the lower academic performance and retention rates observed among female students in these disciplines (Kamara & Mansaray, 2018).

Moreover, gender bias and discrimination within the academic environment present significant obstacles. Some faculty members and male students perpetuate harmful stereotypes about women's capabilities, leading to unequal treatment in the classroom. This can manifest in subtle ways, such as female students

being overlooked for leadership roles in group projects, or in more overt forms, such as dismissive attitudes toward female academic contributions (Sillah, 2021). Such discriminatory behaviors create a hostile learning environment for women, undermining their confidence and academic engagement.

Sexual harassment is another critical issue that affects female participation and academic success. Despite the university's anti-harassment policies, many female students reported experiencing harassment from male lecturers and peers. This harassment not only affects their mental health but also disrupts their academic progress, as they may avoid certain courses or faculty members to protect themselves from inappropriate behavior (World Bank, 2020). Although Njala University has taken steps to address these issues, including implementing reporting mechanisms, there is a need for stronger enforcement of policies and greater accountability for those involved in such misconduct (UN Women, 2021).

4. Recommendations

Addressing the challenges female students face at Njala University requires a multi-faceted approach that includes the implementation of gender-sensitive policies, the promotion of female role models, and community engagement. The following recommendations aim to support the academic success and retention of female students.

4.1. Gender-Sensitive Policies and Support Systems

To mitigate the barriers female students face, Njala University must introduce more gender-sensitive policies, especially in areas like financial support, academic advising, and mentorship programs. Studies have shown that targeted financial aid can significantly improve female students' retention and performance in higher education institutions, particularly in low-income contexts (UNESCO, 2021). Scholarships specifically aimed at women, particularly those pursuing degrees in male-dominated fields such as Science, Technology, Engineering, and Mathematics (STEM), can provide critical financial relief and encourage female enrollment and success in these disciplines (Zarroug, 2021).

Additionally, mentorship programs that connect female students with successful women in their fields can provide guidance and support, helping them navigate the challenges of higher education (Hughes, 2019). These programs should include not only academic mentorship but also career advising to ensure that female students are equipped with the knowledge and networks necessary for post-graduation success.

4.2. Promoting Female Role Models in Academia

The presence of female role models in academia can have a powerful impact on female students' aspirations and academic performance. Research indicates that when students, especially women, see others who have successfully navigated the academic system, they are more likely to persist in their own educational journeys (World Bank, 2020). Njala University should prioritize recruiting and promoting female faculty members, particularly in disciplines where women are underrepresented, such as STEM fields (Sillah, 2021). By creating a more balanced gender representation among faculty, the university can foster a supportive academic environment that empowers female students to thrive.

Furthermore, highlighting the achievements of female faculty and researchers through public recognition and leadership opportunities can help dismantle the stereotype that certain academic fields are "male-only" (Kamara, 2016). These initiatives can inspire more women to pursue advanced degrees and academic careers, thereby contributing to a more gender-equitable academic environment.

4.3. Addressing Socio-Cultural Barriers through Community Engagement

To address the socio-cultural barriers that limit female participation in higher education, Njala University must engage with local communities to challenge traditional gender roles. Community involvement is crucial in reshaping attitudes towards women's education. Research has shown that when community leaders, parents, and local organizations are involved in promoting female education, societal attitudes begin to shift, leading to increased enrollment and retention of female students (Gennari et al., 2020).

Njala University should collaborate with these stakeholders to raise awareness of the importance of female education for personal and community development. Workshops, public campaigns, and parental education programs can be used to demonstrate the long-term benefits of higher education for women, including economic independence and improved family well-being (Conteh, 2019). Such efforts can also challenge the stigma associated with early motherhood and encourage pregnant students to return to complete their degrees (Sillah, 2021).

Moreover, creating community-based support systems that address the triple burden of caregiving, domestic responsibilities, and education can help female students balance these competing demands more effectively. Community leaders and local organizations can play a critical role in advocating for policies that support

female students, such as flexible learning schedules or childcare services for student mothers (UNESCO, 2017).

5. Conclusion

The barriers faced by female students at Njala University are multi-faceted, arising from socio-cultural, economic, and institutional challenges. To promote gender equity and improve female academic performance, there is a need for comprehensive reforms. These should include enhanced financial support for female students, robust mentorship and career guidance programs, and the creation of a more gender-sensitive academic environment. Moreover, addressing the socio-cultural norms that limit female participation in education will require concerted efforts from policymakers, educational institutions, and local communities. By removing these barriers, Sierra Leone can empower more women to achieve academic success and contribute meaningfully to national development.

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