

Gender Equality in Cambodian Higher Education Institutions: A Case Study of the National University of Battambang

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ABSTRACT

This study examines the gender distribution among students, faculty, and administrative staff at the National University of Battambang (NUBB). The research investigates the sociocultural, economic, and institutional barriers to gender equality at the university, assesses the effectiveness of existing gender equality policies and initiatives, and considers the role of university leadership in advancing gender equality and fostering an inclusive culture. A mixed-methods approach was used, combining quantitative surveys with qualitative interviews. The findings reveal that the number of female students significantly exceeds that of male students, yet women constitute less than 25% of the faculty and administrative staff. Despite this disparity, NUBB's commitment to implementing gender equality policies and initiatives is commendable. The university's leadership is dedicated to these efforts and actively supports advancing gender equality, which bodes well for the future. The researchers offer practical recommendations to enhance gender equality at NUBB, contributing to broader efforts to promote gender equity in Cambodian higher education institutions. The results underscore the ongoing need for policy revisions and sustained efforts to address gender imbalances and create a more equitable academic environment.

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1. INTRODUCTION

1.1. Background and rationale of the study

Gender disparities in global higher education are apparent, with female students outnumbering male students. However, a pronounced 'humanities bias' exists: 54% of female students choose arts, humanities, and social sciences (AHSS), whereas only 30% opt for science, technology, engineering, and mathematics (STEM) [1]. Despite universities

claiming supportive policies, evidence of their impact remains scarce. Fewer than two-thirds of institutions actively monitor women's graduation rates and implement targeted strategies to bridge this gap [2].

There were 124 higher education institutions (HEIs) across Cambodia, an increase of 6 compared with 2016; 48 public higher education institutions (an increase of 2) and 76 private HEIs were located in 20 capitals/provinces. HEIs were under the supervision of 16 ministries/institutions. Two hundred twenty-two thousand eight hundred seventy-nine students, 106,952 or 48% female, were pursuing higher education. There were 19,575 associate degree students, 52.57% of whom were female and 2,374 of whom were female. A total of 179,258 students, including 50.7% female and 27,338 (51.8% female) who were scholarship students, were pursuing a bachelor's degree. A total of 28.3% of the participants were bachelor's degree students studying science, technology, engineering, and mathematics (STEM) (40.1% male and 16.9% female). Among the 23,256 Master's students, 24.4% were pursuing postgraduate studies, 790 were PhD students, and 7.3% were female. The gross enrollment ratio for individuals with a higher education level was 12.0% (12.2% male, 11.8% female) from SY 2019--2020. There are 23 dormitories with 1,480 female students, seven owned by private higher education institutions with 275 female students [3]. Ensuring that women and girls have access to high-quality education is vital for reducing gender inequality [4].

Under the devastating regime of the Khmer Rouge for almost four years, the educational sector was abolished almost wholly [5]. Educational facilities were destroyed, and approximately 75% of higher educational lecturers and 96% of university students were lost to genocide [6]. "Before the DK, Cambodia had 5,275 primary schools, 146 secondary schools, and nine higher educational institutions, but approximately 90 percent of these educational facilities and all their documents were destroyed under this regime [7]." Cambodia ranks 99 out of 145 countries on the Gender Inequality Index (GII) in the Human Development Report 2011 [8]. In Cambodia, deeply entrenched gender norms continue to perpetuate inequality, denying that women's fundamental rights hinder progress. Empowering girls is crucial to poverty reduction and development [9]. Despite progress in areas such as reducing violence against women, promoting gender equality in education, and empowering women in the economy, significant challenges remain. Fewer girls than boys complete school, highlighting the ongoing need for targeted efforts to achieve full gender equality in the country [10].

In terms of gender inequality in enrollment in tertiary education, Cambodia was ranked 127 out of 145 countries [11]. Unfortunately, several factors discourage female students from pursuing postgraduate education in Cambodia, contributing to a gender imbalance in Master's programs. For the 2021--2022 school year, out of 206,893 higher-education students, only approximately 46% are female, most pursuing bachelor's degrees [12]. However, for master's or doctorate degrees, the number of female students significantly decreases. Specifically, of 9,483 students pursuing a master's degree, only 28.6% are female [12]. Efforts are needed to address these disparities and provide more significant opportunities for Cambodian women in higher education. Owing to improvements in higher education globally and regionally, the Royal Government of Cambodia (RGC) has strived to

increase the quality of higher education by strengthening national policies, legal frameworks, and institutions to enhance education quality [11]. Cambodia is considered a developing country and was ranked 109 out of 145 countries on the Gender Inequality Index in 2015. In terms of gender inequality in enrollment in tertiary education, Cambodia was ranked 127 out of 145 countries [13]. As Cambodia moves toward middle-income status and regional integration, there is a need to promote equitable access to high-quality education at all levels of society to compete in the free labour market. In Cambodia, the poorest people have few postsecondary education opportunities. This is evident by examining the gender makeup of positions that require postsecondary education, such as the proportion of female lawmakers in the legislative body, which decreased from 21% in 2008 to 20% in 2013 [14]. RGCs need to address these issues to address the gender gap, particularly in secondary and higher education, due to the lack of locally available education facilities and traditional values that place lower primacy on girls and women. Cambodian women need more significant opportunities for higher education to compete for jobs in competitive markets. Gender inequality in higher education can give women the right to work and economic prosperity [7].

Concerning gender equality in Cambodia, efforts have been made to address gender disparities in education. However, deeply rooted gender inequalities persist. According to official data, women lag behind men in economic empowerment, tertiary education, and representation in government. For example, in 2017, only 22% of Master's degree students and 5% of PhD students were women, while female ministers constituted just 10% of the sample [15]. The National University of Battambang (NUBB) is Cambodia's largest public university in northwestern China. It hosts thousands of scholarships and full-fee-paying students across various undergraduate and postgraduate programs [16].

1.2. Research problem

Despite Cambodia establishing a robust strategic plan to increase girls' access to education, the outcomes remain significantly below the expected goals of the plan [17]. However, many policies are only in use, and implementation seems unsuccessful. Cambodia is recognized for creating policies that are pretty comprehensive on paper, but their full implementation is constrained, mainly when there is no external financial support [18]. Stakeholders' commitment to implementing all policies is also insufficient [19]. Traditionally, girls are expected to handle more household tasks than boys, resulting in a high opportunity cost for girls to attend school. Parents might refrain from investing in their daughters' education because they believe that higher education for women is unnecessary because of their perceived lower status, mainly when financial resources are scarce; deeply rooted traditional and social attitudes also prevent women from fully utilizing their abilities and exercising their rights, including the right to education [20]. The achievement of enrollment in Cambodia has led to significant strides toward equal access to primary education for boys and girls. However, while progress has been made at higher levels of education, achieving equal enrollment alone does not guarantee equal opportunities in personal, professional, or public life [21]. While the National University of Battambang has made progress in increasing female participation in higher education, significant gender

inequalities still exist. These inequalities manifest in various forms, including disparities in enrollment rates, academic performance, career advancement, and leadership representation among students, faculty, and administrative staff. Furthermore, the sociocultural and institutional obstacles leading to these disparities are poorly understood, and the impact of current policies and initiatives designed to foster gender equality has not been extensively assessed [16].

1.3. Research questions

1. What are the gender ratios among students, faculty, and administrative positions?
2. What sociocultural and economic factors affect gender equality at universities?
3. How effective are the current gender equality policies and initiatives?
4. How do university leaders perceive their role in promoting gender equality?

1.4. Research objectives

To achieve the main objective, researchers use four main objectives as follows:

1. To evaluate the current gender distribution among students, faculty, and administrative staff at the National University of Battambang.
2. To investigate the sociocultural, economic, and institutional barriers that hinder gender equality within universities.
3. To analyze the effectiveness of existing policies and initiatives to promote gender equality at the National University of Battambang.
4. To examine the role of university leadership in advancing gender equality and fostering an inclusive culture.

1.5. Limitations of the research

Research on gender equality in Cambodian higher education institutions, particularly at the National University of Battambang, has several potential limitations. These limitations include limited data availability, which impedes a thorough analysis of sex disparities. Cultural and societal factors, such as the influence of traditional gender roles and the prevalence of gender-based violence, are essential. These beliefs and norms can significantly influence gender dynamics and research outcomes. Language barriers can also make it difficult to access and analyze academic literature and official documents that must be written in English. Financial constraints can limit the resources available for conducting comprehensive research, such as surveys, interviews, and data analysis.

Moreover, it is crucial to emphasize the need for careful attention to ethical considerations. This is not just a formality but a serious commitment to ensuring the validity and reliability of the research findings. Especially when handling sensitive topics such as gender equality, ethical considerations are necessary to ensure ethical research practices. All of these limitations must be carefully addressed to ensure the validity and reliability of the research findings.

2. LITERATURE REVIEW

2.1. The current state of gender in Cambodia

Despite government and international efforts to improve the number of schools, enrollment, completion rates, and gender parity, the prevalence of gender and education in Cambodia remains poor. Traditional cultural expectations and an entrenched system of hierarchy and patronage continue to place women behind men in education, formal employment, and social class. Governmental efforts to address these inequalities through a top-down approach have been largely ineffective.

Notable progress has been made in increasing school enrollments and completion rates for both girls and boys in Cambodia. However, the quality of education and the lack of mainstream gender at all educational levels are disappointing [22]. Teachers are often poorly trained and unfamiliar with student-centred and gender-equitable teaching methods. Educational materials tend to reinforce traditional gender roles, school facilities are often inadequate, and the curriculum fails to prepare students for the workforce. The patronage system ingrained in Cambodian society hinders improvements in quality, transparency, and accountability. There is no effective evaluation system for hiring school personnel, leading to fewer qualified male candidates being favoured over female candidates [23]. Evaluating teacher effectiveness locally is challenging, and the patronage system results in little accountability among administrators and teachers [24]. This lack of fair evaluation and the irregular disbursement of low pay discourage performance improvements and perpetuate gender inequality.

Cultural norms in Cambodia are a fundamental barrier to women's progress in education, the workplace, and politics. Rigid social structures dictate a woman's role, often placing her under the protection of her husband or family and requiring her to defer to male authority [25]. Although women are typically responsible for managing household finances, hierarchical and patronage roles pervade all aspects of society. Men are considered more common in the social and spiritual hierarchy, with women traditionally hoping to be reincarnated as men [26].

Nevertheless, there is hope. A bottom-up approach, supported by foreign agencies in building state capacity in education, seems to be the most viable path to increasing gender equality in Cambodia. As younger generations challenge entrenched gender roles and assume positions in local, provincial, and national governments, these norms can be re-evaluated. Women may gain acceptance in nontraditional employment, hierarchical systems may begin to weaken, and poverty may decrease.

2.2. Policies and regulations related to gender in Cambodia

In the recently formed government, women are represented for the first time at the ministerial level, with two female ministers. Although this approach is encouraging, the proportion of women in high-ranking and policy-making positions is shallow. Only eight out of the 122 members of the National Assembly are female. This means that women, who constitute the majority of the Cambodian population (52 percent), have very little say in creating the rules, regulations, and policies that affect their lives.

Discussions about development have included gender as a critical issue for the last 25 years [27], and the practical application of gender analysis in development has evolved significantly. Initially focused on integrating women into existing development efforts, this approach gave rise to numerous women-centric organizations and projects. The GAD framework subsequently emerged, recognizing the interconnectedness of gender roles in resource distribution and power dynamics. The current trend is to embed gender considerations across all development processes, challenging traditional structures and inequalities. We can use the social relations framework to explore how societal interactions create inequalities between men and women [27]. This approach can be applied to design projects and policies, offering a fresh perspective on development that places gender at its core [28]. Gender inequality is rooted in how resources, responsibilities, and power are divided between men and women. This analysis examines the complex relationships between individuals shaped by societal structures such as families, governments, and markets. Unequal power dynamics between genders lead to disparities in access to and control over resources. Men's and women's roles are interconnected, involving cooperation and competition, and these relationships constantly evolve.

While Cambodian women may appear outwardly content with traditional gender roles, this often masks their internal struggles and compromises made to survive. Although they are aware of gender inequalities, they prioritize immediate needs over challenging the status quo. Rather than being passive victims, women are proactive in navigating their circumstances, gradually shifting their gender norms. By adopting new roles without directly confronting existing power structures, women are progressing toward gender equality.

2.3. Gender Equality in Cambodian Higher Education Institutions

After the catastrophic Khmer Rouge regime (1975--1979), Cambodia had to rebuild its entire education system from the ground up. The Cambodian government, alongside development partners and numerous NGOs, has collaborated to improve the quality and equity of education through various policy reforms and initiatives. These collective efforts have substantially reduced the gender disparity in higher education in Cambodia, with female student enrollment increasing from 15.8% in 1995 to 43.7% in 2015. By 2018, female enrollment in higher education was approximately 49.68% [29], reaching 50.8% in 2020 [30]. Despite this progress, traditional cultural norms, financial constraints, and other societal challenges continue to hinder Cambodian women from pursuing higher education, limiting their involvement in political and economic development and their broader contributions to society.

The Cambodian government has made significant progress in establishing legal and policy frameworks to promote women's education. It recognizes the crucial need for equal access to higher education for all citizens, irrespective of social status, gender, age, or disability. In 2007, the Law on Education was enacted, and in 2019, the National Policy on Lifelong Learning was introduced to promote adult education in collaboration with NGOs [31]. Furthermore, the Ministry of Women's Affairs developed its third five-year strategic plan in 2008, concentrating on five main areas, including educating women and girls and promoting changes in attitudes and behaviours [32]. Hill and King's [33] research

highlighted the crucial importance of women's education and the educational gender gap in influencing societal well-being and economic progress. Educated women are catalysts for inspiring and creating opportunities for others, facilitating their attainment of parity with men domestically and globally. Hill and King [33] identified several advantages of female education, including stimulating economic growth, increasing life expectancy, and refining political processes.

In Cambodia, deep-rooted cultural norms and gender stereotypes significantly hinder women's access to higher education. Allison [34] states, "The explicit and implicit rules defining a woman's role within Cambodian society are rigid and unyielding." The longstanding traditional societal guidelines found in Chbab Srey have historically shaped gender roles in the country. Despite removing specific provisions from the school curriculum in 2007, the influence of Chbab Srey has increased, reinforcing the perception that education favours boys over girls [34]. Women frequently face pressure to terminate their education prematurely and enter into marriage to fulfil their expected familial and societal roles. Research indicates insufficient encouragement for women and girls to pursue STEM disciplines, traditionally viewed as male-dominated domains [35].

Cambodia, despite its turbulent history marked by civil war and genocide, has achieved notable progress. Through joint efforts involving the government, NGOs, and development partners, significant strides have been made in reforming the education system and narrowing gender gaps. These collective endeavours have notably expanded educational opportunities for Cambodian women, as evidenced by rising female enrollment across different educational levels [30]. Improving women's entry into higher education is a crucial economic-related goal for Cambodia and is promising for mitigating gender disparities, bolstering social welfare, advancing human resource capabilities, and stimulating economic advancement.

3. METHOD

3.1. Research design

This research adopts a qualitative and quantitative case study approach to explore the nature of gender equality in Cambodian higher education institutions: a case study of the National University of Battambang, Cambodia. The case study method is chosen for its depth, detail, and ability to provide context-specific insights, making it particularly suitable for exploring the complicated phenomenon of gender equality in unique settings. A study was undertaken at the National University of Battambang (NUBB). The data were selected based on their ability to provide a range of bachelor's degrees across the sciences and social sciences. For quantitative surveys, researchers collected data on gender distribution, academic performance, and perceptions. Students, teachers, faculty, and administration were interviewed for qualitative interviews to gain deeper insights into barriers and experiences.

3.2. Participants

This study involved nine lecturers and ten students who work and study at the National University of Battambang. These participants will be selected based on specific criteria, such as their major. The selection process aims to ensure a diverse representation of

experiences and contexts. These participants will be purposively selected based on their diversity in implementing gender equality in higher education institutions in Cambodia: a case study of the National University of Battambang.

Table 1. Teachers' and leaders' profiles

Code	Age	Sex	School Location	Years of Experiences	Educational Background
P1	30	F	Battambang	7	MBA
P2	30	M	Battambang	8	MBA
P3	31	M	Battambang	11	MBA
P4	31	M	Battambang	5	BA
P5	56	M	Battambang	13	MBBA
P6	37	M	Battambang	13	MBA
P7	48	F	Battambang	6	BA
P8	42	M	Battambang	12	PHD,BA
P9	51	M	Battambang	10	BA

Table 2. Students' profiles

Code	Age	Sex	School Location	Years of Studies	Educational Background
P10	18	M	Battambang	3	LLB
P11	21	M	Battambang	3	LLB
P12	21	F	Battambang	3	BA
P13	19	F	Battambang	3	BA
P14	20	M	Battambang	2	BBA
P15	21	F	Battambang	3	BBA
P16	20	F	Battambang	3	LLB
P17	20	M	Battambang	3	BA
P18	22	F	Battambang	3	BA
P19	19	F	Battambang	3	BA

3.3. Sampling method

A case study on gender equality at the National University of Battambang requires a well-defined sample approach that ensures comprehensive data collection. We used a sample approach to analyze gender equality at the National University of Battambang. The sample included undergraduate students from various colleges. We randomly selected 210 students, ensuring equal representation of male and female participants from approximately 10,000 students. The random sampling method yielded 29.52% male students and 70.48% female students from various faculties at the National University of Battambang. This approach allows us to capture diverse experiences and perspectives on gender equality at the National University of Battambang.

3.4. Research tool design

This case study employs a mixed-method approach to investigate gender equality at the National University of Battambang (NUBB). This approach seeks to offer deeper insight into the matter by combining quantitative and qualitative data collection methods. Surveys will be used to gather quantitative data on student experiences and perceptions, whereas interviews will offer in-depth qualitative insights from faculty and administrators directly involved in shaping the university environment. The survey is structured using a series of closed-ended questions rated on a five-point Likert scale (from "Strongly Disagree" to "Strongly Agree"). This format allows for the quantification of perceptions and experiences across a large sample. Questions are organized into categories such as sociocultural barriers, economic barriers, and institutional support. Semi-structured interviews allow flexibility in exploring critical themes while maintaining consistency across interviews. The interview guide includes open-ended questions focusing on topics such as the impact of gender equality policies, perceived barriers to gender equity, and the role of leadership in promoting an inclusive environment.

3.5. Data collection procedures

The data will be collected primarily through quantitative and qualitative methods to explore the experiences, perceptions, and practices at NUBB in depth. The interview and survey guides will be developed based on the research questions and cover sociocultural, economic, and institutional barriers to gender equality within the university. Surveys will be distributed through classes at NUBB, targeting both male and female students. Participation will be anonymous. The interviews involved identifying and contacting suitable participants for face-to-face or online sessions. Each interview is expected to last between 15 and 20 minutes and will be conducted primarily in Khmer to ensure comfort and clarity. All interviews will be audio-recorded with the participant's permission and later transcribed word-for-word for analysis. The participants will be assured of their anonymity and the confidentiality of their responses.

3.6. Data analysis

Analyzing data from this mixed-method case study on gender equality at NUBB involves separate methods for obtaining quantitative and qualitative data. Descriptive statistics will be used to analyze survey data, providing insights into the student body's composition (gender, age, major, year of study) and responses. The data will be imported into the Statistical Package for the Social Sciences (SPSS) to calculate means, standard deviations, frequencies, and percentages. For the qualitative data, researchers used thematic analysis conducted on the transcribed faculty and administrator interviews to identify recurring themes. This included their observations on gender dynamics within the university, their perspectives on gender equality policies, and their thoughts on challenges and opportunities for equity at NUBB. The results will be used to answer the research questions comprehensively.

4. RESULTS AND DISCUSSION

4.1. Results

The findings of this study reveal significant insights into the gender dynamics at the National University of Battambang (NUBB). While female students outnumber their male counterparts, there is a stark underrepresentation of women in faculty and administrative positions, with women constituting less than 25% of these roles. The analysis highlights a range of sociocultural, economic, and institutional barriers that contribute to this disparity despite the university's efforts to promote gender equality through various policies and initiatives. These findings underscore the need for targeted interventions and sustained efforts to address the ongoing gender imbalances within the institution.

Table 3. Sociocultural barriers

Sociocultural barriers	Level of Agreement (%)					M	SD
	1	2	3	4	5		
I believe that gender stereotypes influence the future choice of major at NUBB.	5.7	13.8	33.8	40.0	6.7	3.28	0.97
Faculty members at NUBB treat students of all genders equally in classroom interactions.	1.0	1.9	7.1	58.1	31.9	4.18	0.72
I feel that my gender affects the way I am perceived and treated by my peers at NUBB.	5.2	19.0	40.5	27.1	8.1	3.14	0.99
There is sufficient support from NUBB for gender-related issues.	1.9	3.3	17.1	61.0	16.7	3.87	0.79
Overall	3.45	9.5	24.62	46.55	15.85	3.61	3.47

*Level of agreement: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree

The data in Table 3 highlight various aspects of students' perceptions and challenges related to sociocultural barriers. The mean scores (M) ranged from 3.14 to 4.18. The highest mean score of 4.18 corresponds to the statement, "Faculty members at NUBB treat students of all genders equally in classroom interactions," suggesting that the university emphasizes fair and unbiased treatment of students, irrespective of their gender identity. A mean score of 3.87 for the statement "There is sufficient support from NUBB for gender-related issues" indicated sufficient support from NUBB for addressing gender-related issues. The statement "I believe that gender stereotypes influence the future choice of major at NUBB" had a mean score of 3.28, indicating moderate agreement. The lowest mean score of 3.14 was for the statement, "I feel that my gender affects the way I am perceived and treated by my peers at NUBB." This finding indicates that individuals experience differential treatment and perceptions based on gender.

Table 4. Economic barriers

Economic barriers	Level of Agreement (%)					M	SD
	1	2	3	4	5		
Students of all genders have equal access to scholarships and funding opportunities at NUBB.	2.4	4.3	10.5	43.3	39.5	4.13	0.93
Economic factors limit the participation of any gender in university programs and extracurricular activities.	6.2	20.5	32.4	34.3	6.7	3.15	1.02
High tuition fees can be a significant barrier for women, especially those from low-income families, making higher education less accessible.	2.9	3.8	15.2	47.6	30.5	3.99	0.93
The cost of living and lack of affordable house options near the university can disproportionately impact female students.	1.9	4.3	17.6	51.4	24.8	3.93	0.87
Overall	3.35	8.22	18.92	44.15	25.37	3.8	0.93

*Level of agreement: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree

The mean (M) values in Table 4 range from 3.15 to 4.13, reflecting different levels of agreement with various strategies for addressing economic barriers among students. The statement with the highest average score, at 4.13, indicates that "students of all genders have equal access to scholarships and funding opportunities at NUBB," indicating that the institution has policies and practices in place to promote equality, ensuring that no individual is disadvantaged or favoured based on their gender concerning applying for and receiving scholarships and funding. High tuition fees can be a significant barrier for women, especially those from low-income families; making higher education less accessible" has a mean of 3.99, highlighting the economic challenges that disproportionately affect female students, particularly those from financially disadvantaged backgrounds. The statement "The cost of living and lack of affordable housing options near the university can disproportionately impact female students" followed by a mean of 3.93, reflecting that economic challenges and housing shortages may affect female students more significantly. The statement "Economic factors limit the participation of any gender in university programs and extracurricular activities" has a mean of 3.15 years, highlighting that financial constraints can prevent students, regardless of their gender, from fully engaging in the educational and social opportunities offered by the university.

Table 5. Institutional barriers

Institutional barriers	Level of Agreement (%)					M	SD
	1	2	3	4	5		
The university's policies on gender equality are communicated and effectively implemented.	2.4	2.4	17.1	62.9	15.2	3.28	0.78
Complaints and issues related to gender discrimination are promptly and effectively addressed by the university's leaders.	5.7	13.8	33.8	40.0	6.7	3.78	0.81
There are adequate mentoring and support programs to promote gender equality within the university.	3.3	4.4	24.2	52.7	15.4	3.73	0.89
The university leadership reflects gender diversity.	2.2	3.3	15.4	50.5	28.6	4.00	0.88
Overall	3.4	5.97	22.62	51.52	16.47	3.69	0.34

*Level of agreement: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree

The mean values in Table 5, which range from 3.28 to 4.00, indicate varying degrees of agreement with statements regarding economic barriers among students. The statement with the highest average score, at 4.00, demonstrates that "University leadership reflects gender diversity" signifies strong agreement among students on the higher levels of administration and decision-making bodies at the university, including a balanced representation of different genders. The statement "Complaints and issues related to gender discrimination are promptly and effectively addressed by the university's leaders" has a high mean value of 3.78, indicating that the university has established mechanisms and procedures to handle and resolve instances of gender discrimination swiftly and efficiently. The statement "There are adequate mentoring and support programs specifically aimed at promoting gender equality within the university" has a mean of 3.73, suggesting that the institution has implemented initiatives to support and empower individuals of all genders in their academic and professional journeys. Although the mean value for the statement "The University's policies on gender equality are communicated and effectively implemented" is the lowest at 3.28, there is still general agreement that the institution has clear and well-defined policies in place to promote gender equality, and these policies are actively communicated to the university community and stakeholders.

4.1.1 Research Question One: What are the gender ratios among students, faculty, and administrative positions?

NUBB has trained 6,214 undergraduate, bachelor's, Master's, and doctoral students, including 3,214 female students. The university employs 107 education officers and teaching

staff, 20 of whom are female. Among these staff members, nine hold PhDs (7%), 95 hold master's degrees, 19 of whom are female (90%), and three hold bachelor's degrees, with only one female (3%). There are 145 part-time teachers in one academic year, 5% female. NUBB has 6,214 students and 252 education personnel, including 107 education officers, teaching staff, and 145 part-time teachers. The student-to-teacher ratio is approximately 24.66 students per teacher, calculated by dividing the total number of students by the total number of education personnel.

4.1.2 Research Question Two: What sociocultural and economic factors affect university gender equality?

The investigation revealed that most of the participants said that there is equality and no prejudice at this university, and the problem is mainly based on past mindsets. In addition, there are also societal problems related to being a woman. One respondent shared their opinion, noting the following:

"The most important problem that women face in university is that they must stop their studies because of family issues or financial issues, and they need to make money for their family and take care of their little siblings to continue their studies. Some quit their studies because they got married and faced lots of discrimination by the people around them, or that is not a skill suited for a woman." (P5)

The findings mention several factors that contribute to or hinder gender equality in the university setting, including both social and cultural norms and economic influences. Moreover, being a woman far from home can be challenging at university or any other school. Although men and women have equal opportunities to receive scholarships and funding for their research, their biological differences can influence what they can do. One respondent shared their opinion:

"Being a woman away from home, in a rented house, or far away without a guardian is challenging. Women are not as strong as men are, and men are strong. I'm not saying that women are not strong. However, in a situation where a man is alone, it won't be that dangerous. While if a woman is alone, it would be insecure and unsafe; this is just a society problem." (P5)

4.1.3 Research Question Three: How effective are the current gender equality policies and initiatives?

The findings of existing policies and initiatives on gender at universities are as follows. Gender equality remains a critical global issue, with policies to reduce disparities in pay, education, and leadership. The effectiveness of gender equality policies varies widely. Effective policies are usually well supported by institutions and society, whereas mixed outcomes often result from cultural and implementation challenges. One respondent shared their opinion:

"To support gender equality in the university, I find that the university leader provides opportunities for female staff to be promoted in their units and that female students can enter the university's internship or vice president of administration. On the other hand, women can also attend meetings to provide input or participate in expressing opinions on various university issues." (P3)

This study explores how financial factors influence the efficacy of gender equality policies and initiatives. Financial factors play a crucial role in the effectiveness of gender equality policies. Understanding the financial impact of a university can help provide insight into the obstacles to accessing both genders. One respondent shared their opinion:

"There is much of that because we cannot do anything without financial factors. Even those who come to university pay for accommodations, food, clothing, study materials, and other expenses. The financial factors are related and significant." (P5)

4.1.4 Research Question Four: How do university leaders perceive their role in promoting gender equality?

This study explores the perceptions of university leaders in Cambodia regarding their role in promoting gender equality within higher education institutions. Through in-depth interviews and surveys, this research aimed to understand the challenges and opportunities faced. One respondent shared their opinion:

"To promote gender equality in higher education. First, we must prevent violence against women. The second factor is gender-sensitive teaching and learning. The third factor is the incentive to participate in educational programs. Finally, representation in leadership positions." (P1)

Additionally, in the past, Khmer university leaders often approached their roles with a traditional mindset, significantly influencing their perceptions of promoting gender equality. As a result, promoting gender equality was not always prioritized or actively pursued. However, despite these traditional views, there has been a gradual shift in recent years, with increasing awareness and efforts to challenge these norms. One respondent shared their opinion about this mindset of the past:

"Most Khmer mindsets are that women from the beginning did not see the need to go higher education, always waiting for the rich man to get married without much effort and live as a rich man's wife instead, but I think this mindset is wrong; we must not depend on anyone; we must strengthen ourselves. In addition, if women go and get higher education, the family situation will be stronger and better than waiting for that chance." (P5)

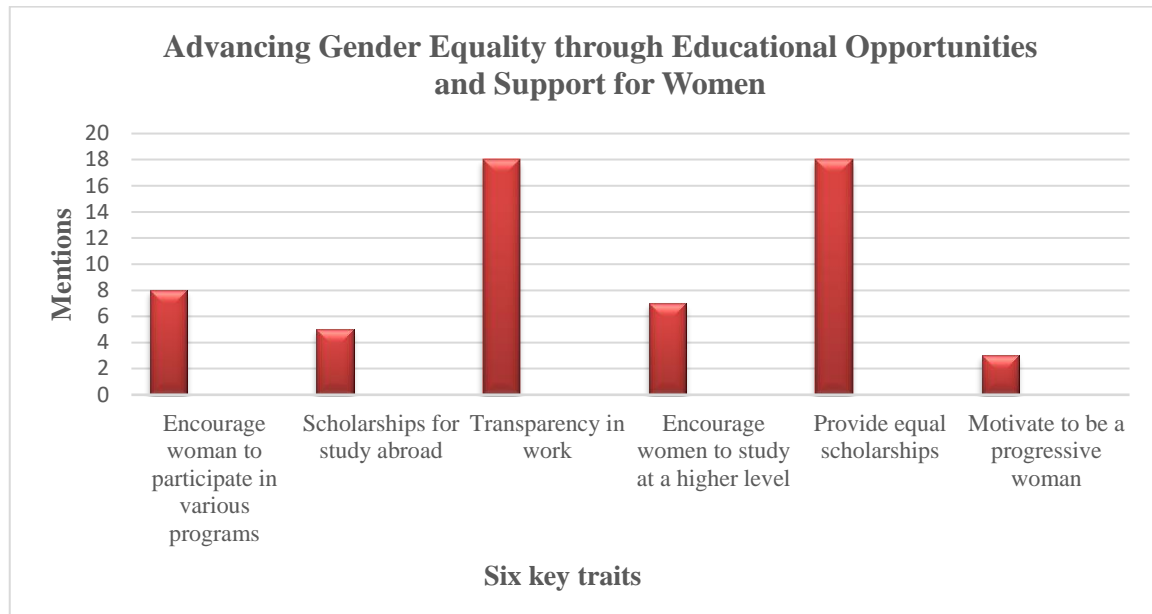


Figure 1. Six key traits that advance gender equality through educational opportunities and support for women

Based on these findings, while university leaders in Cambodia generally support promoting gender equality, they face significant challenges related to cultural norms, resource limitations, and policy implementation. Addressing these challenges requires a multifaceted approach that includes policy reform, capacity building, and increased advocacy and collaboration. The findings underscore the need for continued efforts to create a more inclusive and equitable higher education landscape in Cambodia.

4.2. Discussion

The research findings indicate that gender equality in Cambodian higher education institutions is a fundamental human right and a critical component of sustainable development. Within Cambodian higher education institutions, achieving gender equality remains a significant challenge. This discussion explores the current state of gender equality in Cambodian universities, the barriers to achieving it, and potential strategies for improvement.

Despite government and international efforts to increase the number of schools, school enrollment rates, completion rates, and gender parity and equality, the state of education in Cambodia remains relatively poor. An entrenched system of hierarchy and patronage, along with traditional cultural expectations on gender roles, keeps women in a subordinate position in terms of education, formal employment, and societal status. The top-down approach to helping the government solve these inequalities has not been successful thus far [35], [36], [37].

In recent years, Cambodia has made notable progress in increasing school enrollments and completion rates for both girls and boys. However, the quality of education and the lack of mainstream gender at all educational levels are disappointing [21]. Gender inequalities persist within higher education institutions. Statistics reveal that although

undergraduate enrollment shows a near balance between male and female students, disparities become more evident at the postgraduate level and within faculty roles.

Many Cambodian parents believe women should not pursue higher education, expecting them to become housewives. Some parents adhere to traditional views, fearing that educated women will be challenging to control and may become promiscuous. Additionally, there is a common perception that daughters and sons should not receive equal educational opportunities, given the preference for investing in sons' education. This preference is particularly evident when parents can support only one child's education. In Cambodian society, it is believed that sons are more likely to support their parents in old age and have a duty to do so, whereas daughters are expected to prioritize their new families after marriage. As a result, many families prefer their daughters to focus on domestic responsibilities rather than academic pursuits. This lack of social encouragement is a significant barrier to achieving gender equality in higher education.

This research aims to systematically examine the scope and characteristics of gender equality at the National University of Battambang, uncover the fundamental obstacles, and evaluate the effectiveness of existing gender equality guidelines. By addressing this gap, this study aims to provide evidence-based recommendations for enhancing gender equity within universities and, by extension, to contribute to broader efforts toward gender equality in Cambodian higher education institutions [15], [38], [39].

One limitation of this study is the focus on a single institution, which may not fully represent the state of gender equality across all Khmer universities. Achieving gender equality in Cambodian higher education institutions requires concerted efforts from various stakeholders, including the government, educational institutions, civil society, and the community.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study of gender equality at the National University of Battambang (NUBB) reveals significant insights and trends that mirror broader matters within Cambodian higher education institutions. While notable strides have been made in increasing female enrollment and participation through policies and initiatives such as scholarships and mentorship programs, significant gender disparities persist, particularly in STEM fields. Sociocultural factors and limited access to resources such as childcare and financial support disproportionately influence female students and faculty. NUBB has attempted to promote gender equality through gender-sensitive training and increasing female representation in leadership positions. These efforts have led to greater empowerment among female students and faculty. However, more comprehensive support systems are needed. To improve, universities should enhance outreach programs, strengthen NGO partnerships, and regularly monitor gender equality policies. The case of NUBB reflects national trends, and addressing these issues requires a multifaceted approach. Continued efforts are essential for NUBB to overcome challenges and serve as a model for gender equality in higher education in Cambodian countries.

5.2. Recommendation

University Administration

A multifaceted approach is essential to create a truly fair and inclusive learning and working environment. First, university administrators should formulate and implement comprehensive gender equality policies. These policies ensure equal opportunities across genders in admissions, faculty recruitment, promotions, and administrative positions. Simultaneously, regular gender sensitivity training programs should be organized for faculty, staff, and students to increase awareness of gender-related issues. Finally, establishing dedicated support services such as counselling, mentoring programs, and career guidance tailored for female students and staff will empower them to overcome academic and professional challenges more confidently.

Faculty and staff

Empowering faculty and staff plays a pivotal role in achieving sustainable change. A robust mentorship program can facilitate connections between seasoned female faculty members and younger female students and staff. This guidance and support are invaluable for their academic and professional growth. Additionally, universities should actively encourage and support faculty research on gender equality issues. The insights gained from such research can inform university advocacy efforts and contribute to broader community discussions. Finally, integrating gender studies and gender-sensitive perspectives throughout the curriculum ensures comprehensive education for all students, fostering critical thinking and creating a more inclusive learning environment.

Student

Active student engagement is crucial for creating an inclusive campus environment. A university can facilitate the establishment of student organizations committed to promoting gender equality. These organizations serve as platforms for students to discuss gender-related issues, coordinate events, and advocate for positive change. Additionally, fostering peer support networks enhances a sense of community. Students can share their experiences within these networks, provide mutual encouragement, and collectively address gender-related challenges. Finally, organizing awareness campaigns and events will educate the student body about gender equality, contributing to a campus culture of respect and inclusivity.

Parents

To promote gender equality, we can establish a fair playing field by nurturing equal educational and career opportunities. This process begins at home, where we challenge traditional gender expectations and actively encourage all children's aspirations. Open dialogue about gender issues is crucial, enabling children to comprehend equality and question stereotypes. Financial and logistical assistance ensures that sons and daughters, especially girls facing additional obstacles, have the necessary resources to achieve their academic potential. Advocating for gender-sensitive policies within educational institutions further dismantled barriers. By modelling equitable behaviour within families and collaborating with the community, a broader network of support for gender equality in

education can be created. They regularly monitor children's progress and provide emotional encouragement to foster confidence and resilience throughout their educational journey.

Government and Policy Makers

The ability to obtain government support is significant for sustained progress. Focused funding and scholarships, especially for female students from underprivileged backgrounds, can substantially enhance access to higher education. Furthermore, implementing and enforcing regulations that mandate gender equality initiatives within universities and transparent reporting requirements ensures accountability. Finally, creating mechanisms to assess the effectiveness of these initiatives is crucial for ongoing improvement and maintaining universities' commitment to genuine gender equality.

Community and Industry Partners

To extend our impact, collaboration beyond university boundaries is essential. Establishing partnerships with local and international organizations dedicated to gender equality facilitates a valuable exchange of resources, expertise, and best practices. This collaborative approach fortifies our collective efforts toward a common goal. Additionally, designing internship and job placement programs tailored for female students equips them with valuable skills and experience, enhancing their career prospects upon graduation. Finally, community engagement through outreach initiatives is crucial. By raising awareness of the significance of gender equality in education, we can address social and cultural norms that might impede female participation in higher education. The university and the community can have a more equitable path for all through joint efforts.

International organizations and donors

Developing robust partnerships with international organizations and donors is vital for sustained success. These collaborations offer vital support to universities in several ways. First, technical assistance and capacity-building programs equip institutions with the necessary tools and resources to implement and maintain gender equality initiatives effectively. Second, research funding focused on gender disparities in higher education yields valuable data and insights for informing future strategies. Finally, active participation in global networks and gender equality initiatives facilitates knowledge exchange and best practices on a broader scale. Through international collaboration, universities can lead the way in advancing gender equality in education.

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