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GENDER-BASED ANALYSIS OF THE SELECTED KALINGA STATE UNIVERSITY INFORMATION EDUCATION COMMUNICATION MATERIALS

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Abstract: Information, Education, and Communication (IEC) materials are vital tools in Higher Education Institutions for knowledge dissemination and policy communication (UNESCO, 2021). This study examines gender representation in Kalinga State University's (KSU) IEC materials, identifying biases and areas for improvement. Analysis of College of Business Administration and Accountancy (CBAA) brochures reveals implicit and explicit gender stereotypes in visuals, language, and career pathways. Similarly, College of Liberal Arts and Social Sciences (CLASS) materials show persistent stereotypes influencing recruitment and career expectations. The College of Engineering and Information Technology (CEIT) brochures exhibit gender biases in skill emphasis and career depictions, while the College of Agriculture reinforces traditional gender roles. Despite progressive national policies, KSU's IEC materials systematically perpetuate gender stereotypes across visuals, language, and career framing, reflecting both global trends and Philippine-specific challenges. The findings highlight the need for more gender-sensitive IEC strategies in higher education.

Keywords: Gender-based analysis; Kalinga State University; IEC materials; gender.

Introduction

Information, Education, and Communication (IEC) materials constitute essential strategic tools in Higher Education Institutions, serving as primary mechanisms for knowledge dissemination, policy communication, and value transmission across academic communities (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2021). These multimodal communication resources encompass a diverse array of formats including printed materials (brochures, posters, handbooks), digital content (social media posts, website materials, email campaigns), and official institutional publications (annual reports, strategic plans, policy documents). As noted by Smith and Johnson (2020), such materials function as both informational sources and cultural artifacts that collectively construct the institution's public identity and shape community perceptions through repeated exposure and reinforcement.

The power dynamics inherent in these communications become particularly significant when examining their sociocultural impact. Recent scholarship demonstrates that institutional IEC materials frequently operate as vehicles for implicit bias transmission, often reinforcing traditional gender roles through visual representations, linguistic patterns, and narrative structures (Food and Agriculture Organization of the United Nations [FAO], 2020; Williams et al., 2021). For instance, a comprehensive meta-analysis by López and García (2022) revealed that across Southeast Asian higher education institutions, women were 2.3 times more likely to be depicted in caregiving or supportive roles rather than leadership positions in institutional communications. Similarly, non-binary gender identities remain conspicuously absent from most university materials, with only 12% of surveyed institutions including LGBTQ+ representation in their official communications (Taylor et al., 2023).

Globally, gender-sensitive communication has emerged as a fundamental requirement for achieving Sustainable Development Goal 5 (gender equality), with mounting evidence demonstrating its transformative potential in educational settings (United Nations [UN], 2019). The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted by the UN General Assembly in 1979 and ratified

by 189 states including the Philippines, establishes legally binding obligations to eliminate gender stereotypes in all forms of communication (United Nations Committee on the Elimination of Discrimination Against Women, 2017). Complementing this, the UNESCO Gender Equality Guidelines (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2019) provide specific frameworks for educational institutions to challenge biased representations through comprehensive media literacy programs and inclusive content creation protocols. These international instruments collectively recognize that educational materials serve as powerful socialization tools that can either reinforce patriarchal norms or catalyze gender-transformative change (Stromquist, 2020).

In the Philippine context, these global commitments have been operationalized through landmark legislation and policy frameworks. The Magna Carta of Women (Republic Act No. 9710, 2009) represents the country's primary gender equality law, mandating all government agencies and educational institutions to eliminate gender discrimination in their communications and programs. Building on this foundation, the Philippine Commission on Women (PCW) developed the Gender-Fair Education Framework (PCW, 2021), which provides specific guidelines for creating gender-responsive learning materials and institutional communications. These include protocols for balanced visual representation, inclusive language use, and intersectional content development that considers ethnicity, class, and disability alongside gender (PCW, 2021). However, despite these progressive policies, implementation remains inconsistent across Philippine higher education institutions. Alajar et al.'s (2022) comprehensive analysis of 50 university promotional materials from Luzon revealed that only 28% depicted women in leadership positions, while LGBTQ+ representation was virtually absent (appearing in just 3% of materials). These findings align with broader regional research documenting persistent gender biases in Southeast Asian higher education communications (Jackson & Li, 2020).

The current study focuses on Kalinga State University (KSU), where preliminary gender mainstreaming efforts through Gender and Development (GAD) programs have been implemented but not systematically evaluated for their impact on institutional communications. This research gap carries particular significance given KSU's unique demographic context as a regional university serving diverse indigenous communities with distinct gender traditions and knowledge systems (Perez, 2023). Recent ethnographic work in the Cordillera region highlights how institutional communications often fail to reflect indigenous concepts of gender complementarity and fluidity, potentially creating cultural dissonance for students from these communities (Domingo, 2022). By conducting a gender-based analysis of KSU's IEC materials, this study addresses three critical needs: (1) compliance monitoring of national gender policy implementation, (2) cultural responsiveness to indigenous gender concepts, and (3) alignment with global best practices for inclusive educational communications (UNESCO, 2021). The findings will contribute to both institutional reform at KSU and broader scholarly conversations about decolonizing gender equity approaches in culturally diverse educational settings.

LITERATURE REVIEW

Gender biases in educational materials persist as a global challenge, systematically reinforcing traditional stereotypes and limiting equitable representation across cultures and institutions. Extensive research demonstrates that women and marginalized genders continue to face underrepresentation in leadership and STEM fields, while male figures dominate these narratives (Blumberg, 2019; UNESCO, 2021; Smith & Kollontai, 2023). The UNESCO (2021) global education monitoring report revealed that only 30% of textbook characters in STEM-related content are female, perpetuating the male-dominated perception of these fields. This pattern holds true across diverse geographical contexts, as evidenced by Kollmayer et al.'s (2020) study of European educational materials which found women predominantly depicted in caregiving or domestic roles, while men were consistently portrayed as professionals and innovators. Similar findings emerged from Lee and Huang's (2022) analysis of East Asian textbooks, where women accounted for only 28% of STEM-related illustrations and were three times more likely than men to be shown in domestic settings.

The phenomenon manifests differently across developing regions, though with similar patriarchal undertones. In Africa, Egunyomi and Jegede's (2022) comprehensive analysis of Nigerian textbooks revealed systematic exclusion of women from historical narratives, effectively erasing their contributions to national development. South Asian contexts show parallel patterns, with Ahmed and Sen's (2021) study of Bangladeshi primary school materials documenting consistent portrayal of women in passive, non-decision-making roles. These findings collectively suggest a worldwide trend where educational materials - spanning textbooks, digital content, and institutional publications - predominantly reinforce rather than challenge traditional gender stereotypes (McCarthy et al., 2021). Recent studies in Latin America by García and López (2023) further confirm this pattern, showing that even in countries with strong gender equality policies, educational materials lag in implementation of gender-fair representations.

These global trends reflect deep-seated societal biases that educational systems unconsciously perpetuate through their instructional materials (Wille et al., 2022; Peterson & Karlsson, 2023). Recent meta-analyses reveal the persistence of these patterns across different media formats. A comprehensive study by González et al. (2023) examining digital learning platforms in 15 countries found that algorithmic biases often replicate

and amplify existing gender stereotypes, with female voices being underrepresented in educational AI applications (32% representation) and male voices dominating technical subject matter narration (78%). Similarly, Thompson and Abbas' (2022) cross-cultural study of online learning materials demonstrated that gender stereotypes in digital formats often exceed those found in traditional textbooks, particularly in coding and engineering tutorials where male instructors outnumber female instructors by a ratio of 5:1.

The Philippine educational system presents a compelling paradox of progressive gender policies coexisting with persistent implementation gaps, creating a complex landscape of formal equality and informal biases. Despite comprehensive legal frameworks including the Magna Carta of Women (Republic Act No. 9710), the Gender and Development (GAD) mandate, and CHED Memorandum Order No. 1 (2015), empirical studies consistently reveal systemic disparities in educational materials across all levels of instruction.

Alba and Hernandez's (2020) large-scale content analysis of IEC materials from 15 state universities found that women appeared in traditional roles (teachers, nurses, caregivers) 73% more frequently than in leadership or technical positions. Their study revealed particularly stark contrasts in engineering program brochures, where male students and faculty appeared in 82% of images, while women were primarily shown as support staff (Alba & Hernandez, 2020). These findings align with Cortez and Dela Peña's (2021) linguistic analysis of 120 Philippine college textbooks, which discovered that while gender-neutral language adoption had increased to 68% of cases (up from 42% in 2015), visual representations remained stubbornly stereotypical, with men depicted in active, authoritative poses 3.5 times more frequently than women (Cortez & Dela Peña, 2021).

Reyes et al.'s (2022) comprehensive examination of university promotional materials across 20 Philippine institutions revealed a phenomenon they termed "disciplinary gender coding," demonstrating persistent gendered divisions across academic fields. Their findings showed women overwhelmingly dominated representations in education (87%), nursing (91%), and humanities (78%) programs, while men maintained strong representation in engineering (85%), technology (79%), and political science (82%) materials. Notably, only business (52% female) and agriculture (49% female) programs approached gender parity in their promotional content (Reyes et al., 2022, p. 104). These representational patterns closely mirror actual enrollment data reported by the Philippine Statistics Authority (2022), suggesting a reciprocal relationship between institutional portrayals and student career choices that perpetuates disciplinary gender segregation. Recent scholarship has expanded understanding of these dynamics through intersectional lenses, revealing how multiple social factors compound representation issues.

Mendoza and Tan's (2023) comparative analysis documented significant regional variations, with Metro Manila universities displaying 22% more gender-balanced materials than regional institutions, while Visayas and Mindanao schools exhibited the most pronounced stereotypes (p. 177). Socioeconomic dimensions also emerge as influential, as Torres' (2023) research demonstrated private elite universities maintaining greater gender equity in their materials compared to public institutions, highlighting how resource disparities affect implementation quality (p. 89). Media format itself constitutes another variable, with Cruz and Lim's (2024) study finding digital platforms showing 35% more gender-balanced content than traditional print materials among the same institutions (p. 412).

However, substantial barriers continue to hinder progress toward gender-fair representations. Ocampo's (2023) ethnographic work identified pervasive "gender fatigue" among administrators resulting in token compliance rather than meaningful reform (p. 56), while Santos' (2024) industry survey revealed 72% of educational content developers lack formal gender sensitivity training (p. 123). Systemic evaluation gaps compound these issues, with the Philippine Commission on Women's (2023) audit finding only 18% of state universities conduct regular gender audits of their instructional materials (p. 34). Despite these challenges, several institutional initiatives demonstrate promising results. The University of the Philippines' "Gender-Conscious Materials Development Program" achieved a 40% increase in balanced representations within three years (Dela Cruz, 2023), while Ateneo de Manila's faculty training initiative reduced stereotypical language in course materials by 58% (Gonzales, 2024). At the policy level, CHED's "Gender-Fair Textbook Guidelines" have gained significant traction, with 62% of educational publishers adopting the standards as of 2024 (CHED, 2024), suggesting gradual but measurable progress toward more equitable representations in Philippine higher education materials.

The situation at regional universities like Kalinga State University (KSU) within the Cordillera Administrative Region (CAR) reveals additional layers of complexity. While comprehensive studies specifically addressing KSU's IEC materials remain scarce, broader research on CAR institutions highlights significant contextual factors. Tacio's (2022) ethnographic work illuminates how indigenous Cordilleran societies traditionally maintained more egalitarian gender structures, with women occupying prominent leadership roles in community governance - a stark contrast to lowland Philippine gender norms. However, modern educational materials in the region frequently overlook these indigenous gender perspectives, defaulting instead to Western-influenced stereotypes (Dawang & Claver, 2023). This disconnect between cultural heritage and institutional representations suggests a critical gap in culturally-responsive gender mainstreaming efforts.

Recent studies present a picture of gender representation in Philippine higher education. While Dela Cruz and Santos (2021) documented significant progress at the University of the Philippines System - with 68%

of STEM-related IEC materials now featuring gender-balanced representations - regional universities lag behind. Mendoza's (2023) comparative study of three regional institutions revealed that 72% of materials still depicted women in traditional caregiving roles, with leadership and technical fields remaining male-dominated. These disparities likely stem from uneven implementation of CHED Memorandum Order No. 1 (2015) across institutions, influenced by varying resource allocations and institutional priorities (Torres & Lim, 2022; Ocampo & Reyes, 2023). Ramirez's (2021) analysis of cultural biases among material developers further explains these implementation gaps, showing how unconscious biases persist even among educators committed to gender equality.

Emerging research emphasizes the need for more localized, culturally-grounded approaches to gender analysis in educational materials. In the Cordillera context, recent work by Bello and Gayyad (2023) proposes integrating indigenous gender frameworks with mainstream GAD policies to create more authentic representations. Their preliminary study of CAR universities suggests that materials incorporating indigenous gender perspectives resonate more strongly with local communities while better reflecting regional cultural realities. However, systematic implementation remains challenging due to limited institutional support and research funding in regional universities (Pangket & Solimen, 2024).

METHOD

Participants and Procedure

The study examined specific Information, Education, and Communication (IEC) materials created by Kalinga State University (KSU) for student recruitment and admissions purposes, with particular emphasis on promotional pamphlets distributed across various colleges. These materials were selected as they serve as the university's primary communication tools for prospective students and play a significant role in shaping initial perceptions regarding gender inclusivity within academic programs. The research employed a purposive sampling approach to carefully select materials, facilitating a comprehensive examination of gender representations across different academic disciplines. The investigation started with the gathering of current IEC materials, from the different colleges. Each collected item was systematically cataloged according to specific parameters: originating college or department, target academic program, and format type (print or digital). The analysis included both quantitative and qualitative dimensions, with the quantitative component focusing on measuring the frequency of gender representation, while the qualitative aspect scrutinized language usage, visual stereotypes, and the portrayal of career roles. Particular attention was given to how different academic disciplines depict gender in their promotional content, allowing for comparative insights across fields of study.

Data Analysis

The study employed a systematic qualitative approach utilizing Gender-Sensitive Content Analysis (GSCA) to critically examine gender representations in Kalinga State University's (KSU) Information, Education, and Communication (IEC) materials. This methodological framework enabled a structured yet interpretative exploration of how gendered norms and biases are constructed and perpetuated through institutional promotional content, with particular attention to three key dimensions: (1) visual representations, (2) linguistic patterns, and (3) career pathway depictions.

To ensure analytical rigor and minimize subjective bias, the study implemented an interrater reliability protocol. Trained coders independently analyzed the materials. The coders achieved an initial agreement rate of 78%, with remaining discrepancies resolved through structured discussions referencing the operational definitions in the coding manual. This process continued until the coders reached the predetermined reliability threshold of 85% agreement, after which the remaining materials were divided for independent analysis with periodic cross-checks to maintain consistency.

RESULTS

Gender Stereotypes & Biases in KSU IEC Materials

Table 1: Gender Stereotypes & Biases in the Promotional Brochures of the College of Business Administration and Accountancy

Bias Category	Indicator	Example from KSU IEC Materials	Stereotype/ Bias Identified
Visual Stereotypes	Occupational Roles	No images of male students in administrative roles; only female testimonials highlighted.	Implies office admin is "feminine" work.
Linguistic Biases	Gendered Pronouns	Uses "they" neutrally but emphasizes "she" in testimonials	Subtle reinforcement of female dominance in the field.

	Stereotyped Adjectives	Describes alumni as "eager to learn," "dedicated" (traditionally feminine traits).	Soft skills over leadership/technical prowess.
	Voice Attribution	Female voices dominate testimonials; male perspectives absent.	Gender imbalance in representation.
Career Pathway Biases	Disciplinary Segregation	Lists "clerical" roles (e.g., stenographer) without gender-neutral examples.	Reinforces traditional gender roles in admin work.
	Leadership Depictions	Leadership roles (e.g., Office Manager) lack male examples.	Suggests men are less suited for admin leadership.
	Role Model Gaps	No male alumni testimonials or images in leadership positions.	Missed opportunity to challenge stereotypes.

The data from the analysis of the brochure the College of Business Administration and Accountancy (CBAA) reveals several implicit and explicit gender stereotypes through the lens of visual, linguistic, and career pathway biases. The brochure predominantly features female voices in testimonials and endorsements. This lack of male representation in the descriptions and examples frames the program as a traditionally "feminine" profession, reinforcing societal norms that associate administrative roles with women's work. Such depictions risk discouraging male enrollment and may perpetuate occupational gender segregation.
Linguistic biases further underscore gendered expectations in the field. The testimonials and descriptions rely heavily on female pronouns and emphasize traits like being "eager to learn" and "dedicated," which align with stereotypically feminine qualities such as nurturing and supportive. This focus on soft skills overshadows technical or leadership competencies, potentially limiting perceptions of administrative roles as requiring strategic or managerial expertise. The absence of male or gender-neutral language in these descriptions subtly reinforces the idea that the college is a domain where women naturally excel, while men are less visible or absent altogether.

Table 2: Gender Stereotypes & Biases in the Promotional Brochures of the College of Liberal Arts and S cial Sciences

Bias Category	Indicator	Example from KSU IEC Materials	Stereotype/ Bias Identified
Visual Stereotypes	Occupational Roles	No images of men in Social Work or History; women dominate Psychology testimonials.	Implies caregiving roles (Social Work) are "feminine."
Linguistic Biases	Gendered Pronouns	Social Work mission uses "we" but emphasizes "helping" (stereotypically feminine trait).	Associates empathy with women.
	Stereotyped Adjectives	Psychology goals highlight "social responsibility"	Soft skills over technical competencies.
	Voice Attribution	Female dean listed as contact; male faculty underrepresented in leadership.	Reinforces "male authority gap" in humanities.
Career Pathway Biases	Disciplinary Segregation	History careers focus on teaching/museum work (traditionally female-dominated).	Neglects male role models in archival research.
	Leadership Depictions	Political Science careers omit male examples in "policy making" or "foreign service."	Suggests women lack political authority.
	Role Model Gaps	No male alumni featured in Psychology or Social Work.	Missed chance to challenge occupational segregation.

The analysis of the College of Liberal Arts and Social Sciences (CLASS) brochures reveals persistent gender stereotypes that shape student recruitment, program perceptions, and career expectations. Through examining visual, linguistic, and career pathway biases across programs, three key patterns emerge. First, the brochures reinforce traditional gender roles by associating caregiving and service-oriented fields like Social Work and History with women, evidenced by feminine-coded language ("helping profession," "social responsibility") and the absence of male role models in these disciplines. Conversely, leadership-oriented paths

balanced gender representation, with no examples of women in policy-making roles, subtly perpetuating the notion that authority remains a masculine domain.

Linguistic choices further establish these biases. While the Psychology program adopts relatively neutral terminology, its focus on clinical practice over industrial-organizational applications—a typically masculinized specialization—creates an implicit gendered divide. The Social Work mission's emphasis on empathy and vulnerability, though laudable, risks deterring male applicants by aligning the profession with stereotypically feminine traits. This linguistic framing extends to leadership representation, where female contacts is prominently listed while male faculty remain invisible, potentially reinforcing the perception that liberal arts leadership is inherently female-dominated.

The career pathway depictions compound these issues by omitting non-traditional role models. History graduates are shown as teachers and museum workers—roles culturally coded as feminine—with no mention of male archivists or researchers. Similarly, Political Science careers highlight abstract "policy making" without gendered examples, missing an opportunity to challenge stereotypes. Most critically, the complete absence of male alumni testimonials in Psychology and Social Work implies these fields lack male participation, which could discourage enrollment and perpetuate occupational segregation. These biases reflect broader societal norms that equate women with nurturing roles and men with technical or authoritative positions, creating structural barriers to gender diversity in academia and beyond.

Table 3: Gender Stereotypes & Biases in the Promotional Brochures of the College of Engineering and Information Technology

Bias Category	Indicator	Example from KSU IEC Materials	Stereotype/ Bias Identified
Visual Stereotypes	Occupational Roles	Brochure features male-dominated leadership photos (e.g., events, awards). Brochure lacks female representation in technical roles (e.g., coding, hardware design).	Reinforces the stereotype that engineering leadership and technical roles are male-dominated.
	Body Language	Photos show men in assertive poses (e.g., speaking at events), while women (if present) are passive (e.g., listening).	Suggests men are natural leaders, while women are followers.
	Spatial Dominance	Group photos materials often place male members centrally, with women at the edges.	Implies male dominance in organizational hierarchy.
Linguistic Biases	Stereotyped Adjectives	Brochure emphasizes "innovation," "technical skills," and "hardware" (traditionally masculine traits). Lacks terms like "collaborative," "creative," or "inclusive."	Reinforces the idea that technical fields favor masculine traits.
	Voice Attribution	Leadership contacts and event speakers are predominantly male; no female faculty highlighted.	Reinforces the stereotype of male authority in STEM.
Career Pathway Biases	Disciplinary Segregation	Career examples ("hardware engineer," "AI specialist") lack female representation.	Suggests women are less suited for technical roles.
Skill Emphasis	Technical vs. Soft Skills	Brochure heavily emphasizes "coding," "hardware design," and "AI" (traditionally "masculine" skills). Only briefly mentions "teamwork" or "communication" (traditionally "feminine" skills). PICE materials focus on "technical expertise" and "innovation" but omit collaborative or social-impact skills.	Reinforces the stereotype that engineering prioritizes "masculine" (technical) skills over "feminine" (collaborative) ones.

The analysis of the brochures from the College of Engineering and Information Technology (CEIT) reveals significant gender biases. These biases manifest in visual representations, career pathway depictions, and skill emphasis. The materials predominantly feature male students and faculty in leadership and technical roles, while women, when present, appear in passive or supporting roles. This visual underrepresentation reinforces the stereotype that engineering is a male-dominated field. Career materials lack female role models in technical and leadership positions.
The skill emphasis in these brochures reveals perhaps the most telling bias. There's a clear prioritization of "hard" technical skills (coding, hardware design) over "soft" interpersonal skills (teamwork, communication). This dichotomy perpetuates the false gender binary that associates technical competence with masculinity and collaborative skills with femininity. Such framing not only devalues essential engineering competencies but also creates artificial barriers for women whose strengths may lie in integrative, creative problem-solving approaches.

Table 4: Gender Stereotypes & Biases in the Promotional Brochures of the College of Agriculture

Bias Category	Indicator	Example from KSU IEC Materials	Stereotype/ Bias Identified
Visual Stereotypes	Occupational Roles	All visual representations include male Only one individual is mentioned, who is male and labeled as the Program Chairperson.	Suggests male dominance in the course and leadership
Linguistic Biases	Gendered Pronouns	Consistent use of gender-neutral language	No bias detected
	Voice Attribution	Only contact person listed is male	Reinforces male dominance in academic leadership
Career Pathway Biases	Disciplinary Segregation	Specializations presented neutrally but no effort to counter field's male-dominated image	Implicit association with traditional gender roles
	Role Model Gaps	No women featured or named. Absence of female role models or professionals.	Reinforces invisibility of women in agriculture leadership.
Skill Emphasis	Technical vs. Soft Skills	Emphasizes “scientific habit of thought,” “diagnosing,” “analyzing problems,” and “packaging and applying technologies.”	Strong technical framing, which is gender-neutral in theory, but in practice may subtly align with masculine-coded competencies.

The analysis presented in Table 4 reveals significant gender stereotypes and biases in the promotional brochures of the College of Agriculture, which collectively reinforce traditional gender roles in agricultural education. Beginning with visual stereotypes, the material exclusively depicts male figures in both occupational roles and leadership positions, with the Program Chairperson being the only named individual—a male. This visual representation perpetuates the notion that agriculture is a male-dominated field, potentially discouraging female and non-binary students from seeing themselves as future leaders or professionals in this sector. The absence of diverse role models in imagery and text further impairs this issue, creating an implicit bias that aligns agricultural careers with masculinity.
Linguistically, the CA brochure employ gender-neutral language, which is a positive aspect, as it avoids overtly exclusionary terms. Career pathway biases are evident in the way specializations are presented. While the descriptions of fields like Crop Science and Animal Science are technically neutral, the lack of proactive efforts to counter the field's male-dominated image—such as highlighting female success stories or gender-inclusive initiatives—results in a passive reinforcement of traditional gender roles. The complete absence of female role models or representative in the brochure further marginalizes women, reinforcing their invisibility in agricultural leadership and innovation.

Gender Representation in KSU IEC Materials

Table 5: Gender Representation in KSU IEC Materials

Dimension	Category	Findings from KSU Materials	Stereotype/Bias Identified
Visual Representation	Occupational Roles	Men dominate technical/leadership roles	Reinforces "men as leaders, women as supporters" in technical

		(e.g., engineers, program chairs). Women appear in caregiving/support roles (e.g., office admin, social work).	
	Body Language	Men shown in assertive poses (speaking, demonstrating).	Suggests men are natural authorities
Linguistic	Gendered Pronouns	Gender-neutral terms are used in most courses. Feminine pronouns dominate Business Ad. testimonials.	Feminization of some fields
Career Pathways	STEM Fields	No women shown in engineering technical roles. Male faculty highlighted in Agriculture leadership.	Reinforces STEM as male-dominated.
	Social Science Fields	Women overrepresented in caregiving roles (social work, psychology). Men absent in these fields.	Positions social sciences as "feminine" domains.

The analysis of gender representation in Kalinga State University's (KSU) informational, educational, and communication (IEC) materials reveals persistent patterns of gender bias that mirror global trends while reflecting unique Philippine contextual challenges. The data demonstrates systematic reinforcement of traditional gender stereotypes across visual representation, linguistic framing, and career pathway depictions, despite progressive national gender policies.

The materials consistently portray men in technical and leadership roles (engineers, program chairs) while depicting women in caregiving and support positions (office administrators, social workers). While some programs use gender-neutral language, the Business Administration materials' emphasis on feminine pronouns and stereotypically female traits ("dedicated," "eager to learn"). The complete absence of women in engineering technical roles and men in social science fields reflects and reinforces actual enrollment patterns.

Recommendations for Revising and Improving the KSU IEC Materials to be more Gender-Inclusive and Equitable

The following recommendations propose strategies to address gender biases identified in KSU's IEC materials across colleges. Drawing from the analysis of visual, linguistic, and career pathway differences in the tables above, these evidence-based solutions aim to address stereotypes, promote inclusive representation, and align with global best practices in gender-fair education. By implementing these measures, KSU can transform its materials into tools for equitable recruitment and student empowerment.

Table 6: Integrated Recommendations

Issue Identified	Recommended Action	Expected Outcome
Visual Stereotypes: Male-dominated technical/leadership roles; women in caregiving roles.	Include balanced imagery of all genders in diverse roles (e.g., female engineers, male social workers). Ensure equal spatial dominance in group photos.	Challenges occupational stereotypes; encourages non-traditional enrollment.
Linguistic Biases: Feminine pronouns dominate "soft" fields; masculine-coded technical language.	Use gender-neutral pronouns consistently. Balance "hard" and "soft" skill descriptors across all fields.	Neutralizes gendered associations; values all competencies equally.

Career Pathway Gaps: Lack of non-traditional role models	Feature testimonials from diverse alumni (e.g., graduates, leaders).	Broadens student aspirations; disrupts occupational segregation.
Leadership Depictions: Men overrepresented in STEM leadership; women in social sciences leadership.	Highlight female STEM faculty and male social science leaders in materials. Show diverse leadership styles.	Reduces "male authority" bias in STEM and "feminized" leadership in social sciences.
Skill Emphasis: Technical skills masculinized; soft skills feminized.	Reframe skills as complementary (e.g., "innovative collaboration" in Engineering, "analytical empathy" in Social Work).	Dismantles false gender binaries in skill perception.
Role Model Absence: No non-binary representation; gendered disciplinary coding.	Incorporate indigenous Cordilleran gender perspectives (e.g., gender-egalitarian roles in agriculture). Add non-binary faculty/student profiles.	Aligns with local cultural values; ensures LGBTQ+ visibility.
Body Language Bias: Men assertive; women passive in visuals.	Diversify poses (e.g., women demonstrating tech, men listening actively).	Challenges "natural authority" stereotypes.
Institutional Implementation Gaps: Uneven adoption of gender-fair policies.	Conduct gender audits of IEC materials. Train content developers on CHED's Gender-Fair Guidelines.	Ensures consistent, policy-aligned improvements across all colleges.

DISCUSSION

In general, the analysis of the different brochures from Kalinga State University's colleges reveals persistent gender stereotypes that align with global and Philippine-specific research on gender biases in educational materials. Across the College of Business Administration and Accountancy (CBAA), College of Liberal Arts and Social Sciences (CLASS), College of Engineering and Information Technology (CEIT), and College of Agriculture (CA) three consistent patterns emerge: (1) visual underrepresentation of certain genders in discipline-specific roles, (2) linguistic biases reinforcing gendered traits and career expectations, and (3) skill emphasis that perpetuates a false binary between "masculine" and "feminine" competencies.

The CBAA brochure's female-dominated testimonials reflect Reyes et al.'s (2022) findings on "disciplinary gender coding," where business programs—despite nearing gender parity in enrollment—are framed as "feminine" domains through overrepresentation of women in nurturing roles. This aligns with Alba & Hernandez's (2020) discovery that women in Philippine IEC materials are 73% more likely to appear in caregiving roles than in leadership positions. Similarly, the CLASS brochures' association of Social Work and History with women mirrors Kollmayer et al.'s (2020) and Lee & Huang's (2022) global studies, where humanities and caregiving fields are consistently gendered as female, while leadership and technical roles are masculinized. The absence of male role models in these materials risks discouraging male enrollment, a phenomenon documented in Egunyomi & Jegede's (2022) research on Nigerian textbooks, where gendered portrayals directly influenced career aspirations.

Linguistic analysis reveals a complex landscape where surface-level gender neutrality often masks deeper biases. While some colleges employ gender-neutral language, the underlying messaging remains problematic. The Business college's focus on soft skills and the Liberal Arts college's emphasis on empathy in Social Work create implicit gendered associations – parallels Cortez & Dela Peña's (2021) findings that while gender-neutral language adoption has increased in Philippine textbooks, stereotypical descriptors persist. The CLASS materials' focus on empathy in Social Work reflect González et al.'s (2023) observation that skill framing often adheres to traditional gender norms. This linguistic patterning reinforces societal expectations, as seen in Ahmed & Sen's (2021) study of Bangladeshi materials, where women were consistently described in passive, non-technical terms. CEIT's exclusive highlighting of technical skills perpetuates the masculinization of STEM fields. These patterns reflect the Philippine paradox noted in recent studies - progressive gender policies coexisting with persistent implementation gaps. Career pathway depictions compound these issues through significant role model gaps. The complete absence of female agriculturist or engineers and

the invisibility of male social workers and business administrators reinforce occupational segregation, a phenomenon well-documented in Reyes et al.'s 2022 study of Philippine universities. This representation gap has real consequences, as research shows it directly influences student enrollment patterns and career aspirations.

Additionally, the CEIT and CA brochures' prioritization of "hard" technical skills (e.g., coding, hardware design) over collaborative competencies perpetuates the masculinization of engineering, a trend highlighted in UNESCO's (2021) global report on STEM gender gaps. This bias aligns with Blumberg's (2019) research on how "masculine" fields are linguistically and visually associated with individual achievement and technical prowess, while "feminine" fields emphasize interpersonal skills.

These findings collectively demonstrate how KSU's materials mirror global patterns of gendered representation (McCarthy et al., 2021) and Philippine-specific implementation gaps (Mendoza & Tan, 2023). Despite progressive policies like CHED's Gender-Fair Textbook Guidelines, regional universities lag in equitable portrayals, as seen in Torres & Lim's (2022) comparison of Metro Manila and regional institutions.

The materials consistently portray men in technical and leadership roles (engineers, program chairs) while depicting women in caregiving and support positions (office administrators, social workers). This aligns perfectly with Alba and Hernandez's (2020) findings in Philippine state universities, where men appeared in 82% of engineering program images. The body language analysis showing men in assertive poses and women in passive roles replicates Cortez and Dela Peña's (2021) discovery that men were shown in authoritative poses 3.5 times more frequently than women in Philippine textbooks. These visual patterns reinforce what Reyes et al. (2022) termed "disciplinary gender coding," creating a stark divide between male-dominated technical fields and female-dominated caregiving disciplines.

While some programs use gender-neutral language, the Business Administration materials' emphasis on feminine pronouns and stereotypically female traits ("dedicated," "eager to learn") exemplifies what UNESCO (2021) identified as the global feminization of certain academic domains. This linguistic framing corresponds with the Philippine paradox noted by Cortez and Dela Peña (2021) - improved gender-neutral language adoption coexisting with stubbornly stereotypical representations. The materials' failure to highlight women's technical competencies or men's caregiving abilities perpetuates the false binary documented in González et al.'s (2023) multinational study of educational AI applications.

The complete absence of women in engineering technical roles and men in social science fields reflects and reinforces actual enrollment patterns reported by the Philippine Statistics Authority (2022). This reciprocal relationship between representation and enrollment creates a self-perpetuating cycle of occupational gender segregation. The findings mirror global patterns identified by Kollmayer et al. (2020) in Europe and Lee and Huang (2022) in East Asia, where women remain dramatically underrepresented in STEM visuals. The Philippine-specific manifestation of these biases appears particularly pronounced in regional universities like KSU, which Mendoza (2023) found lagged behind Metro Manila institutions in gender-balanced representations.

CONCLUSION

The analysis of Kalinga State University's IEC materials reveals gender biases that perpetuate traditional stereotypes across colleges, reinforcing occupational segregation and limiting equitable representation. The findings demonstrate a clear pattern: men dominate technical and leadership roles in STEM fields, while women are depicted in humanities, mirroring global trends observed in UNESCO (2021). These biases—evident in visual representations, linguistic framing, and career pathway depictions—not only reflect societal norms but may also actively shape student aspirations, as evidenced by the reciprocal relationship between enrollment patterns and gendered portrayals.

Despite progressive national policies like CHED's Gender-Fair Guidelines, KSU's materials lag in implementation, particularly in regional contexts where indigenous gender-egalitarian traditions remain untapped. The persistence of these biases underscores the need for intentional interventions, such as diversifying role models, balancing skill narratives, and integrating culturally responsive approaches. By adopting the recommended strategies—from inclusive visual redesigns to institutional gender audits—KSU can transform its IEC materials into powerful tools for challenging stereotypes and fostering a more equitable academic environment. Addressing these gaps is not merely about representation but about dismantling structural barriers that hinder all students, regardless of gender, from pursuing their full potential in any field. This study highlights an urgent call to align KSU's IEC materials with its commitment to gender equality, ensuring that its educational mission reflects the diversity and inclusivity it aspires to achieve.

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