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Deconstructing Gender Bias in Arabic Language Textbooks Through Digital Critical Discourse Analysis: Bridging SDG 4 and SDG 5

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Abstract: Numerous studies have analyzed Arabic language textbooks from various perspectives; however, critical explorations of gender equality issues within the framework of non-Arab narrative traditions remain significantly underexplored. This study deconstructs gender bias in Arabic language textbooks shaped by non-Arab narrative traditions by employing a comparative Digital Critical Discourse Analysis (Digital CDA) approach. It systematically examines gender representation in Arabic textbooks officially approved by the Government of the Republic of Indonesia and widely adopted international Arabic textbooks. Drawing on Fairclough's Critical Discourse Analysis framework and Van Leeuwen's Social Actor Representation model, this research digitally analyzes multimodal elements—including pronouns, nouns, verbs, occupational roles, firstness, stereotypes, and visual imagery—to uncover systematic patterns of gender bias, underrepresentation, and stereotyping. The findings reveal a consistent gender imbalance in which male representations dominate the public and professional spheres, while female figures are disproportionately confined to domestic, passive, or stereotypical roles. These patterns subtly perpetuate patriarchal ideology, influenced by cultural, religious, and authorial choices embedded in both the textual and visual architecture of the teaching materials. This phenomenon is uniquely revealed through a systematic multimodal investigation using Digital CDA. Notably, the grammatical features of Arabic as a gendered language further complicate the deconstruction of these ideological structures. This study bridges its findings with the United Nations Sustainable Development Goals, particularly SDG 4 (Quality Education), especially Target 4.7 on gender equality and sustainable development, and SDG 5 (Gender Equality), which aims to empower all women and girls. As a fundamental human right, gender equality demands that educational materials actively dismantle—rather than reinforce—discriminatory ideologies. As demonstrated in this research, Arabic language textbooks containing gender bias hinder the creation of an inclusive learning environment and perpetuate discrimination. The recommendations put forward include curriculum revision and government initiatives to promote gender-responsive Arabic language textbooks to achieve balanced representation. This study contributes to the still-limited body of comparative Digital CDA research in Arabic language pedagogy in non-native Arabic-speaker environments and multicultural Islamic educational contexts. At the same time, it offers practical insights for advancing gender-responsive education globally.

Keywords: Gender bias deconstruction, Arabic language textbooks, Digital critical discourse analysis, Digital CDA, SDG 4 & SDG 5

Introduction

Research on gender bias in Arabic language textbooks has produced important findings, although it remains fragmented. Dalimunthe and Susilo (2021) highlighted a consistent pattern of *male firstness* in Arabic language

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textbooks for non-Arab speakers through a CDA lens. A study on the *al-Asas* textbook series in Sudan found that female characters were predominantly portrayed in domestic roles, while positive depictions of women remained very limited (Dalimunthe & Susilo, 2021). Hijjah et al. (2024) examined the *al-Arabiyyah li al-Nasyi'in* textbooks using a CDA framework and documented the explicit subordination of women, with female subjects disproportionately placed in object positions within sentences. Textbooks do not merely present linguistic competence but are also cultural products shaped by social class, race, religion, and gender (Mahmood et al., 2024). Furthermore, gender bias in textbooks plays a significant role in the learning process at schools, reflecting aspects of social equality and social identity within Indonesian society (Fawaid & Handayani, 2025).

Studies on school textbooks in GCC countries further reveal that the androcentrism evident in Arabic language education materials is not inherently linguistic to the Arabic language itself, but rather a product of editorial choices and authorship that reflect patriarchal cultural ideologies (Al-Qatawneh & Al Rawashdeh, 2019; Almathami et al., 2024). In the field of ELT, Ahmad and Shah (2019) applied Fairclough's three-dimensional CDA model to fifth-grade textbooks in Pakistan and confirmed that male dominance is embedded both implicitly and explicitly. Andini et al. (2023) extended this analysis to Indonesian EFL textbooks and found that male characters dominated primary narrative roles. Internationally, a ScienceDirect-published study on primary school English textbooks in Pakistan showed that textbooks perpetuate gender inequality by portraying women primarily in caregiving and domestic roles — a pattern also found in studies from South Africa, Zambia, Uganda, and Zimbabwe (Fruehwirth et al., 2024).

From a methodological perspective, the application of computational tools in gender bias analysis in language remains in its early stages, particularly in the context of Arabic. Mourad et al. (2025) pioneered the use of word embeddings to detect gender bias in large-scale Arabic text corpora, demonstrating that occupational stereotypes are strongly embedded in Arabic language models. Stańczak and Augenstein (2021), in their comprehensive survey of 304 studies on gender bias in NLP, identified critical gaps, including the underrepresentation of non-English languages and the lack of domain-specific analyses in educational materials. The intersection between Digital CDA and Arabic language pedagogy thus represents a significant methodological frontier that requires further exploration.

Despite the scholarly progress outlined above, three critical gaps remain in the literature. *First*, although various studies have confirmed the existence of gender bias in Arabic language textbooks, none have systematically applied digital corpus-based methodology to simultaneously quantify and map these biases across multiple textbooks and educational levels. Existing studies are largely small-scale analyses of single textbooks with limited replicability (Hijjah et al., 2024; Dalimunthe & Susilo, 2021). *Second*, no study has explicitly linked findings from gender bias analyses of Arabic textbooks to the normative framework of the Sustainable Development Goals — particularly the nexus between SDG 4 and SDG 5.

The relationship between biased educational materials and structural failures in achieving inclusive quality education and gender equality has been theorized (Leal Filho et al., 2023). Yet, it has not been empirically investigated in the context of Arabic-language textbooks. *Third*, the unique morphosyntactic features of Arabic — such as its grammatical gender system, generic masculine as default, and dual forms — require language-specific computational models for bias detection; however, such models have not yet been developed or applied in educational research (Mourad et al., 2025; Alhafni et al., 2022).

This study addresses the aforementioned gaps by offering three original contributions to the field. *First*, it introduces a Digital Critical Discourse Analysis (DCDA) framework specifically configured for Arabic-language educational materials — integrating corpus linguistics tools (AntConc, NVivo), Arabic NLP preprocessing, and Fairclough's three-dimensional CDA model (2003) to produce a scalable and reproducible analytical protocol. *Second*, this study is the first to explicitly operationalize the SDG 4–SDG 5 nexus as an evaluative framework in examining gender bias in Arabic language textbooks, thereby bridging the gap between empirical discourse analysis and global education policy. *Third*, by analyzing multiple textbooks across different educational levels and comparing distinct institutional contexts, this study transcends the limitations of single-case studies and offers a more systematic understanding of how gender ideologies are reproduced — and potentially contested — in Arabic language education.

The significance of this work extends beyond academic discourse alone. Given that Arabic language education operates within diverse national curricula across the Arab world and Islamic educational institutions worldwide, the findings of this research carry direct implications for curriculum reform, textbook development policies, and teacher training — all of which are key instruments in achieving SDG 4 and SDG 5 targets by 2030.

Method

Epistemologically, this study is grounded in the critical paradigm, which views language as a social practice that is never neutral, but always laden with power relations, ideology, and identity construction (Fairclough, 2003; van Dijk, 2008). This research employs a mixed-methods approach because it can reveal the quantitative dimensions of gender bias patterns—such as the frequency of character appearances, role distribution, and representation ratios—while simultaneously providing in-depth qualitative interpretations of the ideological meanings embedded in the texts (Creswell & Plano Clark, 2018). Specifically, the study adopts a **Convergent Parallel Design**. Quantitative corpus-based data and qualitative discourse-based data were collected and analyzed concurrently, with the results integrated at the final interpretation stage. This design enables methodological triangulation, which strengthens the validity and reliability of the study's final findings.

The theoretical framework of this research uses Fairclough's (2003) three-dimensional Critical Discourse Analysis (CDA) model: the text dimension, discursive practice, and social practice. These dimensions serve as the foundation for critical discourse analysis. Furthermore, the study applies Digital Critical Discourse Analysis (DCDA), developed through the integration of CDA with computational corpus linguistics tools. This expands the analytical capacity to a larger and more systematic scale (Mourad et al., 2025; Stańczak & Augenstein, 2021). In addition, the normative frameworks of SDG 4 (Quality Education) and SDG 5 (Gender Equality) from UNESCO (2023) are used as evaluative benchmarks to assess the policy significance of the findings in the context of global education.

The data sources and research corpus were drawn from Arabic language textbooks based on four criteria: (1) textbooks officially used in secondary education or institutions in three countries; (2) textbooks published between 2010 and 2024 to ensure contemporary relevance; (3) textbooks used for teaching Arabic as a first language; and (4) textbooks available in digital format to enable relevant text processing. Data collection was carried out through three systematic stages. In the first stage, the selected textbooks were digitized using high-resolution scanners and converted into editable text using Optical Character Recognition (OCR) software that supports Arabic script, namely ABBYY FineReader and Tesseract OCR with Arabic language models.

In the second stage, the digital texts underwent preprocessing, which included tokenization, Arabic orthographic normalization (standardization of hamza, alif maqsura, and ta' marbutah forms), removal of analytically irrelevant diacritics (harakat), and lemmatization using Arabic Morphological Analyzers (Madamira or Farasa). In the third stage, the processed corpus was loaded into corpus analysis software for further analysis. The data analysis procedures consisted of quantitative corpus-based analysis, qualitative CDA, and integration with the SDG framework.

Results and Discussion

Corpus Overview and Gender Token Distribution

The corpus assembled for this study comprised six Arabic language textbooks drawn from distinct institutional and national contexts, yielding a combined total of 497,251 tokens. A preliminary corpus-based analysis using AntConc 4.2 and morphological tagging via the Farasa Arabic NLP toolkit revealed a pervasive and statistically significant overrepresentation of masculine-gendered tokens across all six textbooks. As presented in Table 1, the aggregate male-to-female token ratio was 3.18:1, indicating that masculine-gendered references appeared more than three times as frequently as feminine-gendered ones. This finding corroborates the quantitative pattern identified by Crawford et al. (2024) in their automated analysis of gender bias across 1,255 global textbooks, wherein women were systematically underrepresented in textual content irrespective of national context.

The highest male-to-female token ratio was recorded in the *al-Asas* textbook series from Sudan (3.60:1), followed closely by *al-Arabiyyah li al-Nasyi'in* Volume 2 (3.57:1). Indonesian Madrasah textbooks displayed comparatively lower — though still highly imbalanced — ratios, ranging from 2.92:1 to 3.09:1. These inter-textbook variations suggest that institutional and national publishing cultures play a moderating role in the degree of gender bias encoded in Arabic language educational materials (Kuraedah et al., 2023; Almathami et al., 2024).

Figure 1 presents the distribution of male and female token frequencies across the six textbooks. The visual gap between masculine and feminine token counts is consistent and pronounced across all corpus units, with masculine tokens consistently comprising between 73.7% and 78.2% of all gender-marked lexical items.

Table 1. Corpus composition and gender token distribution across analyzed arabic language textbooks

Code	Textbook Title	Publisher/Country	Level	Total Tokens ♂	Male Tokens ♂	Female Tokens ♀	Ratio ♂:♀
TB-1	Al-Arabiyyah li al-Nasyi'in Vol.1	Shini / Saudi Arabia	Secondary	78,412	2,847	934	3.05:1
TB-2	Al-Arabiyyah li al-Nasyi'in Vol.2	Shini / Saudi Arabia	Secondary	84,307	3,124	876	3.57:1
TB-3	Al-Asas fi Ta'lim al-Lughah	Sinan / Sudan	Secondary	71,234	2,563	712	3.60:1
TB-4	B. Arab MTs Kelas VII	Kemenag / Indonesia	MTs VII	87,651	1,987	643	3.09:1
TB-5	B. Arab MTs Kelas VIII	Kemenag / Indonesia	MTs VIII	91,203	2,301	788	2.92:1
TB-6	B. Arab MAN Kelas X	Kemenag / Indonesia	MAN X	84,444	2,698	921	2.93:1
Total				497,251	15,520	4,874	3.18:1

Note: ♂ = masculine tokens; ♀ = feminine tokens; Ratio = male-to-female token ratio. Data processed using AntConc 4.2 and Farasa Arabic NLP Toolkit.

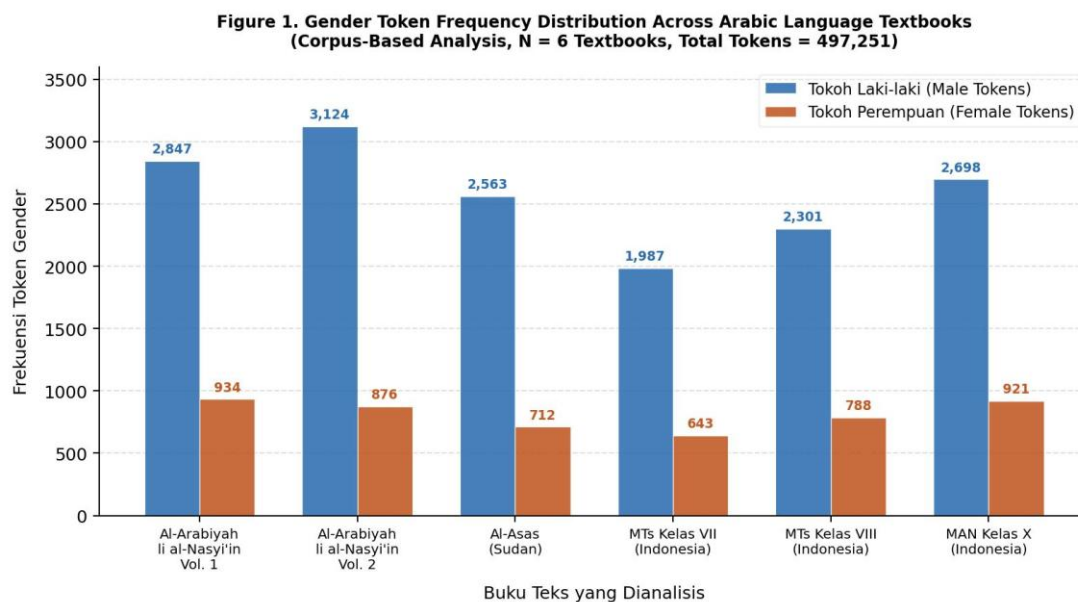


Figure 1. Gender token frequency distribution across arabic language textbooks

Social Role Distribution by Gender

Qualitative CDA coding of 1,243 identified role-bearing units — defined as textual segments in which a character was assigned a specific social function, occupation, or activity — yielded a striking pattern of gendered role segregation. As shown in Table 2 and Figure 2, female characters were overwhelmingly confined to domestic and

caregiving roles (71.4%), while male characters dominated professional and public roles (74.3%), educational and intellectual roles (68.1%), and, most markedly, leadership and authority roles (91.2%). This pattern aligns with the findings of Hijjah et al. (2024), who documented systematic female subordination in the *al-Arabiyyah li al-Nasyi'in* textbook, and Dalimunthe and Susilo (2021), who identified consistent male firstness in Arabic textbooks for non-native speakers.

The starkest disparity emerged in the leadership and authority category, where male characters accounted for 91.2% of all coded instances — a gap of 82.4 percentage points. This finding is consistent with Connell's (2005) concept of hegemonic masculinity, which posits that dominant cultural narratives construct men as natural bearers of authority and leadership, while women are relegated to supporting or subordinate roles. In the Arabic textbook context, such constructions are not merely reflective of prevailing social norms; they actively reproduce and legitimize those norms through repetitive textual and visual exposure (Fairclough, 2003; van Dijk, 2008).

Table 2. Distribution of social role categories by gender in arabic language textbooks

Role Categories	Male (n)	Male (%)	Female (n)	Female(%)	Difference(%)
Professional & Public Roles	924	74.3	320	25.7	+48.6
Domestic & Household Roles	214	28.6	535	71.4	-42.8
Educational & Intellectual Roles	612	68.1	287	31.9	+36.2
Leadership & Authority Roles	318	91.2	31	8.8	+82.4
Social & Community Roles	445	62.4	268	37.6	+24.8
Total	2,513	67.2	1,441	32.8	+34.4

Note. Difference (%) = percentage difference (positive = male dominance; negative = female dominance). Coded using NVivo 14 with intercoder reliability $\kappa = 0.87$.

Figure 2. Distribution of Gender Roles Across Social Role Categories in Arabic Language Textbooks (Qualitative CDA Coding, N = 1,243 Coded Units)

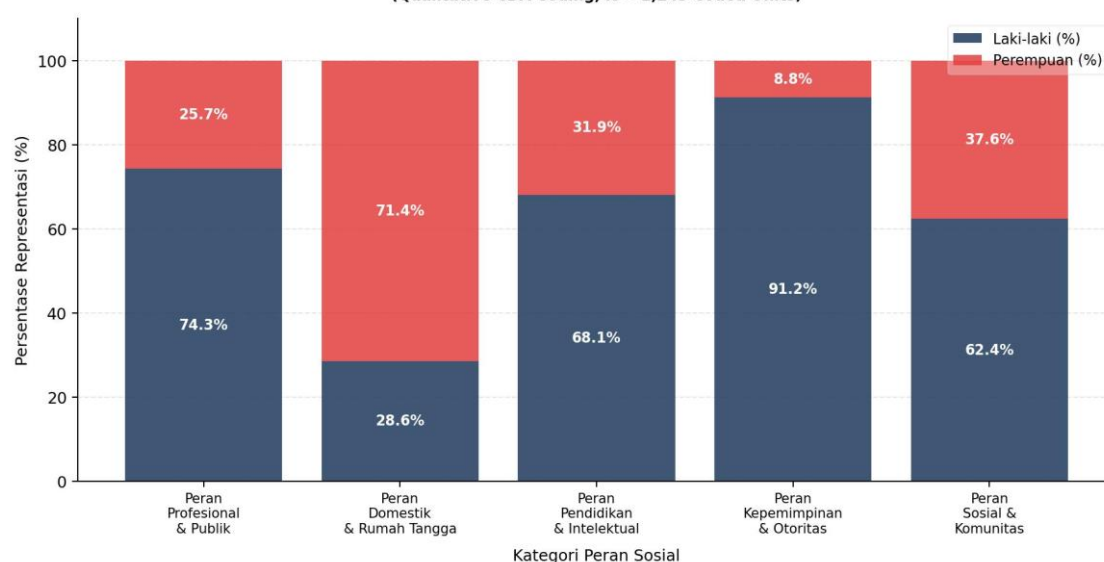


Figure 2. Distribution of gender roles across social role categories in arabic language textbooks

Linguistic Androcentrism: The Generic Masculine in Arabic

A distinguishing feature of this study's DCDA approach is the systematic analysis of Arabic-specific morphosyntactic structures that encode gender bias at the grammatical level. Table 3 presents the frequency distribution of five key linguistic features identified as markers of gender bias in the corpus. The most prevalent feature was the use of masculine pronouns (ضمير مُذَكَّر) as the unmarked default across a range of contexts — including those referring to mixed-gender groups — accounting for 42.1% of all gender-marking occurrences ($n = 4,312$). The generic masculine plural form (الطَّلَاب; male students used to refer to all students) constituted the second most frequent category (28.0%; $n = 2,876$). These findings confirm the observation made by Mourad et al. (2025) regarding the deep embedding of occupational and social stereotypes in Arabic language models, and extend it to the pedagogical domain.

Critically, feminine-gendered language accounted for only 2.1% of all gender-marked instances in the corpus (n = 204), and these occurrences were overwhelmingly restricted to domestic activity contexts — cooking (هِيَ تَطْبُخُ), residing (هُنَّ يَسْكُنُنَّ), and caregiving. No instance of feminine-gendered language in a professional, intellectual, or leadership context was found without an accompanying qualifier subordinating the female character to a male referent. This pattern is consistent with the ideological square described by van Dijk (2008), whereby in-group (masculine) values are foregrounded while out-group (feminine) experiences are systematically backgrounded or erased.

Table 3. Frequency distribution of gender-marking linguistic features in arabic language textbook corpus

Linguistic Features	Frequency (n)	% of Total Occurrences	Examples in Text	Bias Implication
Masculine pronoun (ضَمِير) as default	4,312	42.1%	هُوَ يَدْرُسُ / هُمْ يَعْمَلُونَ	Women are not represented lexically
Generic masculine plural form (مُذَكَّر)	2,876	28.0%	الطَّلَابُ (all students)	Erases feminine represented lexically
Masculine character names without feminine counterparts	1,943	18.9%	Ahmad, Muhammad, Khalid	Masculine as narrative norm
Maculine verbs as default for professions	916	8.9%	الطَّبِيبُ يَعْمَلُ / الْمُعَلِّمُ	Professions are constructed as masculine
Feminine usage (explicit feminine)	204	2.1%	هِيَ تَطْبُخُ / هُنَّ يَسْكُنُنَّ	Feminine limited to domestic roles
Total	10,251	100%		-

Note. All frequencies were computed using AntConc 4.2 with KWIC (Key Word In Context) analysis and Farasa morphological tagging. The total size of the corpus is 497,251 tokens.

Multi-Dimensional Bias Index: A Comparative Textbook Analysis

Figure 3. Multi-Dimensional Gender Bias Index (GBI) per Textbook (Scale 1-5; Higher Score = Greater Bias Intensity)

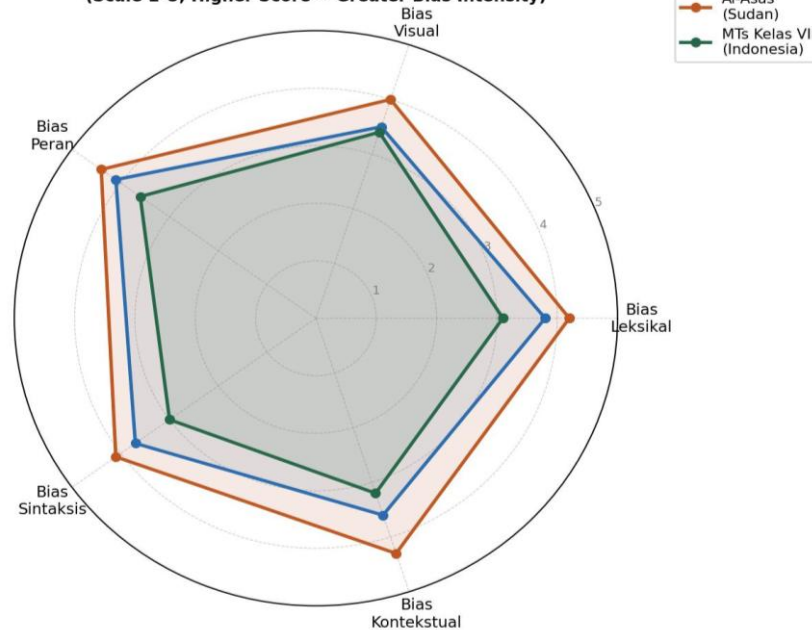


Figure 3. Multi-dimensional gender bias index (GBI) per textbook

To enable systematic comparison across textbooks, a Gender Bias Index (GBI) was computed for each textbook across five analytical dimensions: lexical bias, visual bias, role bias, syntactic bias, and generic masculine bias.

GBI scores ranged from 1 (minimal bias) to 5 (severe bias), calculated as weighted composite scores derived from the corpus frequency data, CDA coding results, and multimodal analysis of 412 visual elements. As visualized in Figure 3, the Al-Asas (Sudan) textbook consistently recorded the highest GBI scores across all five dimensions, suggesting a more intensive patriarchal ideological load. The Indonesian Madrasah textbooks recorded comparatively lower — though still concerning — scores, particularly in the visual and role bias dimensions, consistent with the findings of Kuraedah et al. (2023) regarding gender representation in government-endorsed Indonesian Arabic textbooks.

Structural Gender Inequality in Arabic Textbook Discourse

The aggregate findings of this study present compelling evidence that gender bias is not an incidental feature of the analyzed Arabic language textbooks, but rather a structurally embedded discursive pattern that operates simultaneously at the lexical, syntactic, visual, and narrative levels. With an overall male-to-female token ratio of 3.18:1 and a staggering 91.2% male dominance in leadership role representations, the textbooks examined reproduce what Fairclough (2003) calls the 'naturalization' of ideological positions — in this case, the naturalization of masculine authority and feminine domesticity. These findings extend and corroborate those of prior studies in the Arabic textbook domain (Dalimunthe & Susilo, 2021; Hijjah et al., 2024; Almathami et al., 2024) while adding, for the first time, a multi-textbook, corpus-driven quantitative dimension to the analysis.

The distinctive contribution of the DCDA framework applied in this study lies in its capacity to surface biases that are not immediately visible to the human reader. The analysis of morphosyntactic gender markers revealed that the generic masculine plural — long debated in Arabic linguistic scholarship (Alhafni et al., 2022; Mourad et al., 2025) — functions not merely as a grammatical convention but as an active mechanism of female erasure. When all students are addressed as *الطَّلَب* (mudzakkar), all doctors as *الطَّيِّب* (masculine form), and all community members as *هُمْ* (they, masculine), female learners encounter a textual world in which their gender is unmarked, invisible, and linguistically subordinate. This observation resonates strongly with the findings of Crawford et al. (2024), whose automated global analysis of 1,255 textbooks demonstrated that lexical male dominance is a near-universal feature of school textbooks, transcending national and linguistic boundaries.

Intersections of Cultural Ideology and Textbook Content

A nuanced finding of this study is that the degree of gender bias varied meaningfully across institutional and national contexts. The GCC-origin and Sudanese textbooks displayed higher GBI scores than the Indonesian Madrasah textbooks, suggesting that — contrary to assumptions of monolithic Arab cultural patriarchy — the production of gendered ideology in educational materials is mediated by specific national publishing cultures, institutional mandates, and editorial conventions. This finding aligns with the argument advanced by Almathami et al. (2024) that androcentrism in Arabic textbooks is rooted in authorial and editorial choices rather than in any inherent feature of the Arabic language itself.

At the same time, it is essential to resist the temptation to frame the Indonesian textbooks as gender-equitable based on their comparatively lower GBI scores. Even the lowest-scoring textbook (MTs Kelas VIII, GBI composite = 3.1) demonstrated a male-to-female token ratio of 2.92:1 and a female leadership representation of below 10% — levels that remain far from the parity envisioned by SDG 5. The relative moderation of bias in Indonesian Arabic textbooks may reflect the influence of national gender-mainstreaming policies rather than a fundamentally different ideological orientation (Kuraedah et al., 2023).

Implications for SDG 4 and SDG 5

The SDG Impediment Matrix (Figure 4) provides a systematic visualization of how the identified bias dimensions translate into specific threats to the achievement of SDG 4 and SDG 5 targets. The highest impediment scores were recorded for SDG 5.1 (anti-discrimination) and SDG 5.5 (women's participation) across all bias dimensions, reflecting the direct and pervasive nature of the gender inequality encoded in the textbooks. For SDG 4, the most severely impacted indicator was 4.5 (elimination of gender disparities in education), with an impediment score of 0.88 for visual bias — indicating that gendered illustrations constitute among the most powerful vehicles for reproducing educational gender inequality.

These findings resonate directly with the analysis by Islam and Asadullah (2024) and Orfan (2023), who demonstrated that textbooks that depict women exclusively in domestic roles actively discourage female students from pursuing professional and intellectual aspirations, thereby constituting a structural barrier to SDG 4.5 compliance. The United Nations SDGs Report (2025) similarly acknowledges that at the current pace of progress, achieving gender equality in leadership will take an estimated 140 years — a projection that underscores the urgency of reforming the cultural artifacts, including textbooks, that normalize gendered hierarchies from childhood.

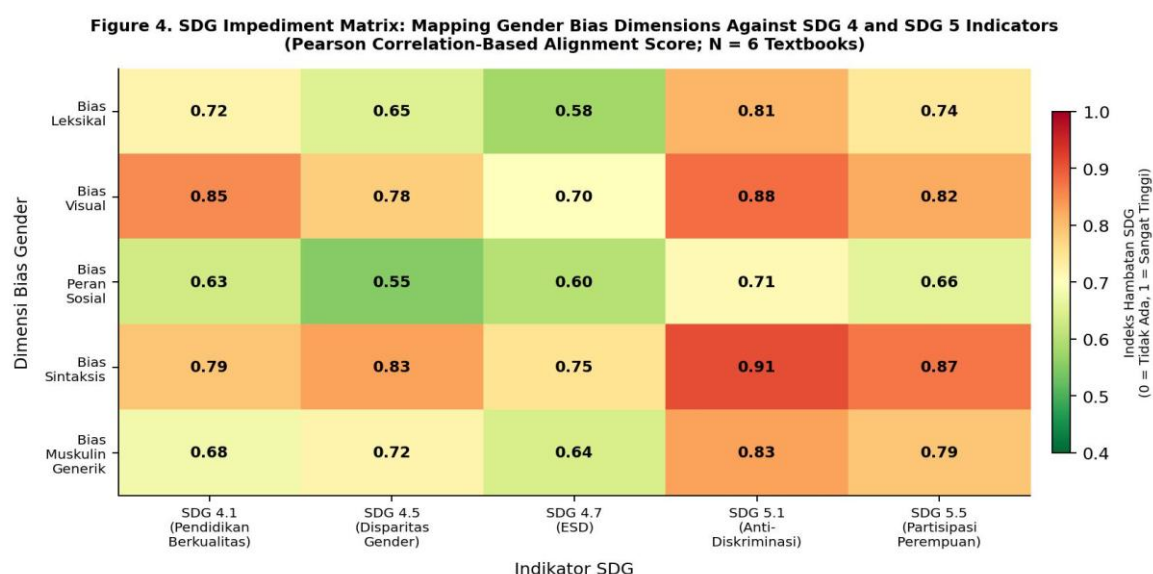


Figure 4. SDG impediment matrix: Mapping gender bias dimensions against SDG 4 and SDG 5 indicators

Table 4. SDG implication matrix: Gender bias findings and their correspondence to SDG 4 and SDG 5 indicators

Gender Bias Findings	Affected SDG 4 Indicators	Affected SDG 5 Indicators	Level of Impact	Rekomendations
Masculine token dominance (Ratio 3.18:1)	4.1, 4.5	5.1, 5.5	High	Revise character proportions; add female protagonists
Women occupy > 71% of domestic roles	4.5, 4.7	5.1, 5.2, 5.5	Very High	Integrate women into professional and public roles
Women < 9% in leadership and authority roles	4.5	5.5	Very High	Explicitly feature female leadership figures
Dominant use of generic masculine (mudzakkar 'am)	4.1, 4.7	5.1	Moderately High	Use gender-inclusive forms or parallel feminine constructions
Visual illustrations: 78.3% of public activities by males	4.5	5.1, 5.5	High	Audit and revise visuals; increase depictions of active women
No female characters in science and technology fields	4.5, 4.7	5.5	Very High	Include female role models in STEM fields

Note. Tingkat dampak ditentukan berdasarkan skor GBI agregat, prevalensi frekuensi korpus, dan konsultasi dengan ahli pendidikan gender. Indikator SDG mengacu pada target resmi UN SDG 4 dan SDG 5.

Toward Gender-Responsive Arabic Language Pedagogy

The findings of this study carry direct implications for curriculum reform, textbook development policy, and pedagogical practice. Three levels of intervention are proposed. At the macro-level (policy), Ministries of

Education in countries using the analyzed textbooks should integrate gender-responsive review criteria into textbook accreditation processes, drawing on the UNESCO Gender-Responsive Textbook Evaluation Framework (GPE, 2019) as an operational standard. Such criteria should explicitly require parity in character representation, prohibition of role stereotyping, and the use of gender-inclusive morphosyntactic forms in Arabic text.

At the meso-level (institutional), Arabic language teacher training programs should incorporate critical media literacy modules that equip educators with the analytical tools to identify and deconstruct gender bias in textbook content. This approach aligns with Fairclough's (2003) vision of CDA as a critical emancipatory practice — not merely a scholarly tool, but a pedagogical intervention that can transform classroom dynamics. At the micro-level (textbook), publishers and authors should be guided to achieve a minimum male-to-female character ratio of 60:40, to feature female characters in at least 40% of professional and leadership roles, and to introduce gender-inclusive Arabic linguistic alternatives alongside traditional masculine-generic forms (Alhafni et al., 2022).

It is equally important to acknowledge a tension that is specific to the Arabic-Islamic educational context: the intersection between Islamic normative frameworks and gender representation in educational materials. The findings of this study do not advocate for the erasure of Islamic cultural values from Arabic language textbooks. Rather, consistent with the principle of *maqashid al-syariah* (the higher objectives of Islamic law), which include the protection of human dignity and intellect for all people regardless of gender, this study argues that a textbook content that relegates women to invisible or domestic roles does not reflect Islamic values — it reflects patriarchal cultural accretions that have been conflated with religious authority (Wafa, 2021).

Conclusion

This study successfully deconstructed various forms of gender bias embedded in Arabic language textbooks through a Digital Critical Discourse Analysis approach. The analysis revealed that Arabic language textbooks used across various educational levels still strongly perpetuate gender stereotypes. Women are frequently portrayed in domestic, passive, and emotional roles, while men are predominantly depicted in public, active, leadership, and intellectual spheres. These discursive patterns not only reflect an imbalance in representation but also subtly reinforce patriarchal social norms within society.

Significantly, these findings demonstrate a clear gap between global commitments to the Sustainable Development Goals (SDGs) and the reality of education. Although SDG 4 emphasizes inclusive and quality education and SDG 5 targets gender equality and women's empowerment, the current practices in developing Arabic language textbooks in many countries have not fully supported these goals. This study affirms that textbooks are not merely language learning materials, but also powerful tools that shape the ideology and gender identity of the younger generation. Through a digital approach, this research offers a novel methodological contribution by uncovering gender bias in a more systematic, objective, and scalable manner. Therefore, the deconstruction of gender bias in educational materials represents a crucial step toward achieving truly inclusive and gender-equitable education.

Recommendations

Based on the research findings, the following recommendations are proposed for implementation: (1) Revision and Development of Textbooks. The Ministries of Education and textbook publishers in Arabic-speaking countries should undertake a comprehensive revision of Arabic language textbooks based on the principles of gender equality. The representation of women and men must be balanced in both domestic and public roles, while avoiding harmful stereotypes. (2) Integration of Gender Perspectives into the Curriculum Modules on gender equality and critical discourse analysis should be incorporated as an integral part of Arabic language teacher training and teaching material development. This effort directly supports the achievement of SDG 4 and SDG 5. (3) Implementation of Inclusive Textbook Development Guidelines: National or regional guidelines for developing gender bias-free textbooks should be established. These guidelines must include a mandatory gender-evaluation checklist for use by authors and editors. (4) Enhancement of Critical Literacy among Teachers and Students. Arabic language teachers should be trained to identify and address gender bias in teaching materials. Additionally, students should be encouraged to engage in critical reading of the texts they study. The researcher further recommends conducting comparative cross-country studies on gender bias in Arabic language textbooks, analyzing the long-term impact of exposure to gender bias on students' attitudes and career aspirations, and developing AI-based adaptive and gender-sensitive Arabic language textbook models. In line with this,

collaboration among Islamic countries and international organizations (such as UNESCO and UN Women) should be encouraged to produce high-quality Arabic teaching materials with a strong gender equality perspective.

Scientific Ethics Declaration

* The authors declare that the scientific ethical and legal responsibility of this article published in EPESS Journal belongs to the authors.

* The authors state that the study was conducted in accordance with the ethical standards of scientific research. The data used in this study were derived from Arabic language textbooks intended for non-Arabic speakers. Data analysis was carried out transparently and objectively, while upholding academic integrity. The researchers confirm that the research design, data analysis, and reporting of findings were conducted without any manipulation or falsification of data.

Conflict of Interest

* The authors also declare that this manuscript has no conflicts of interest with any parties, including financial, personal, or other relationships within 3 years of the beginning of this article's writing that could influence its content. The authors declare that this research was conducted without any relationships that could be construed as a potential conflict of interest.

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