

Gender equality in Indonesian education: A systematic review of trends, challenges, and policy implications

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Abstract

Gender equality in education remains a critical yet insufficiently synthesized issue in Indonesia despite growing scholarly attention. This study provides a systematic synthesis of recent research to examine research trends, structural challenges, and policy implications related to gender equality in Indonesian education. A systematic literature review, guided by the PRISMA framework, was conducted using the Scopus database, resulting in the analysis of 58 peer-reviewed articles published between 2020 and March 2026. The findings reveal a growing academic interest in the topic, although research production remains concentrated in several major universities in Indonesia. The literature highlights persistent barriers, including patriarchal sociocultural norms, socioeconomic inequalities, gender bias in educational practices, and institutional limitations in implementing gender-responsive policies. At the same time, education emerges as a key pathway for strengthening women's empowerment, social mobility, and economic participation. Overall, this study provides a comprehensive synthesis of recent evidence and offers insights for developing more inclusive and gender-responsive educational policies in Indonesia.

L'uguaglianza di genere nell'istruzione rimane una questione cruciale ma ancora insufficientemente sintetizzata in Indonesia, nonostante la crescente attenzione accademica ricevuta negli ultimi anni. Questo studio offre una sintesi sistematica delle ricerche recenti per esaminare le tendenze della ricerca, le sfide strutturali e le implicazioni politiche relative all'uguaglianza di genere nel sistema educativo indonesiano. Una revisione sistematica della letteratura, guidata dal framework PRISMA, è stata condotta utilizzando il database Scopus, portando all'analisi di 58 articoli sottoposti a *peer review* pubblicati tra il 2020 e marzo 2026. I risultati evidenziano un crescente interesse accademico, sebbene la produzione scientifica rimanga concentrata in alcune grandi università indonesiane. La letteratura evidenzia barriere persistenti, tra cui norme socioculturali patriarcali, disuguaglianze socioeconomiche, pregiudizi di genere nelle pratiche educative e limitazioni istituzionali nell'attuazione di politiche sensibili alla dimensione di genere. Allo stesso tempo, l'istruzione emerge come strumento fondamentale per rafforzare emancipazione, mobilità sociale e partecipazione economica.

Keywords: gender equality; gender-responsive education; women's empowerment; educational inequality; systematic review

Parole chiave: uguaglianza di genere; educazione sensibile al genere; empowerment femminile; disuguaglianza educativa; revisione sistematica

1. Introduction

Gender equality in education continues to be recognized as an important global priority because of its close relationship with human rights, social justice, and sustainable development. Educational systems that promote gender equality not only expand access to learning opportunities but also help reduce structural inequalities and encourage inclusive social participation (Smith & Sinkford, 2022; Yadav, 2025). Over the past several decades, international organizations and policymakers have increasingly emphasized education as a key strategy for advancing gender justice and improving long-term development outcomes. In this regard, gender-responsive education plays an essential role in strengthening individual capabilities, supporting inclusive social engagement, and improving economic prospects for women and girls (Volodzkiene, 2025).

Despite substantial global progress in expanding educational access for girls, gender equality within educational systems remains uneven in many countries. In many contexts, increased school enrollment has not necessarily resulted in equal learning experiences, comparable educational quality, or similar long-term educational outcomes. Research shows that girls may still face unequal treatment in classrooms, limited participation in leadership and decision-making roles, and persistent gender stereotypes embedded within educational practices (Unterhalter et al., 2022). These patterns suggest that advancing gender equality in education requires more than expanding access to schooling; it also requires addressing deeper structural and socio-cultural factors that shape educational opportunities (Durrani & Halai, 2018; Rizwan, 2024).

In Indonesia, significant progress has been made in improving access to education for both boys and girls. Government initiatives have contributed to reducing gender gaps in basic education and increasing national enrollment rates. Nevertheless, gender-related disparities persist in more subtle and structural forms. Existing studies indicate that inequalities appear in the quality of learning environments, participation patterns across academic fields, and the unequal distribution of educational responsibilities within households. Cultural norms and social expectations continue to influence educational aspirations and opportunities, particularly for girls and young women (DeJaeghere, 2018; Gambaro et al., 2023). These patterns indicate that gender inequality in education is shaped by complex interactions between institutional structures, socio-cultural norms, and economic conditions (Iqbal et al., 2022; Kim, 2022).

Among these factors, patriarchal cultural norms remain one of the most influential forces shaping gender relations within educational contexts. In communities where patriarchal values are deeply embedded in social and cultural structures, girls' education may be considered less important than traditional domestic responsibilities. Such perceptions can influence family decisions regarding schooling and long-term educational investment. Social expectations regarding gender roles may also limit girls' access to higher levels of education and reduce opportunities for leadership and professional advancement (Beatty, 2025; Smith & Sinkford, 2022). These dynamics demonstrate that gender inequality in education cannot be understood solely as an institutional issue but must also be examined within broader socio-cultural contexts.

In addition to cultural influences, socioeconomic disparities further intensify gender inequalities in educational access and attainment. Girls from economically disadvantaged households often face greater barriers to continuing their education due to financial constraints, domestic labor expectations, or limited access to educational resources. Similarly, girls living in rural or remote areas frequently encounter challenges related to inadequate educational infrastructure, shortages of qualified teachers, and limited supportive learning environments (Hanaway et al., 2019; Mphosi & Chauke, 2025). These structural conditions suggest that policies focusing solely on increasing school participation may be insufficient unless accompanied by broader efforts to address social and economic inequalities that influence educational opportunities.

Although scholarly attention to gender and education in Indonesia has increased in recent years, the existing body of research remains fragmented and dispersed across different conceptual and disciplinary perspectives. Some studies emphasize cultural norms and gender roles (Ismail et al., 2024), while others focus on socioeconomic inequality (Alistina et al., 2025; Ang & Lai, 2023), educational policy (Shah, 2020), or women's empowerment (Ang & Lai, 2023; Fadillah, 2023). Although this diversity provides valuable insights, it also makes it difficult to develop a comprehensive understanding of the current landscape of gender equality in Indonesian education.

Moreover, systematic attempts to synthesize recent research findings remain limited. As Indonesia continues to implement educational reforms and gender mainstreaming initiatives, the absence of comprehensive evidence-based syntheses creates challenges for policymakers and educators seeking to design effective interventions. Without a structured overview of existing studies, it is difficult to identify emerging research trends, persistent barriers, and the broader implications of gender equality initiatives within the education sector (Abbas & Smith, 2023; Haque, 2024; Smith & Sinkford, 2022).

Addressing this limitation requires a structured review of the literature that integrates diverse research findings into a coherent analytical framework. A systematic synthesis of recent studies can provide clearer insights into how gender equality in Indonesian education has been examined (Aulia et al., 2024), what structural challenges remain prominent, and how educational policies can contribute to strengthening women's empowerment.

Therefore, this study employs a Systematic Literature Review (SLR) to synthesize recent scholarly research on gender equality in Indonesian education. By examining contemporary research trends, identifying key structural barriers to achieving gender-equitable education, and exploring the broader implications of gender equality initiatives for women's empowerment in both education and the labor market, this study provides a comprehensive evidence-based perspective on gender inequality in Indonesian education. Through this synthesis, the research aims to deepen understanding of the socio-cultural, economic, and institutional factors shaping gender inequality while offering insights to support the development of more inclusive and gender-responsive educational policies in Indonesia.

2. Material and methods

2.1 Research design

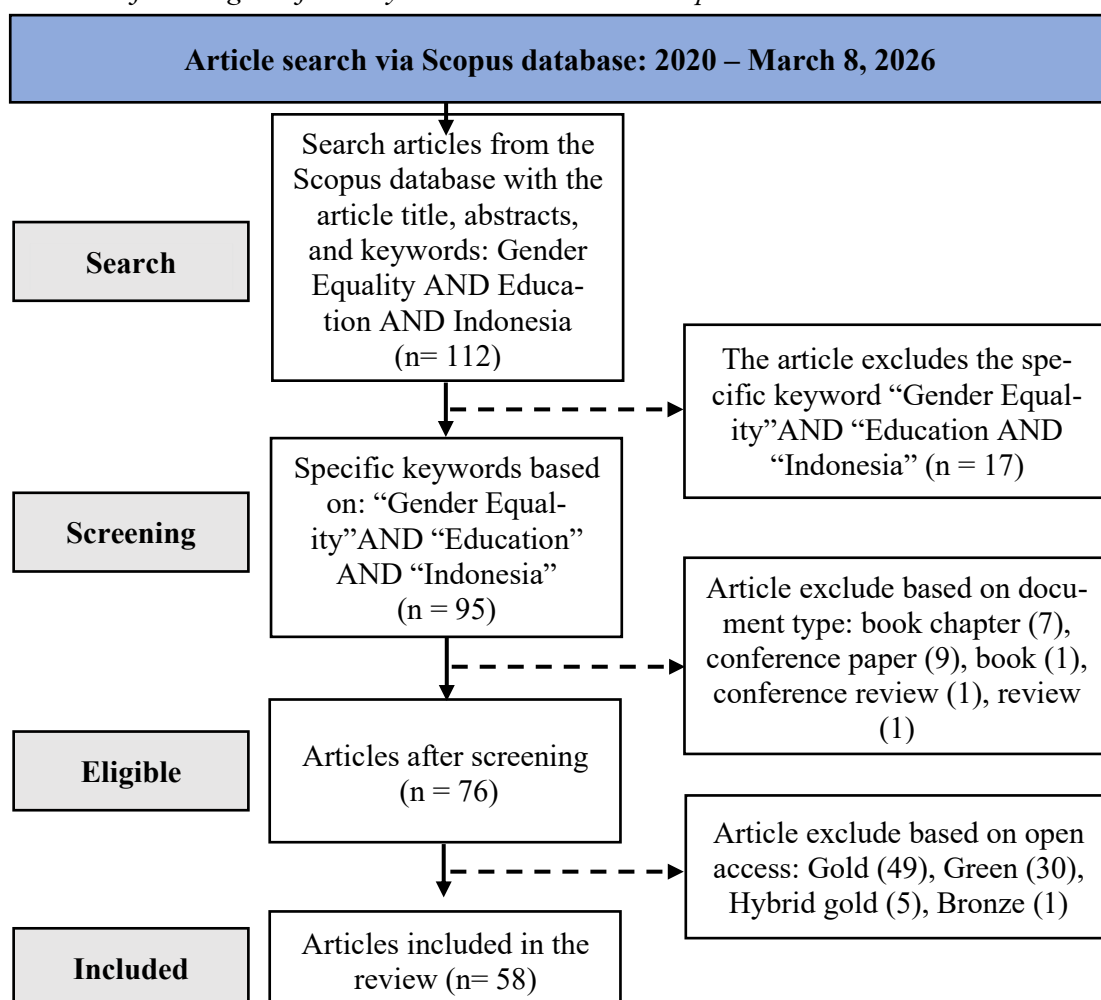
This study employs a qualitative systematic literature review (SLR) combined with bibliometric analysis (Alsadi et al., 2025; Marzi et al., 2025; Rojas-Sánchez et al., 2023), to examine the development of research on gender equality within the Indonesian education system. This integrated approach enables a systematic synthesis of existing scholarship while also mapping broader patterns in the development of research in this field (Soaita et al., 2020). Although the study follows established procedures commonly used in systematic literature reviews, its analytical orientation prioritizes conceptual interpretation rather than statistical meta-analysis. Accordingly, the study seeks to synthesize and interpret findings from previously published research in order to identify major research trends, key structural challenges, and policy implications related to gender equality in Indonesian education.

Methodologically, the study combines two complementary analytical approaches: qualitative thematic synthesis and bibliometric analysis. Bibliometric analysis is applied at the structural level to map the distribution of publications, institutional contributions, and keyword co-occurrence networks within the literature (Hassan & Duarte, 2024; Klarin, 2024). This structural mapping provides an overview of how scholarly attention to gender equality in education has evolved over time. At the substantive level, thematic synthesis is employed to identify dominant themes, conceptual patterns, and recurring challenges highlighted in the literature. Through this dual

analytical framework, the study aims to generate both a macro-level understanding of research trends and a deeper conceptual interpretation of the issues shaping gender equality discourse in Indonesian education (Badrolhisam & Jamil, 2025; Mugion et al., 2026).

The literature review process follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological transparency and research replicability. The adoption of the PRISMA framework enables each stage of article identification, screening, eligibility assessment, and inclusion to be systematically documented (Agrawal et al., 2024). This procedure also helps minimize potential selection bias during the literature screening process (Rethlefsen et al., 2021). The stages of article selection are illustrated in the PRISMA flow diagram presented in Figure 1.

Figure 1
PRISMA flow diagram for the systematic literature review process



2.2 Data sources and search strategy

The primary data source for this study was the Scopus database, widely recognized as one of the largest international bibliographic indexes covering peer-reviewed scholarly publications across various disciplines (Baas et al., 2020; Pranckuté, 2021; Singh et al., 2021). Scopus was selected because of its extensive journal coverage and

consistent indexing standards, making it a commonly used source for systematic literature reviews in the fields of social sciences and education (Singh et al., 2021; Wardat & AlAli, 2025).

The literature search was conducted using the Advanced Search feature in Scopus, with the query limited to the title, abstract, and keyword fields (TITLE-ABS-KEY). Restricting the search to these sections ensured that the retrieved articles explicitly addressed gender equality within the context of education in Indonesia as a central focus of the study.

The search strategy employed Boolean operators to ensure conceptual alignment between the main variables examined in this research. The search query used was:

TITLE-ABS-KEY ("gender equality")

AND TITLE-ABS-KEY ("education")

AND TITLE-ABS-KEY ("Indonesia")

The use of the AND operator ensured that all retrieved articles simultaneously contained the three key concepts within the title, abstract, or keywords. This strategy was intended to maintain thematic consistency while preventing the inclusion of studies that discuss gender issues or education more broadly without a direct connection to the Indonesian educational context.

To capture recent developments in the field, the literature search was restricted to publications published between 2020 and March 8, 2026, which corresponds to the date on which the search was conducted in the Scopus database.

2.3 Article selection process

The article selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which consists of four main stages: identification, screening, eligibility assessment, and final inclusion (O’Dea et al., 2021; Page et al., 2021).

During the identification stage, the initial search in the Scopus database yielded 112 articles containing the keywords “gender equality,” “education,” and “Indonesia” within the title, abstract, or keywords.

The next stage involved screening, which consisted of an initial evaluation of thematic relevance and keyword alignment with the focus of the study. Articles that did not explicitly address the intersection of gender equality and education in Indonesia were removed from the dataset. After this screening process, 95 articles met the preliminary relevance criteria, while 17 articles were excluded due to insufficient relevance to the research focus. The eligibility stage involved assessing the types of publications identified in the dataset. Documents categorized as book chapters (n = 7), conference papers (n = 9), books (n = 1), conference reviews (n = 1), and review articles (n = 1) were excluded to maintain analytical consistency by focusing exclusively on peer-reviewed journal articles. Following this evaluation, 76 articles met the eligibility criteria for further analysis.

The final stage involved inclusion, which consisted of verifying article accessibility and ensuring the substantive relevance of each study. Articles that did not meet the accessibility requirements established in this study were excluded. After this final evaluation, 58 articles met all inclusion criteria and were used as the primary dataset for analysis.

2.4 Inclusion and exclusion criteria

To ensure thematic consistency and methodological rigor, clear inclusion and exclusion criteria were established at the outset of the study (Elsman et al., 2022). Articles included in the analysis were required to meet the following criteria:

- Published as peer-reviewed journal articles indexed in the Scopus database
- Written in English to ensure analytical consistency

- Published between 2020 and 2026
- Explicitly addressing gender equality within the context of education in Indonesia
- Available in full-text format to allow comprehensive analysis

Conversely, documents categorized as books, book chapters, conference proceedings, conference reviews, and review articles were excluded from the analysis. Articles that did not directly address gender equality in the Indonesian education sector were also removed from the dataset. The application of these criteria was intended to maintain the focus of the study and enhance methodological consistency throughout the literature review process.

2.5 Inclusion and exclusion criteria

Following the completion of the article selection process, the next stage involved systematically extracting data from all articles included in the research dataset. The extracted information included the authors and year of publication, article title, research objectives, methodological approaches employed, key findings, identified implementation challenges, and the policy implications reported in each study. These data were used to address Research Questions 2 and 3 (RQ2 and RQ3), which focus on identifying the key challenges in achieving gender equality in education and examining the policy implications of various gender equality initiatives.

Meanwhile, Research Question 1 (RQ1) was addressed through bibliometric data obtained from the Scopus database. This analysis was used to examine the structural characteristics of the literature, including publication trends, authorship patterns, institutional affiliations, and keyword relationships in studies related to gender equality in education in Indonesia.

To comprehensively address the research questions, this study combined qualitative thematic analysis with bibliometric exploration (Khan et al., 2025; Marzi et al., 2025; Verma et al., 2024). The thematic analysis involved an in-depth reading of each article to identify recurring conceptual patterns and the main challenges affecting the achievement of gender equality in education. In addition, bibliometric exploration was conducted using VOSviewer software to visualize keyword co-occurrence patterns. These visualizations served as an exploratory tool to support the thematic interpretation of the literature (Kirby, 2023).

3. Results

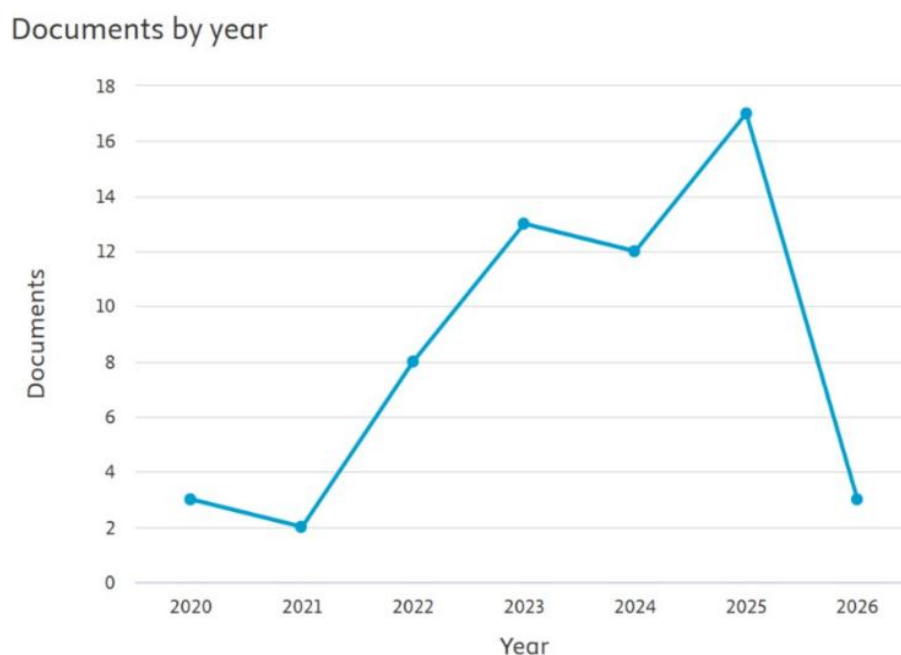
The findings of this study are based on 58 peer-reviewed articles addressing gender equality in education in Indonesia retrieved from the Scopus database. The initial search identified 112 articles using the keywords “gender equality,” “education,” and “Indonesia.” After applying several stages of selection based on predefined inclusion and exclusion criteria—including thematic relevance, document type, and article accessibility—58 articles were deemed eligible for further analysis.

This section presents an overview of the main characteristics of the selected literature, including annual publication trends, the distribution of country contributions, institutional affiliations, and patterns of keyword co-occurrence. These descriptive results provide an initial structural overview of how research on gender equality in Indonesian education has developed in recent academic literature.

Through this analysis, the study seeks to identify broader patterns in scholarly attention to gender equality in education, including the growth of research output, the geographic distribution of scholarly contributions, and the dominant conceptual themes emerging from the literature. These findings provide insights into the evolving research landscape and help contextualize the thematic analysis presented in the subsequent sections.

Figure 2

Contribution of articles by year (Source: Scopus Database).



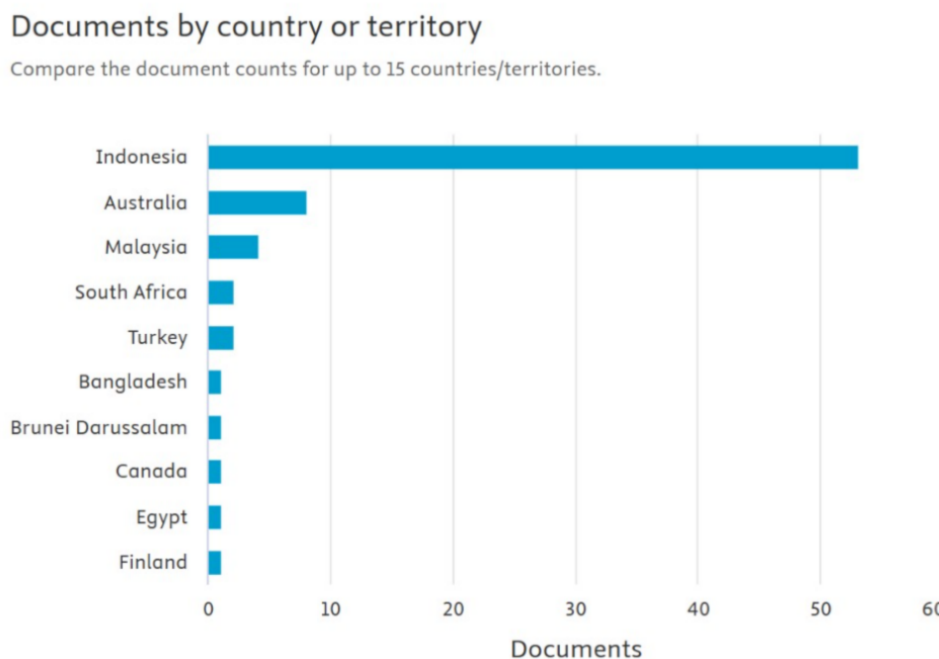
The annual publication distribution presented in Figure 2 indicates that scholarly attention to gender equality in education in Indonesia has gradually increased between 2020 and March 8, 2026, although the growth pattern is not entirely linear. During the early phase of the observation period, the number of publications remained relatively limited. In 2020, only three articles addressing the topic were published, followed by a slight decline to two articles in 2021. This relatively low output may reflect the early stage of research development, when gender equality in education had not yet emerged as a prominent focus in the academic literature.

A noticeable increase began in 2022, when the number of publications rose to eight articles, suggesting growing scholarly interest in the topic. This upward trend continued in 2023, with 13 publications, and remained relatively stable in 2024, with 12 articles published. The highest level of research productivity occurred in 2025, when 17 articles were published, indicating a substantial expansion of academic engagement with gender equality issues in the Indonesian education sector.

By contrast, three publications were recorded for 2026 as of March 8, the date on which the literature search was conducted. Because the year had not yet concluded at the time of data collection, this figure does not represent the total publication output for 2026. Overall, the observed trend suggests that research on gender equality in Indonesian education has expanded considerably since 2022, reflecting the growing prominence of this issue within contemporary educational research and policy discussions.

Figure 3

Contribution of articles by country (Source: Scopus Database).



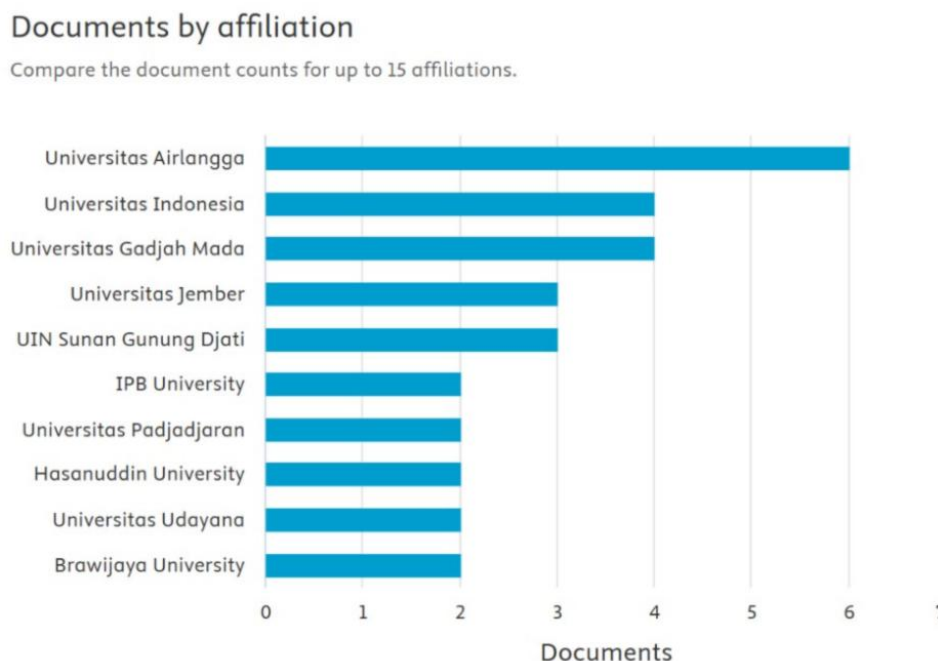
The country or regional distribution of publications presented in Figure 3 shows that research on gender equality in education in Indonesia is overwhelmingly dominated by contributions from Indonesian scholars. Of the 58 articles analyzed, 53 publications were authored by researchers affiliated with institutions in Indonesia. This dominance suggests that the study of gender equality in Indonesian education remains strongly shaped by national social, cultural, and policy contexts, making it a topic frequently examined by domestic researchers who possess direct empirical access and contextual familiarity with the dynamics of the Indonesian education system. Beyond Indonesia, research contributions also originate from several other countries, although in relatively limited numbers. Australia appears as the most prominent international contributor, with eight publications, followed by Malaysia with four publications. Other countries—including South Africa and Türkiye—each contributed two publications, while Bangladesh, Brunei Darussalam, Canada, Egypt, and Finland each contributed one publication.

This distribution pattern indicates that, although research on gender equality in Indonesian education has begun to attract attention from the international academic community, the involvement of foreign scholars remains relatively limited. One possible explanation is the context-specific nature of the topic, which is closely linked to local social conditions and national education policies. As a result, much of the existing scholarship continues to be produced by Indonesian academics who have direct access to relevant empirical data and institutional contexts.

At the same time, the presence of contributions from multiple countries suggests that gender equality in Indonesian education is gradually entering broader global academic discussions. Cross-national contributions—particularly from scholars in the Asia-Pacific region and several European countries—indicate emerging opportunities for expanding international research networks in the fields of gender studies and education. This trend also reflects the growing recognition that gender equality in education should not be viewed solely as a national concern, but rather as part of a broader global agenda related to inclusive education and the achievement of the Sustainable Development Goals (SDGs).

Figure 4

Article contributions by institutional affiliation (Source: Scopus Database).



The distribution of publications based on institutional affiliations, as illustrated in Figure 4, indicates that research production on gender equality in education in Indonesia is concentrated in a number of specific universities. This pattern suggests that the development of scholarship in this field is strongly influenced by the research capacity, institutional priorities, and academic networks associated with these institutions.

Based on the analyzed data, Universitas Airlangga emerges as the institution with the highest publication output, contributing six articles to the dataset. This leading position indicates that the university plays a significant role in advancing research on gender equality in education. The relatively high contribution may also reflect the presence of active research groups or institutional research agendas that focus on gender-related issues within the broader context of Indonesian social and educational studies.

Following Universitas Airlangga, Universitas Indonesia and Universitas Gadjah Mada each contributed four publications. Both universities are widely recognized as leading research institutions in Indonesia. Their involvement in gender equality research suggests that this topic has become part of broader scholarly discussions in the fields of social sciences and education at major national universities.

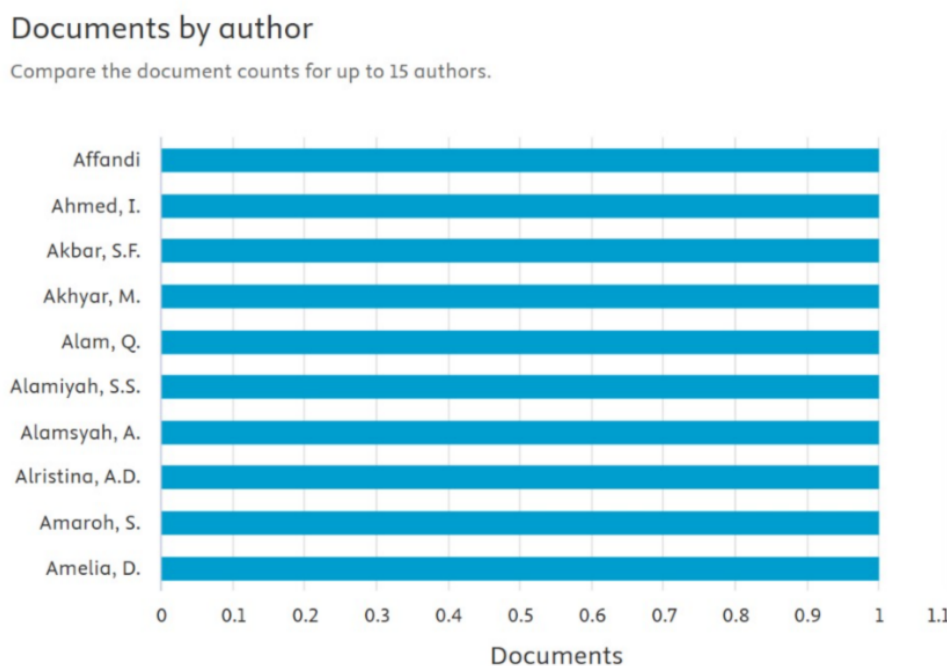
The next level of contribution comes from Universitas Jember and UIN Sunan Gunung Djati, each producing three publications. The inclusion of both public universities and Islamic higher education institutions in this group highlights that gender equality in education is examined across diverse academic contexts, including both general higher education environments and institutions with a religious academic orientation.

Several other institutions—including IPB University, Universitas Padjadjaran, Hasanuddin University, Universitas Udayana, and Universitas Brawijaya—each contributed two publications. Although their individual contributions are smaller, the presence of these institutions indicates that research on gender equality in education is geographically distributed across multiple regions of Indonesia, rather than being concentrated in a single academic hub.

Overall, this distribution pattern suggests that research on gender equality in Indonesian education remains relatively concentrated among several major universities, particularly large public institutions with strong research infrastructures. At the same time, this pattern highlights opportunities for broader institutional participation in advancing scholarship on gender equality in education. Expanding research engagement across a wider range of institutions could help generate more diverse and regionally representative perspectives on gender issues within the Indonesian educational landscape.

Figure 5

Article contributions by author (Source: Scopus Database).



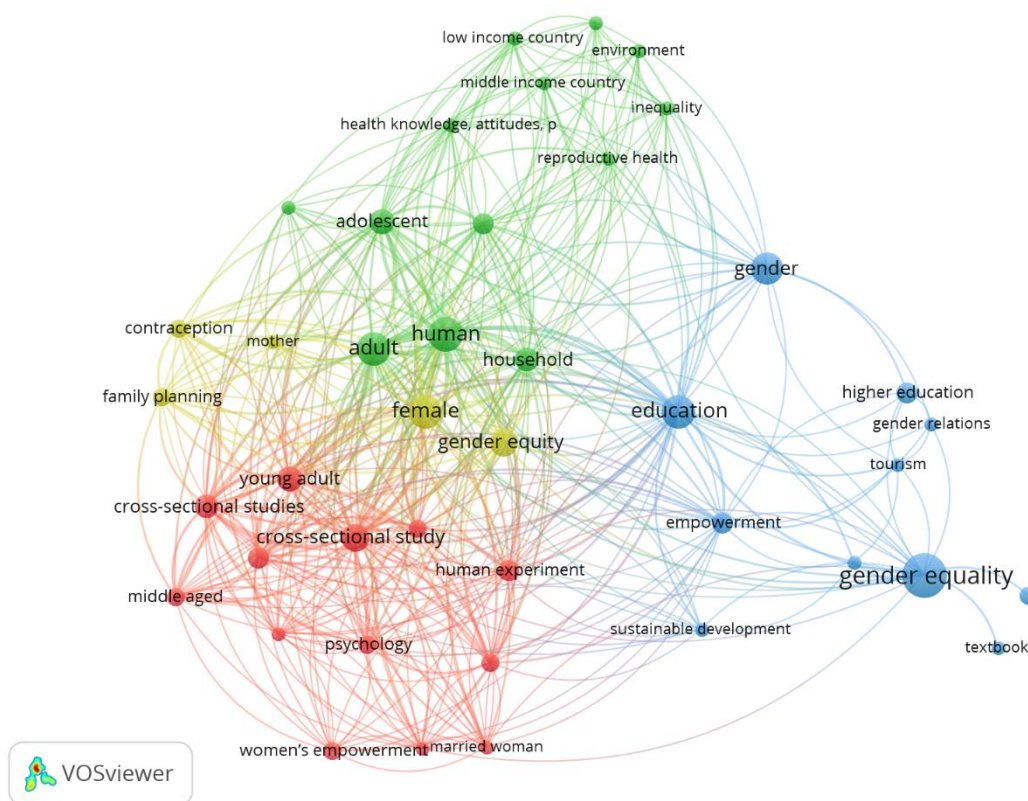
The distribution of publications by author, as illustrated in Figure 5, indicates that research on gender equality in education in Indonesia is not dominated by a single scholar or a small group of researchers. Within the analyzed dataset, most authors contributed to only one publication, as reflected in several representative names such as Affandi, Ahmed I., Akbar S. F., Akhyar M., Alam Q., Alamiyah S. S., Alamsyah A., Alristina A. D., Amaroh S., and Amelia D.

This pattern suggests that scholarship in this field remains widely dispersed among a diverse group of researchers, rather than concentrated within a limited number of specialized research teams. Such a distribution indicates that studies on gender equality in Indonesian education draw contributions from various academic disciplines and institutional backgrounds, reflecting the inherently interdisciplinary nature of the topic.

Furthermore, the relatively even distribution of author contributions may indicate that the field is still in a developing stage, where research activity is expanding but has not yet formed a highly consolidated community of leading scholars. This situation highlights significant opportunities for future collaboration and the development of stronger research networks, which could contribute to deepening theoretical perspectives and strengthening empirical research on gender equality within the Indonesian education system.

Figure 6

Co-occurrence framework and representation of key terms



The keyword network visualization shown in Figure 6 illustrates the conceptual structure of research on gender equality in education in Indonesia, organized into several interconnected thematic clusters. Larger nodes—such as gender equality, education, gender, female, and adult—indicate both a high frequency of occurrence and strong relational connections within the literature network. These terms therefore function as central concepts linking multiple research themes across the field.

The blue cluster is primarily centered on the themes of gender equality and education, which are closely connected with topics such as higher education, gender relations, empowerment, and sustainable development. This pattern suggests that a substantial portion of the literature conceptualizes education as a strategic mechanism for advancing gender equality and women’s empowerment. Within this perspective, education is viewed not only as a means of expanding access to knowledge but also as an instrument for promoting broader social transformation.

The green cluster highlights the intersection between gender equality and social and public health dimensions, incorporating keywords such as adolescent, reproductive health, inequality, and household. This cluster indicates that discussions of gender equality in the Indonesian context frequently extend beyond educational institutions to include broader social and demographic factors, particularly issues related to reproductive health and household dynamics.

The red cluster reflects research focusing on methodological approaches and behavioral studies, represented by keywords such as cross-sectional study, psychology, young adult, and women’s empowerment. The presence of these terms suggests that many studies in this field employ quantitative research designs to examine gender dynamics within social and educational contexts.

Meanwhile, the yellow cluster connects themes related to family structures and reproductive decision-making, including family planning, contraception, mother, and gender equity. This cluster highlights the role of family-level dynamics in shaping gender equality outcomes, particularly in relation to reproductive health and women's autonomy within households.

Overall, the keyword network indicates that research on gender equality in Indonesian education has developed within a multidisciplinary scholarly landscape, where education intersects with reproductive health, socioeconomic conditions, and women's empowerment. These interconnected themes reflect the broader positioning of gender equality within the global sustainable development agenda, particularly in relation to inclusive education and gender-responsive social policies.

3.1 Key challenges in achieving gender equality in Indonesian education (RQ2)

The synthesis of the reviewed literature reveals that efforts to achieve gender equality within the Indonesian education system continue to face multiple and interrelated challenges. These challenges extend beyond issues of access to formal education and are shaped by broader cultural norms, socioeconomic structures, institutional practices, and educational environments. Based on the thematic analysis of the selected studies, several recurring categories of challenges consistently emerge in the literature.

3.1.1 Persistence of patriarchal norms in social structures

One of the most prominent barriers identified in the literature is the continued influence of patriarchal norms shaping gender relations in Indonesian society. In many communities—particularly in rural areas and within certain religious contexts—women are frequently associated with domestic responsibilities, while men are positioned as primary decision-makers within both family and public spheres.

These gendered social expectations influence how families and communities perceive the value of education for girls. Several studies indicate that women often encounter social constraints when pursuing higher education or participating in leadership roles within academic and social institutions (Asrohah & Idayatni, 2020; Firdaus et al., 2024; Ismail et al., 2024; Pickel-Chevalier & Yanthy, 2023; Purba et al., 2025; Rahmania et al., 2025; Tristiana et al., 2025; Yulianti et al., 2023). These cultural dynamics demonstrate that achieving gender equality in education requires not only institutional reform but also broader transformations in social norms and gender ideologies.

3.1.2 Socioeconomic inequality and unequal resource distribution

Socioeconomic disparities also represent a significant factor influencing educational opportunities for women (Aristina et al., 2025). Households facing economic constraints frequently prioritize the education of male children, particularly when educational costs require families to allocate limited resources strategically.

Poverty, informal employment, and limited labor market opportunities further intensify the vulnerability of girls and women in accessing sustained educational opportunities (Affandi et al., 2025; Kuswanto et al., 2024; Tanzihah et al., 2023). Within this context, gender disparities in education are closely linked to broader economic structures shaping the distribution of educational resources and opportunities.

3.1.3 Gender relations within the family and decision-making autonomy

Several studies emphasize the importance of intra-household gender relations in shaping women's educational trajectories. Women's autonomy in decision-making—particularly regarding reproductive health, contraceptive use, and family planning—is often constrained by male dominance within household structures.

These dynamics influence key life decisions, including early marriage, domestic role expectations, and the continuation of women's education (Ang & Lai, 2023; Baroya et al., 2024; Firdaus et al., 2024; Rahayu et al., 2025; Tanziha et al., 2023; Widyastuti et al., 2023; Yulianti et al., 2023). Consequently, unequal gender relations within families can significantly limit women's access to educational opportunities and long-term academic participation.

3.1.4 Gender bias in curriculum and learning materials

In addition to structural social and economic factors, the literature highlights the persistence of gender bias in educational curricula and teaching materials. Analyses of textbooks and instructional resources reveal that gender representation often remains imbalanced. Women are frequently depicted in domestic roles, while men are more commonly portrayed in professional, leadership, and public roles (Muafiah et al., 2025; Purnomo et al., 2025; Ramadan & Hasibuan, 2022; Suharto et al., 2025; Tesar & Pangastuti, 2024; Truna et al., 2022). Such representations may shape students' perceptions of gender roles and influence both academic aspirations and professional expectations, potentially reinforcing gender stereotypes within educational environments.

3.1.5 Limited institutional capacity for gender-responsive education

The literature also points to limitations in the institutional capacity of educational institutions to implement gender-responsive educational practices. Many teachers and educational practitioners have not received adequate training on integrating gender perspectives into classroom teaching and curriculum development (Muafiah et al., 2025; Sulolipu et al., 2022; Yusuf et al., 2023). Furthermore, constraints related to educational resources and institutional policy support affect schools' ability to implement inclusive educational practices (Pickel-Chevalier & Yanthy, 2023; Soeters et al., 2021). These limitations reveal a gap between policy aspirations for gender equality and the practical realities of classroom implementation.

3.1.6 Educational environments that are not fully safe and inclusive

The quality of the learning environment also plays an important role in sustaining girls' educational participation. Inadequate sanitation facilities, social stigma surrounding reproductive health, and risks of gender-based violence in educational settings can reduce students' sense of safety and comfort. These factors significantly affect girls' school participation and educational continuity (Affandi et al., 2025; Rahmania et al., 2025; Rossouw & Ross, 2021; Royo et al., 2024; Tamam & Corebima, 2023; Wiyatmi et al., 2023). Consequently, achieving gender equality in education requires not only policy interventions but also the creation of safe and supportive learning environments.

3.1.7 The gap between policy commitment and policy implementation

A final challenge identified in the literature concerns the disconnect between policy commitments and their implementation in practice. The Indonesian government has introduced several regulatory frameworks aimed at promoting gender equality in education. For example, Presidential Instruction No. 9 of 2000 on Gender Mainstreaming in National Development emphasizes the integration of gender perspectives across development sectors, including education. Similarly, Law No. 20 of 2003 on the National Education System affirms the right of all citizens to access education without discrimination. At the sectoral level, gender mainstreaming in education has also been reinforced through Minister of Education Regulation No. 84 of 2008, which provides guidelines for integrating gender perspectives into education planning, implementation, and evaluation.

Despite these regulatory commitments, numerous studies indicate that policy implementation at the institutional level remains inconsistent. Limited gender awareness among educational administrators, insufficient institutional capacity to translate policy into practice, and weak inter-agency coordination often hinder the effective implementation of gender-responsive policies (Mursidah et al., 2025; Purba et al., 2025; Rahmania et al., 2025; Sart et al., 2026). In addition, the absence of robust monitoring and evaluation mechanisms means that gender mainstreaming efforts are not always systematically assessed.

These findings suggest that the existence of policy frameworks alone is insufficient to ensure gender-responsive education. Effective implementation requires strengthened educational governance, including institutional capacity-building, integration of gender perspectives into curricula and educational management, and the development of more accountable policy evaluation systems.

3.2 Policy implications of gender equality in Indonesian education for women's empowerment (RQ3)

The synthesis of the reviewed literature indicates that gender equality in education has significant implications for women's empowerment at individual, institutional, and structural levels. Education functions not only as a means of enhancing academic capacity but also as an important pathway for strengthening women's participation in decision-making, social engagement, and economic activities. Accordingly, the analyzed studies highlight several key policy implications for strengthening gender equality within the Indonesian education system.

The first implication concerns the systematic integration of gender perspectives into national and institutional education policies. Several studies emphasize that gender disparities in education are not solely caused by unequal access (Firdaus et al., 2024), but are also shaped by policy structures (Athoillah et al., 2024; White et al., 2024) and educational practices (Rossouw & Ross, 2021) that remain insufficiently responsive to women's needs. Integrating gender perspectives into educational planning, curriculum development, and policy evaluation can help reduce persistent gender bias within the education system (Pratama et al., 2024; Purnomo et al., 2025). This approach highlights the importance of recognizing gender equality as a core principle of educational governance, rather than treating it merely as a symbolic policy initiative.

The second implication relates to the transformation of curricula and learning materials to ensure gender inclusivity. Several studies suggest that teaching materials containing gender stereotypes may reinforce traditional perceptions of women's and men's roles in society (Asrohah & Idayatni, 2020; Purnomo et al., 2025). Curriculum reforms that promote balanced gender representation and introduce gender equality perspectives from early levels of education can therefore play an important role in fostering gender awareness among students (Sanah et al., 2025; Truna et al., 2022). These reforms should also be accompanied by pedagogical approaches that encourage greater participation of women in various academic fields, including science, technology, and leadership.

The third implication concerns the strengthening of institutional capacity within educational institutions and among teaching professionals. The literature consistently indicates that the success of gender equality policies depends largely on the ability of educational institutions to translate policy commitments into classroom practices. Teacher training on gender-sensitive pedagogies, the development of inclusive learning resources, and the establishment of gender-responsive evaluation mechanisms are therefore essential steps for ensuring the effective implementation of gender equality principles in education (Muafiah et al., 2025; Sulolipu et al., 2022; Yusuf et al., 2023). Without adequate institutional capacity, gender equality policies risk remaining at the level of regulation without producing meaningful change in educational practice.

The fourth implication highlights the relationship between women's education and economic empowerment. Several studies demonstrate that higher levels of education among women are positively associated with increased employment opportunities, greater economic independence, and stronger contributions to household and community well-being (Affandi et al., 2025; Purba et al., 2025). Consequently, education policies aimed at promoting gender equality should be integrated with broader policies in employment, entrepreneurship, and social protection. Such cross-sectoral integration is important to ensure that improved access to education translates into real economic opportunities for women.

The fifth implication emphasizes the importance of adopting an intersectional approach in education policy design. The literature highlights that women's educational experiences are not uniform but are shaped by various factors, including socioeconomic status, geographic location, cultural background, and other social identities (Rahayu et al., 2025; Rantung, 2024). Effective education policies must therefore consider these diverse social contexts. Strategies designed to promote gender equality in urban areas, for example, may require different approaches from those implemented in rural or indigenous communities.

The final implication relates to the need to align national education policies with the broader sustainable development agenda. Gender equality in education is a central component of the global Sustainable Development Goals (SDGs), particularly those related to quality education and gender equality. Accordingly, educational policies in Indonesia should be strategically designed to support these global goals by expanding educational access, strengthening women's empowerment, and increasing women's participation across multiple sectors of development (Pickel-Chevalier & Yanthy, 2023).

Overall, the findings suggest that achieving gender equality in education cannot rely solely on sector-specific policies. Instead, it requires integrated policy approaches that connect educational reform with broader social, economic, and institutional dimensions. Through more systematic policy integration, education can function as a strategic instrument for strengthening women's empowerment, reducing social inequality, and promoting inclusive and sustainable development.

4. Discussion

Building on the policy implications identified in the literature, the following discussion situates these findings within broader international debates on gender equality in education.

The development of research on gender equality in education in Indonesia has attracted increasing scholarly attention in recent years. This trend reflects growing global awareness of the importance of inclusive and gender-responsive education as a key component of sustainable development. International scholarship emphasizes that gender equality in education involves not only expanding access to schooling but also improving the quality of learning experiences, social representation within educational systems, and long-term opportunities for women's social and economic mobility (Aragonés-González et al., 2020; Plessis, 2025; Walker et al., 2019). Recent studies further highlight that gender-equitable education systems contribute to broader social transformation by reducing structural inequalities and promoting inclusive participation in economic and civic life (UNESCO, 2022; Unterhalter et al., 2022). From this perspective, education functions not only as a mechanism for knowledge transmission but also as an institutional space where gender norms, social expectations, and opportunities for empowerment are continuously negotiated and reshaped. The growth of research in this field therefore reflects an increasing effort to understand the complex relationships between education, gender equality, and social development.

The predominance of domestic scholars in this body of research indicates that gender equality in education in Indonesia is strongly shaped by local social and cultural dynamics. Studies that focus on the national context

enable a more nuanced analysis of how social norms, family structures, and education policies influence women's educational experiences. Research in developing contexts often demonstrates that gender-related studies in education are frequently conducted by local scholars who possess close empirical familiarity with the social environments being examined. This contextual proximity allows researchers to develop a more comprehensive understanding of cultural values, institutional arrangements, and social practices that shape gender relations within educational systems (Asrohah & Idayatni, 2020; Baroya et al., 2024; Rantung, 2024). Furthermore, such contextual insight helps identify structural factors affecting women's access to education, participation in learning processes, and the continuity of educational pathways across different levels of schooling (Abbas & Smith, 2023; Naseem et al., 2025).

At the same time, the involvement of researchers from multiple countries indicates that gender equality in Indonesian education is increasingly attracting attention within broader academic debates. Cross-national collaboration has the potential to enrich analytical perspectives through comparative approaches and to expand understanding of gender dynamics in education across diverse social and institutional contexts. Comparative research also suggests that international academic collaboration plays an important role in strengthening policy development aimed at promoting more inclusive and gender-responsive education systems (Evans & Yuan, 2022; Unterhalter et al., 2022).

The concentration of research output within several major universities also highlights the importance of institutional research capacity in shaping academic knowledge production. Universities with stronger research infrastructure, wider academic networks, and greater access to research funding tend to produce higher volumes of scholarly publications. Similar patterns have been observed in international studies, which show that academic knowledge production is often concentrated within higher education institutions with well-established research capacity (Bashir & Lapshun, 2025; Narbaev et al., 2025; Pherali & Lewis, 2019). However, this concentration may also limit the representation of perspectives from institutions or regions that are less involved in research production.

The findings of this study further reveal that gender equality in education is shaped by the interaction of multiple structural factors, including cultural norms, socioeconomic conditions, and institutional practices within education systems. International literature consistently identifies patriarchal norms as a key factor influencing women's access to and participation in education, particularly in societies where women are traditionally associated with domestic roles (Adisa et al., 2019; Simon & Hasan, 2025). Such norms can influence family decisions regarding girls' education, educational aspirations, and opportunities to pursue higher education.

Socioeconomic inequality also plays a significant role in shaping educational opportunities for women. Studies indicate that households with limited economic resources often face difficult decisions when allocating educational investments among children, which can reinforce gender disparities in education (Psaki et al., 2022; Schneider et al., 2018). In such contexts, policies focused solely on expanding educational access may be insufficient to address gender inequality, as household economic conditions strongly influence the continuity of women's educational trajectories (Alistina et al., 2025).

Another important dimension concerns gender bias within curricula and educational practices. Gender representation in textbooks and learning materials significantly shapes students' perceptions of social roles. International research shows that unequal gender representation in educational materials may reinforce social stereotypes and limit women's academic and professional aspirations (Abbas & Smith, 2023; Makarova et al., 2019). Consequently, curriculum reforms that incorporate gender-responsive perspectives are essential for developing more inclusive education systems.

Furthermore, the findings highlight the strategic role of education in advancing women's empowerment. Global evidence demonstrates that improvements in women's education are associated with multiple positive

social outcomes, including improved family health, poverty reduction, and increased participation of women in labor markets and decision-making processes (Akinwale, 2023; Heymann et al., 2019). In this context, education functions not only as a means of individual capacity development but also as a critical driver of broader social transformation (Mergaert et al., 2022).

Overall, the findings reinforce the argument that gender equality in education is a complex and multidimensional issue requiring comprehensive policy responses. Achieving gender-responsive education systems requires coordinated efforts involving curriculum reform, strengthened institutional capacity, and broader transformations in social norms that shape gender relations in society.

5. Conclusion

This study provides a comprehensive overview of the development of research on gender equality in education in Indonesia through a systematic literature review of recent scholarly publications. Overall, the findings indicate that academic attention to gender equality in education has increased significantly in recent years. This trend reflects growing scholarly and policy recognition of the importance of inclusive and gender-responsive education as a key component of sustainable social development.

Despite the implementation of various policies aimed at expanding women's access to education, the reviewed literature indicates that efforts to achieve gender equality in education continue to face multiple structural challenges. These challenges arise from the interaction of patriarchal social norms, socioeconomic inequalities, gender bias in educational practices, and limited institutional capacity to implement gender-sensitive policies effectively. The findings therefore suggest that gender disparities in education cannot be understood solely as issues of access to schooling but must also be viewed within the broader social structures that shape women's educational opportunities.

In addition to identifying these challenges, the study highlights the strategic role of education in advancing women's empowerment. Gender-inclusive education systems can strengthen individual capabilities, expand economic opportunities, and increase women's participation in social and political life. Integrating gender perspectives into education policy therefore represents an important strategy for promoting more equitable and sustainable development.

The findings also emphasize the importance of integrated policy approaches to achieve gender equality in education. Gender-responsive educational reform requires not only expanding access to schooling but also transforming curricula, strengthening institutional capacity, and addressing social norms that continue to limit women's participation in education and public life. Achieving these objectives requires collaboration among government institutions, educational organizations, civil society, and academic communities to ensure effective implementation of gender equality policies.

Overall, this study contributes to the growing body of scholarship on gender equality in Indonesian education by providing a systematic synthesis of existing research and identifying key structural challenges and policy implications. By mapping current research trends and conceptual developments, the study offers a foundation for future research while supporting the development of more inclusive and gender-responsive education policies in Indonesia.

5.1 Recommendations

Based on the findings of this study, several recommendations can be proposed to strengthen the implementation of gender equality within the Indonesian education system.

First, policymakers should strengthen the integration of gender perspectives across all stages of education policy, including planning, implementation, and program evaluation. This can be achieved by reinforcing gender mainstreaming policies in the education sector and developing evaluation indicators capable of measuring progress toward gender equality more systematically.

Second, curriculum reform and learning materials should be redesigned to ensure that educational systems do not reproduce gender stereotypes. Gender-responsive teaching materials can help foster students' critical awareness of equality, social justice, and the roles of women and men in society. In this regard, professional training for teachers on gender-sensitive pedagogies is essential for strengthening inclusive classroom practices.

Third, more systematic efforts are needed to strengthen the institutional capacity of educational institutions to create safe, inclusive, and gender-responsive learning environments. This includes improving gender-sensitive educational facilities, strengthening mechanisms for preventing gender-based violence within educational settings, and developing institutional policies that support women's participation across academic fields.

Fourth, future research should expand the scope of investigation through more in-depth empirical approaches, including field-based studies, cross-regional comparative analyses, and longitudinal research examining the dynamics of gender equality in education over time. Such approaches would provide a more comprehensive understanding of the factors influencing gender equality in education and the effectiveness of existing policy interventions.

Through the implementation of these recommendations, the Indonesian education system can play a more significant role in strengthening women's empowerment and promoting a more inclusive and equitable society.

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