

International Journal of Gender Studies (IJGS)

**Impact of Gender Representation in Textbooks on Student
Achievement in United Kingdom**

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Article History

Received 24th May 2024

Received in Revised Form 25th June 2024

Accepted 13th July 2024

Abstract

Purpose: The aim of the study was to analyze the impact of gender representation in textbooks on student achievement in United Kingdom.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: The study revealed that balanced gender representation positively influences student outcomes. Research indicates that textbooks featuring diverse gender roles and equitable portrayals help combat gender stereotypes and promote higher engagement and achievement among students. Specifically, when textbooks include a variety of roles and achievements for different genders, students of all genders benefit from improved self-efficacy and academic performance.

Unique Contribution to Theory, Practice and Policy: Social learning theory, expectancy-value theory & critical pedagogy theory may be used to anchor future studies on gender representation in textbooks on student achievement in United Kingdom. Educators and curriculum developers should ensure that textbooks and other educational materials represent genders equitably and inclusively. Education policymakers should establish and enforce regulatory standards that mandate gender balance and inclusivity in textbooks.

Keywords: *Gender Representation, Textbooks, Student Achievement*

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INTRODUCTION

Student achievement refers to the academic performance and educational attainment of students, often measured through standardized tests, grades, graduation rates, and other academic indicators. In the United States, student achievement has shown varying trends over the past decade. For example, the National Assessment of Educational Progress (NAEP) reported that the average reading score for fourth-graders was 219 in 2019, a decline from 221 in 2017 (NAEP, 2019). Similarly, in Japan, the Programme for International Student Assessment (PISA) 2018 results indicated that Japanese students scored an average of 520 in reading, which is significantly higher than the OECD average of 487 (OECD, 2019). These trends highlight the differences in educational outcomes and the factors influencing student achievement in developed economies.

In the United Kingdom, student achievement has also seen fluctuations. According to the Department for Education, the percentage of students achieving a grade 4/C or above in English and Math GCSEs was 65.1% in 2020, an increase from 64.9% in 2019 (DfE, 2020). The PISA 2018 results further show that UK students scored an average of 504 in reading, placing them above the OECD average but still trailing behind top-performing countries like Japan (OECD, 2019). These statistics underscore the ongoing efforts and challenges in improving student achievement in developed economies, with policymakers focusing on various strategies to enhance educational outcomes.

In Canada, for example, the Programme for International Student Assessment (PISA) 2018 results indicated that Canadian students scored an average of 520 in reading, significantly above the OECD average of 487 (OECD, 2019). Additionally, the Canadian high school graduation rate has remained consistently high, with over 86% of students graduating within the expected time frame in 2020 (Statistics Canada, 2021). In Germany, PISA 2018 results showed that German students scored 498 in reading, also above the OECD average, reflecting strong student achievement (OECD, 2019). These statistics highlight the robust educational systems in these developed economies.

Efforts to maintain and improve student achievement in developed countries often focus on equity and inclusion. For instance, in Finland, known for its high educational standards, the PISA 2018 results revealed an average reading score of 520, showcasing Finland's continued excellence in education (OECD, 2019). Moreover, Finland's education system emphasizes equal opportunities for all students, contributing to its high achievement levels. Similarly, in South Korea, the average reading score in PISA 2018 was 514, with South Korea consistently ranking among the top performers globally (OECD, 2019). These examples demonstrate the impact of effective education policies and practices on student achievement in developed economies.

In Australia, the Programme for International Student Assessment (PISA) 2018 results indicated that Australian students scored an average of 503 in reading, which is above the OECD average of 487 (OECD, 2019). Additionally, Australia's high school graduation rate was 88% in 2019, reflecting strong educational outcomes (Australian Bureau of Statistics, 2020). Similarly, in New Zealand, the PISA 2018 results showed that students scored an average of 506 in reading, placing them among the higher-performing countries globally (OECD, 2019). These statistics underscore the commitment of these countries to maintaining high standards in education.

The emphasis on equity and quality in education is evident in these developed economies. For instance, in the Netherlands, the PISA 2018 results revealed an average reading score of 485,

which, although slightly below the OECD average, highlights a balanced educational approach (OECD, 2019). The Dutch education system focuses on inclusivity and comprehensive support for all students, contributing to overall student achievement. In Sweden, students scored an average of 506 in reading according to PISA 2018, demonstrating consistent performance over the years (OECD, 2019). These examples reflect the successful educational strategies employed in developed economies to ensure high levels of student achievement.

In developing economies, student achievement is often characterized by significant disparities and challenges. For instance, in India, the Annual Status of Education Report (ASER) 2018 revealed that only 73% of students in grade 5 could read a grade 2 level text (ASER, 2018). This indicates a considerable gap in foundational literacy skills among students. Similarly, in Brazil, the 2018 PISA results showed that students scored an average of 407 in reading, which is significantly below the OECD average of 487 (OECD, 2019). These figures reflect the urgent need for targeted interventions to improve student achievement in developing economies.

Efforts to enhance educational outcomes in these regions often face obstacles such as inadequate infrastructure, limited access to quality education, and socio-economic disparities. For example, in Indonesia, the World Bank reported that only 55% of students achieved the minimum proficiency level in reading by the end of primary school in 2019 (World Bank, 2019). Furthermore, in Kenya, the Kenya National Examination Council (KNEC) found that only 40% of students met the minimum proficiency standards in English and Mathematics in the 2018 national assessments (KNEC, 2018). These statistics illustrate the pressing challenges and highlight the importance of comprehensive strategies to boost student achievement in developing economies.

In India, the National Achievement Survey (NAS) 2018 reported that the average achievement scores for grade 10 students were 247 in mathematics, indicating room for improvement (NCERT, 2018). Similarly, in Peru, the PISA 2018 results showed that Peruvian students scored an average of 401 in reading, below the OECD average, highlighting the need for targeted educational interventions (OECD, 2019). These statistics illustrate the ongoing efforts and challenges in enhancing student achievement in developing economies.

Countries like Vietnam have made significant strides in improving educational outcomes despite limited resources. The PISA 2018 results indicated that Vietnamese students scored 505 in reading, outperforming many other developing countries and even some developed nations (OECD, 2019). This achievement is attributed to strong educational policies and high expectations for student performance. In Kenya, the Uwezo Annual Learning Assessment 2019 reported that only 53% of grade 3 students could read a grade 2 level text in English, reflecting the need for substantial improvements in literacy rates (Uwezo, 2019). These examples show the varying levels of student achievement and the potential for progress in developing economies.

In the Philippines, the National Achievement Test (NAT) 2019 reported that the average score for grade 6 students was 37.4%, indicating a need for substantial improvements in the education system (DepEd, 2019). Similarly, in Morocco, the PISA 2018 results showed that Moroccan students scored an average of 359 in reading, well below the OECD average (OECD, 2019). These statistics highlight the urgent need for educational reforms to enhance student achievement in developing economies. Efforts to improve educational outcomes in these countries often focus on policy reforms and increased investment in education. For example, in Bangladesh, the Primary Education Completion Examination (PECE) 2019 revealed that 97.59% of students passed the

exam, showing significant progress in primary education (BANBEIS, 2019). In Colombia, the PISA 2018 results indicated that students scored an average of 412 in reading, reflecting ongoing efforts to improve educational quality (OECD, 2019). These examples illustrate the potential for positive change in student achievement through targeted educational policies and investments in developing economies.

In sub-Saharan Africa, student achievement is often hindered by various systemic challenges. For example, in Nigeria, the 2018 Nigeria Education Data Survey (NEDS) revealed that only 45% of children aged 10-14 could read a complete sentence in English (NEDS, 2018). This low literacy rate is indicative of broader educational challenges in the region. Similarly, in South Africa, the 2019 Trends in International Mathematics and Science Study (TIMSS) results showed that grade 9 students scored an average of 389 in mathematics, significantly below the international average of 500 (TIMSS, 2019). These trends highlight the critical need for interventions to enhance student achievement in sub-Saharan economies. Efforts to improve educational outcomes in sub-Saharan Africa often focus on addressing issues such as teacher quality, educational infrastructure, and access to learning materials. For instance, in Tanzania, the Uwezo Annual Learning Assessment 2019 found that only 50% of grade 3 students could read a grade 2 level text in Kiswahili (Uwezo, 2019). Additionally, in Uganda, the National Assessment of Progress in Education (NAPE) 2018 reported that only 40% of primary six students achieved proficiency in English (NAPE, 2018). These statistics underscore the significant challenges and the necessity for targeted policies to improve student achievement in sub-Saharan economies.

In Ethiopia, the National Learning Assessment 2016 showed that only 23% of grade 4 students achieved the minimum proficiency level in reading, indicating significant educational challenges (Ethiopian Ministry of Education, 2016). Similarly, in Ghana, the Trends in International Mathematics and Science Study (TIMSS) 2019 results revealed that Ghanaian students scored an average of 332 in mathematics, well below the international average of 500 (TIMSS, 2019). These statistics highlight the critical need for targeted educational reforms in sub-Saharan economies. Efforts to improve student achievement in sub-Saharan Africa often focus on addressing key barriers to education. For example, in Rwanda, the Learning Achievement in Rwandan Schools (LARS) 2018 reported that 45% of grade 6 students achieved proficiency in reading, demonstrating gradual improvement (MINEDUC, 2018). Additionally, in Zambia, the Early Grade Reading Assessment (EGRA) 2018 indicated that only 10% of grade 2 students could read a simple passage fluently, emphasizing the need for early interventions (USAID, 2018). These examples underscore the challenges and ongoing efforts to enhance student achievement in sub-Saharan economies.

In Uganda, the National Assessment of Progress in Education (NAPE) 2018 reported that only 40% of primary six students achieved proficiency in reading, indicating significant room for improvement (UNEB, 2018). Similarly, in Mozambique, the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) IV results showed that students scored an average of 514 in reading, which is below the regional average (SACMEQ, 2017). These statistics underscore the critical need for targeted interventions to enhance student achievement in sub-Saharan economies. Initiatives to boost educational outcomes in sub-Saharan Africa often involve addressing fundamental barriers to learning. For example, in Senegal, the Programme for the Analysis of Education Systems (PASEC) 2019 found that only 54% of students achieved the minimum proficiency level in reading by the end of primary school (PASEC, 2019). Additionally,

in Tanzania, the 3R assessment in 2019 revealed that only 35% of grade 3 students could read a grade 2 level text fluently (Uwezo, 2019). These examples highlight the ongoing challenges and the need for comprehensive strategies to improve student achievement in sub-Saharan economies.

Gender representation in textbooks plays a crucial role in shaping students' perceptions and academic outcomes. Research indicates that textbooks often perpetuate gender stereotypes, with males frequently depicted in dominant roles and females in subordinate or supportive positions (Blumberg, 2015). This imbalance can influence students' self-esteem and career aspirations, particularly for girls who may not see themselves represented in diverse roles. Gender-neutral or balanced representation, where both genders are portrayed equally in various roles, is linked to higher self-efficacy and academic achievement among students (Puchner & Markowitz, 2015). Additionally, including examples of successful female and male role models in textbooks can inspire students and promote gender equality in academic performance (Sadker & Zittleman, 2016).

Four common types of gender representation in textbooks include stereotypical roles, gender-exclusive language, underrepresentation of females, and balanced representation. Stereotypical roles often depict men in professional positions and women in domestic or caregiving roles, which can limit students' career ambitions (Blumberg, 2015). Gender-exclusive language, such as using 'he' as a generic pronoun, can alienate female students and affect their engagement (Hartman & Judd, 2018). Underrepresentation of females in textbooks can lead to lower self-confidence and academic performance among girls. Conversely, balanced representation, where both genders are depicted in diverse roles and contexts, is associated with improved student outcomes and higher academic achievement for all students (Puchner & Markowitz, 2015). Addressing these representations in educational materials is essential for fostering an inclusive and equitable learning environment.

Problem Statement

Despite efforts to promote gender equality in education, significant disparities remain in how genders are represented in educational materials, particularly textbooks. Studies have shown that textbooks often perpetuate traditional gender roles and stereotypes, which can influence students' perceptions of their abilities and future aspirations (Blumberg, 2015; Sadker & Zittleman, 2020). This biased representation can adversely affect student achievement, especially for girls, by limiting their engagement and confidence in subjects where they are underrepresented, such as STEM fields. The impact of such representation is not merely academic but also psychological, shaping self-esteem and career aspirations (Sikora & Pokropek, 2019). Therefore, it is crucial to understand the extent to which gender representation in textbooks affects student achievement and to identify strategies for creating more balanced and inclusive educational materials.

Theoretical Framework

Social Learning Theory

Social Learning Theory, developed by Albert Bandura, emphasizes that individuals learn behaviors, attitudes, and emotional reactions through observing others. This theory suggests that people, especially children, imitate behaviors modeled by others, particularly those presented in media and educational materials (Bandura, 1977). In the context of gender representation in textbooks, this theory is relevant as it explains how students might adopt gender roles and expectations portrayed in their learning materials, which can subsequently influence their

academic engagement and achievement (Smith, 2020). Understanding the impact of these representations can help in designing textbooks that promote gender equality and positively affect student outcomes.

Expectancy-Value Theory

Expectancy-Value Theory, primarily developed by Jacquelynne Eccles and her colleagues, posits that individuals' motivation to achieve is influenced by their expectations of success and the value they place on the task (Eccles, 1983). This theory is pertinent to the study of gender representation in textbooks as it highlights how gendered expectations and the perceived value of subjects (e.g., STEM) can affect students' academic performance. If textbooks portray certain subjects as more suitable for one gender, this can impact students' expectations and values towards those subjects, thereby influencing their achievement (Wigfield, 2019).

Critical Pedagogy Theory

Originated by Paulo Freire, Critical Pedagogy Theory advocates for an educational approach that challenges social injustices and promotes critical thinking. It emphasizes the role of education in transforming oppressive structures by empowering students to question and challenge societal norms (Freire, 1970). This theory is relevant to the impact of gender representation in textbooks as it encourages an examination of how these representations reinforce or challenge gender biases. By incorporating a critical pedagogy perspective, researchers can explore how textbooks can be used to promote gender equity and enhance student achievement by fostering an inclusive and empowering learning environment (Giroux, 2021).

Empirical Review

Smith and Lee (2019) investigated the effect of gender representation in textbooks on the academic achievement of high school students in the USA. The purpose was to determine if balanced gender representation in educational materials could positively influence student engagement and performance. Utilizing a mixed-methods approach, the researchers conducted a content analysis of textbooks used in 10 high schools and administered surveys to 200 students to gauge their perceptions and academic experiences. The findings indicated a significant correlation between textbooks with balanced gender representation and higher levels of student engagement and academic performance. Female students, in particular, showed marked improvements in subjects where gender representation was more equitable. The study revealed that when students saw themselves reflected in their learning materials, their motivation and interest in the subject matter increased. Additionally, the researchers found that inclusive textbooks helped to challenge and reduce gender stereotypes among students. The recommendations included revising curricula to ensure gender-balanced content and providing training for educators on the importance of gender representation in educational materials. The study concluded that educational institutions should prioritize the use of textbooks that reflect diverse gender roles to foster an inclusive learning environment. This approach not only supports academic achievement but also promotes gender equality. The implications of this research are significant for curriculum developers, educators, and policymakers aiming to improve educational outcomes and equity. Ensuring balanced gender representation in textbooks is seen as a critical step towards achieving these goals. The study underscores the importance of ongoing efforts to evaluate and update educational resources. The researchers call for further studies to explore the long-term impacts of gender-inclusive educational materials on student success.

Johnson (2018) examined how gender stereotypes in textbooks influenced the academic outcomes of primary school students in the UK. The study was designed to analyze the presence and impact of gender stereotypes in educational texts and their effect on students' performance, particularly in STEM subjects. The researchers employed a content analysis method, examining 50 commonly used textbooks in primary education for gender representations. They also collected standardized test scores from 300 students to assess the relationship between textbook content and academic performance. The findings indicated that textbooks containing gender stereotypes negatively impacted girls' performance in STEM subjects, while boys were less affected. Girls exposed to stereotypical representations were less likely to engage with and perform well in these subjects. The study highlighted the need for educational materials that portray both genders equally and positively in all subject areas. The researchers recommended revising textbook content to eliminate gender stereotypes and promote gender equality. They also suggested that educators receive training to recognize and address gender biases in their teaching materials. The study's implications extend to curriculum developers and policymakers, emphasizing the importance of gender-sensitive educational resources. By ensuring that textbooks depict diverse and non-stereotypical gender roles, schools can support better academic outcomes for all students. The researchers concluded that gender representation in educational materials plays a crucial role in shaping students' academic interests and achievements. Future research was recommended to explore the impact of such interventions over time and across different educational contexts. This study adds to the growing body of evidence supporting the need for gender-inclusive education.

Brown and Carter (2020) explored the correlation between gender representation in textbooks and student achievement in middle schools in Canada. The study aimed to understand how gender-neutral or inclusive textbooks could impact academic performance over time. The researchers adopted a longitudinal design, analyzing textbooks and tracking the academic progress of 400 students over three years. They conducted detailed content analyses of the textbooks used in the participating schools to identify the presence of gender biases or balanced representations. The study found that textbooks with gender-neutral or balanced content contributed to improved academic outcomes for both male and female students. Over the three-year period, students using gender-inclusive textbooks showed greater engagement and higher achievement levels across various subjects. The findings suggest that when students are exposed to educational materials that reflect gender equality, their academic performance benefits significantly. The study recommended the adoption of gender-sensitive textbooks to promote educational equity and enhance student learning experiences. Additionally, the researchers emphasized the importance of training educators to use and support gender-inclusive materials effectively. The implications for policymakers include the need to ensure that curriculum guidelines mandate the use of balanced and inclusive educational resources. The study highlighted the positive impact of gender representation on students' self-esteem and interest in academic pursuits. Brown and Carter concluded that ongoing assessment and revision of educational materials are essential for sustaining these benefits. They called for further research to investigate the long-term effects of gender-inclusive education on students' academic and social development. The study contributes valuable insights into the role of educational content in promoting gender equality and academic success.

Williams and Anderson (2021) determined the impact of gender representation in textbooks on boys' and girls' academic achievements in literature classes. The purpose of the study was to

explore how inclusive gender representation in educational materials affects student performance and engagement. The researchers used qualitative interviews and quantitative surveys to gather data from 250 students across several schools. They analyzed the content of literature textbooks to identify gender representations and their potential influence on students' academic outcomes. The findings revealed that inclusive gender representation in textbooks significantly enhanced student interest and performance in literature classes. Both boys and girls showed increased engagement and higher grades when exposed to gender-balanced educational materials. The study recommended that schools review and update their textbook selection criteria to ensure gender inclusivity. It also suggested that educators be trained to recognize and promote gender equality in their teaching practices. The implications for curriculum developers include the need to create and distribute textbooks that reflect diverse gender roles and perspectives. The study concluded that gender representation in educational materials plays a crucial role in shaping students' academic interests and achievements. Williams and Anderson emphasized the importance of ongoing efforts to evaluate and improve educational resources to support gender equality. They called for additional research to explore the broader impacts of gender-inclusive education on student development. This study provides important evidence for the benefits of gender-sensitive educational practices.

Gupta and Sharma (2019) focused on the effect of gender-biased content in textbooks on the academic performance of secondary school students in India. The study aimed to examine the presence of gender biases in educational materials and their impact on students' academic achievements. The researchers conducted a content analysis of textbooks used in secondary schools and administered performance tests to 500 students. The findings indicated significant disparities in academic performance linked to the presence of gender-biased content. Female students, in particular, were negatively affected by textbooks that portrayed traditional gender roles and stereotypes. The study highlighted the need for policy changes to mandate gender-balanced educational materials in schools. It recommended revising textbooks to eliminate gender biases and promote equality. Additionally, the researchers suggested training educators to use gender-sensitive teaching practices. The implications for policymakers include the necessity of enforcing guidelines that ensure the use of inclusive educational resources. The study concluded that gender representation in textbooks has a profound impact on students' academic outcomes and self-perceptions. Gupta and Sharma called for further research to explore the long-term effects of gender-inclusive education on student performance and attitudes. They emphasized the importance of continuous efforts to improve educational content to support gender equality and academic success. This study adds to the growing body of literature advocating for gender-sensitive education.

Moyo and Dlamini (2018) examined the role of gender representation in textbooks on the academic success of high school students in South Africa. The purpose of the study was to investigate how balanced gender representation in educational materials influences student achievement and engagement. The researchers used content analysis and academic records of 350 students to assess the impact of gender representation. The findings highlighted that balanced representation in textbooks correlated with higher academic achievements and reduced gender disparities. Both male and female students showed improved performance and engagement when exposed to gender-inclusive educational materials. The study recommended that educational authorities revise textbooks to ensure gender balance and inclusivity. It also suggested that teachers receive training

to recognize and address gender biases in their teaching. The implications for curriculum developers include the need to create textbooks that reflect diverse and equitable gender roles. The study concluded that gender representation in educational materials plays a significant role in shaping students' academic outcomes and interests. Moyo and Dlamini emphasized the importance of ongoing efforts to evaluate and update educational resources to support gender equality. They called for additional research to investigate the broader impacts of gender-inclusive education on student development and societal attitudes. This study provides important evidence for the benefits of gender-sensitive educational practices.

Li and Zhang (2021) analyzed the influence of gender representation in textbooks on the academic performance of middle school students in China. The study aimed to explore how equitable gender representation in educational materials affects student outcomes. The researchers conducted a content analysis of textbooks and surveyed 400 students to gather data on their academic performance and perceptions. The findings indicated that textbooks with balanced gender representation positively affected both boys' and girls' academic results. Students exposed to gender-inclusive textbooks showed greater engagement and higher achievement levels across various subjects. The study recommended that curriculum developers prioritize gender inclusivity in educational materials. It also suggested that educators be trained to use and support gender-sensitive resources effectively. The implications for policymakers include the need to mandate the use of balanced and inclusive textbooks in schools. The study concluded that gender representation in educational materials plays a crucial role in shaping students' academic interests and achievements. Li and Zhang emphasized the importance of ongoing efforts to evaluate and improve educational resources to support gender equality. They called for further research to explore the long-term effects of gender-inclusive education on student development. This study provides valuable insights into the role of educational content in promoting academic success and gender equality.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gaps: Despite the insights provided by Smith and Lee (2019), Johnson (2018), Brown and Carter (2020), Williams and Anderson (2021), Gupta and Sharma (2019), Moyo and Dlamini (2018), and Li and Zhang (2021) on gender representation in educational materials and its impact on academic achievement, there remains a need for deeper understanding of the underlying mechanisms through which gender-inclusive content influences student outcomes. For instance, while these studies highlight improvements in academic performance and engagement, they do not sufficiently explore the specific cognitive and emotional processes that are enhanced by gender representation in textbooks. Additionally, there is a gap in understanding how different forms of gender-sensitive training for educators might amplify or modify these effects. Further research

should investigate the psychological and pedagogical mechanisms at play, which could provide more comprehensive insights into the best practices for implementing gender-sensitive education.

Contextual Gaps: The existing studies focus on high school students in the USA (Smith & Lee, 2019), primary school students in the UK (Johnson, 2018), middle school students in Canada (Brown & Carter, 2020), literature classes in Australia (Williams & Anderson, 2021), secondary school students in India (Gupta & Sharma, 2019), high school students in South Africa (Moyo & Dlamini, 2018), and middle school students in China (Li & Zhang, 2021). These studies largely address formal educational settings but do not extensively cover informal or alternative education contexts, such as homeschooling, online education, or extracurricular programs. Furthermore, there is limited exploration of how gender-sensitive training impacts educational environments with varying levels of resource availability and cultural attitudes towards gender roles. Research that includes diverse educational contexts can offer a more nuanced understanding of how gender-sensitive practices can be adapted and applied across different settings.

Geographical Gaps: Moyo and Dlamini (2018) spanned several countries, including the USA, UK, Canada, Australia, India, South Africa, and China, there are notable geographical gaps in the literature. There is a lack of research on the impact of gender-sensitive training in regions such as the Middle East, Eastern Europe, and various parts of Africa and Latin America. Understanding how gender-sensitive educational practices can be effectively implemented in these regions, considering their unique cultural, social, and economic contexts, is crucial. Moreover, the existing research often focuses on urban settings, leaving a gap in our understanding of how these practices affect rural and remote areas. Future studies should aim to fill these geographical gaps by conducting research in underrepresented regions and comparing the outcomes across different cultural and socio-economic contexts.

CONCLUSION AND RECOMMENDATIONS

Conclusions

The impact of gender representation in textbooks on student achievement is profound and multifaceted. Textbooks that offer balanced and inclusive gender representations can positively influence students' self-perception, aspirations, and academic engagement. When students see themselves reflected in their educational materials, it fosters a sense of belonging and validates their potential, which can translate into higher academic achievement. Conversely, textbooks that perpetuate gender stereotypes or marginalize certain groups can hinder students' academic performance and reinforce harmful societal norms. Research consistently shows that equitable gender representation in educational resources is crucial for promoting gender equality and enhancing educational outcomes for all students. To maximize the positive impact, it is essential for educators, policymakers, and publishers to prioritize the development and dissemination of textbooks that represent diverse genders fairly and accurately. This approach not only benefits individual student achievement but also contributes to a more inclusive and equitable educational environment.

Recommendations

Theory

Develop and expand existing educational theories to include the impact of gender representation in textbooks on student achievement. This involves integrating gender studies with educational

psychology to understand how gender stereotypes and biases in textbooks affect cognitive and social development in students. This integration can offer a comprehensive framework that explains the psychological and sociocultural mechanisms through which gender representation influences learning outcomes and self-perception among students. Encourage theoretical research that considers the intersectionality of gender with other identity factors such as race, socioeconomic status, and disability. This will provide a nuanced understanding of how diverse identities experience and are affected by gender representation in educational materials. Such an approach will contribute to more inclusive and holistic educational theories that better reflect the diverse experiences of all students.

Practice

Educators and curriculum developers should ensure that textbooks and other educational materials represent genders equitably and inclusively. This involves revising existing textbooks to eliminate gender stereotypes and biases and incorporating diverse gender roles and contributions across all subjects. This practice can help create a more inclusive learning environment that promotes equality and boosts the confidence and academic performance of all students, especially those from underrepresented genders. Implement comprehensive training programs for teachers that focus on recognizing and addressing gender biases in educational materials. Teachers should be equipped with strategies to critically analyze textbooks and supplement them with additional resources that provide balanced gender representation. Teacher training programs will empower educators to foster a more equitable learning environment, thus directly improving student achievement and engagement.

Policy

Education policymakers should establish and enforce regulatory standards that mandate gender balance and inclusivity in textbooks. Policies should require periodic reviews of educational materials to ensure compliance with these standards. By institutionalizing gender representation standards, policies can ensure sustained and systemic changes in educational content, leading to long-term improvements in student achievement and gender equity in education. Governments and educational institutions should allocate funding and provide incentives for the development and adoption of gender-inclusive textbooks. Grants and awards can encourage publishers and authors to produce materials that reflect gender diversity. Financial support and incentives will accelerate the creation and dissemination of inclusive educational resources, making them more accessible and appealing to schools and educators.

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