

Doi:<https://doi.org/10.61841/2rren667> Url:<https://nnpub.org/index.php/EL/article/view/2738>

ENHANCING FEMALE STUDENTS' CLASSROOM PARTICIPATION IN ECONOMICS TO IMPROVE ACADEMIC PERFORMANCE: A CASE STUDY OF 12TH-GRADE SOCIAL SCIENCE STUDENTS AT SHALEKA-JATENI SECONDARY SCHOOL

Melion Kasahun^{a*}, Getachew Hailemariam^b, Tihitina Tadele^c, Obsitu Duba^d, Tesfaye Lemma^e, Burje Kore^f

^a Department of Geography and Environmental Studies, College of Social Science and Humanities, Borana University, P.O. Box: 19, Yabello, Ethiopia

^b Department of Accounting and Finance, College of Business and Economics, Borana University, P.O. Box: 19, Yabello, Ethiopia

^c Department of Economics, College of Business and Economics, Borana University, P.O. Box: 19, Yabello, Ethiopia

^d Department of School of Law, Borana University, P.O. Box: 19, Yabello, Ethiopia

^e Department of Chemistry, College of Natural and Computational Science, Borana University, P.O. Box: 19, Yabello, Ethiopia

^f Department of History, College of Social Science and Humanities, Borana University, P.O. Box: 19, Yabello, Ethiopia

^{a*} Corresponding author E-mail: melionkasahun@gmail.com

How to cite this article:

Kasahun, M., Hailemariam, G. ., Tadele, T. ., Duba, O., Lemma, T., & Kore, B. (2025). Enhancing Female Students' Classroom Participation in Economics to Improve Academic Performance: A Case Study of 12th-Grade Social Science Students at Shaleka-Jateni Secondary School. *International Journal of Advance Research in Education & Literature* (ISSN 2208-2441), 11(2), 41-73. <https://doi.org/10.61841/2rren667>

Abstract

This study investigates the classroom participation of female students in Economics and its impact on academic performance at Shaleka-Jateni Secondary School, Yabello Town, Borana Zone, Oromia Regional State, Ethiopia. Data were collected through classroom observations, interviews, Focus Group Discussion (FGD), surveys, and academic assessments. Findings reveal that female students face significant barriers to active engagement due to socio-cultural norms, institutional factors, and psychological challenges, leading to lower participation levels compared to their male counterparts. Classroom observations, surveys, and teacher interviews indicate that only 17.8% of female students actively participate in discussions, while 75.6% hesitate to ask questions. Gender bias, lack of confidence, and fear of judgment further discourage engagement. However, targeted interventions—such as interactive teaching, collaborative learning, teacher support, relatable content, and the presence of female role models—led to notable improvements. Post-intervention assessments show a 37% increase in classroom participation and significant gains in academic performance. Written test scores improved by 27%, oral presentations by 23%, and overall classroom participation by 37%. Correlation analysis confirms that enhanced participation positively impacts academic outcomes. These findings highlight the importance of gender-inclusive teaching strategies in bridging the participation gap and improving female students' academic performance. Sustained institutional support, teacher training, and mentorship programs are essential to fostering an equitable learning environment. The study also suggests the need for further research on the long-term effects of such interventions and their applicability in other educational contexts.

Keywords: Academic performance; Barriers to active engagement; Classroom participation; Economics; Female students

1. Introduction

1.1. Background of the study

The pursuit of gender equity in education has become a critical global priority, reflected in the United Nations Sustainable Development Goal 4 (SDG 4), which advocates for inclusive and equitable quality education for all [1]. Despite significant strides in improving access to education for girls and women worldwide, disparities in participation and performance persist in education [2].

Globally, gender disparities in education are rooted in socio-cultural, economic, and institutional factors. Studies have revealed that societal norms and expectations often discourage active participation among female students, particularly in patriarchal societies [3]. This lack of engagement can result in lower academic performance and diminished confidence, perpetuating gender inequalities in education and beyond. In regions such as Sub-Saharan Africa and South Asia, where traditional gender roles are deeply entrenched, female students frequently encounter barriers such as limited access to resources, safety concerns, and negative stereotypes, which further hinder their classroom participation [4].

Educational institutions worldwide have implemented various strategies to address these disparities. Programs aimed at fostering inclusive classroom environments, promoting gender sensitivity among educators, and encouraging female participation have shown promising results. For instance, participatory teaching methods such as cooperative learning and peer-led discussions have been effective in increasing engagement among female students [5], [6]. Additionally, mentorship programs and role models have been instrumental in motivating girls to actively participate and excel academically [7], [8].

In Africa, the issue of gender disparity in education remains a pressing concern [9]. Across many African countries, cultural attitudes and societal expectations often discourage active female participation in education [10], [11]. Studies highlight that in some societies, girls are socialized to be submissive and avoid taking leadership roles, even in classroom settings [12]. These deep-rooted norms often translate into limited classroom engagement and reduced academic achievements among female students [3], [4]. Additionally, gender-based violence, including harassment in schools, further discourages active participation and compromises educational outcomes [13].

Economic factors exacerbate the issue. Girls from low-income households are more likely to experience pressure to prioritize domestic responsibilities over academic pursuits [14]. Furthermore, inadequate educational resources, such as the lack of female teachers as role models and insufficient access to gender-sensitive learning environments, contribute to the alienation of female students in African classrooms [15].

The East African region exhibits similar patterns of gender disparity in education, the challenges that female students face are multifaceted, influenced by socio-cultural, economic, and institutional factors. Studies in Kenya, Ethiopia, and Tanzania, for instance, have identified cultural norms and gender stereotypes as major barriers to female students' active participation in educational settings [14], [16], [17]. Traditional societal roles often prioritize domestic responsibilities for girls, limiting the time and energy they can devote to academic pursuits [18].

Furthermore, the lack of female role models in educational institutions exacerbates feelings of exclusion and discourages active engagement [19]. Economic constraints also disproportionately affect female students, leading to higher dropout rates and reduced participation in classroom activities. Research

conducted by Bangura & Mambo, (2023); Naven et al., (2019); Nur, (2024) revealed that girls from low-income families often face difficulties in accessing educational resources, including textbooks and sanitary products, which directly impacts their classroom presence and performance. Additionally, early marriages and teenage pregnancies are prevalent in many East African communities, further reducing the likelihood of sustained educational engagement for female students [23], [24].

Despite these challenges, there is growing evidence that targeted interventions can significantly enhance female students' participation and performance. For instance, action research conducted in Kenya demonstrated that employing participatory teaching methods and fostering gender-inclusive classrooms resulted in improved academic outcomes for female students [25]. Similarly, initiatives in Ethiopia aimed at providing mentorship and creating safe learning spaces have shown promise in boosting female students' confidence and engagement in class [26].

In Ethiopia, significant efforts have been made to promote gender equality in education at all levels. Policies such as the National Gender Strategy for Higher Education and the Ethiopian Education Sector Development Program have sought to create a more inclusive academic environment for female students [27]. Despite these measures, gender-based disparities in participation and performance remain evident in Ethiopian schools, particularly students from rural and semi-urban areas. Research by Abera et al., (2020); Dawit, (2023) indicates that female students often encounter socio-cultural barriers, such as early marriage and traditional household responsibilities, alongside institutional challenges like inadequate support systems and gender-insensitive teaching practices. These factors collectively undermine their classroom participation and academic outcomes [30], [31].

Research conducted in various educational settings, including Ethiopian secondary schools, has highlighted several factors contributing to lower classroom participation among female students. These factors often include socio-cultural norms that may discourage female students from speaking up in class, a lack of self-confidence in their academic abilities, and limited support systems to encourage their active participation [26], [32]. Furthermore, the specific dynamics of the Economics classroom, including the teaching methodologies employed and the nature of the subject matter itself, could also play a role in influencing female students' participation [33].

Studies have explored issues related to female student participation in broader contexts. However, research specifically focused on the unique context of Shaleka-Jatani Secondary School was needed. This study addressed this gap by investigating the factors influencing female students' classroom participation in 12th-grade Social Science Economics classes. By focusing on this specific grade level and subject, the research provided targeted insights relevant to the challenges and opportunities faced by these students. This action research implemented and evaluated strategies designed to enhance female students' classroom participation and examined the impact of these strategies on their academic performance. The study's findings provide valuable information for Shaleka-Jatani Secondary School and contribute to the broader understanding of gender equity in education. This research aligns with national educational goals focused on improving the quality of education and promoting gender equality, as well as international initiatives like the SDG 4: Quality Education and SDG 5: Gender Equality).

2. Review of Related Literature

2.1. Introduction

Classroom participation is widely recognized as a crucial aspect of effective learning, as it allows students to actively engage with the material, ask questions, share insights, and collaborate with peers, thus enhancing their understanding and retention of knowledge [34]. However, female students often encounter distinct challenges that impede their ability to fully participate in classroom settings. These barriers can include societal and cultural norms that discourage female students from speaking out or asserting themselves in mixed-gender environments, the fear of being judged or facing negative stereotypes, and a lack of self-confidence in their academic abilities [21]. Additionally, structural issues such as inadequate classroom facilities, gender biases from instructors, or a lack of female role models can further diminish their participation [13], [30].

These challenges do not only affect participation but can also have a direct impact on academic performance. Studies have shown that active participation is closely linked to improved academic outcomes, as students who engage more deeply with course content tend to develop better critical thinking skills, retain information more effectively, and perform higher on assessments [32]. Female students, when given the opportunity and encouragement to participate, can significantly boost their academic success, yet their potential often remains untapped due to the barriers they face [19].

2.1.1. Gender Disparities in Education

Gender disparities in education remain a global issue, particularly in developing countries, where socio-cultural norms and economic challenges disproportionately hinder female students' participation in classroom activities [35]. Research by Mihiretie, (2023) highlighted that systemic biases in curricula, teaching methods, and institutional policies exacerbate these disparities.

In Ethiopia, studies reveal that cultural norms often discourage active participation by female students, reinforcing perceptions of inferiority compared to their male counterparts [36]. According to [37], this dynamic significantly impacts female students' academic performance in tertiary education.

2.1.1. Barriers to Female Students' Classroom Participation

Research has identified several factors contributing to the low participation of female students in classrooms. Socio-cultural norms, gender stereotypes, and a lack of confidence are significant barriers [36]. In some contexts, societal expectations place additional responsibilities on female students, limiting their time and energy for academic activities [21].

Furthermore, classroom dynamics, such as teacher biases and peer influence, can discourage female students from actively engaging in discussions [34]. Studies in Ethiopia have highlighted how traditional gender roles and early marriage disproportionately affect female students' academic involvement [2].

2.1.2. Strategies to Enhance Female Students' Classroom Participation

To address these barriers, researchers emphasize the importance of creating an inclusive and supportive classroom environment [1]. Training teachers to adopt gender-sensitive pedagogical practices can significantly improve female participation [38]. Strategies such as collaborative learning, role-playing, and peer mentoring have shown promise in encouraging female students to contribute more actively in class [39].

Additionally, providing female students with leadership opportunities within the classroom fosters a sense of agency and confidence [37]. Policies promoting gender equity in educational institutions, such as mentorship programs and access to academic resources, have also been effective [27]. Research has explored various strategies to enhance female students' classroom participation, including:

1. Creating a Supportive and Inclusive Classroom Environment

Creating an inclusive classroom environment is fundamental to enhancing participation among female students. Studies emphasize the importance of establishing clear expectations for respectful and equitable participation. For instance, Rudhumbu, (2022) argue that when teachers set clear norms against gender-based discrimination, it significantly increases female students' willingness to engage in classroom discussions.

Additionally, addressing gender biases and stereotypes within the classroom plays a critical role. According to Souidi & Remil, (2024), unconscious biases often manifest in teachers' differential treatment of male and female students, inadvertently discouraging participation. Training programs that help educators recognize and mitigate such biases have proven effective.

Moreover, research by Kuteesa et al., (2024b) highlights the importance of providing equal opportunities for all students to speak and be heard. Structured participation strategies, such as round-robin discussions or randomly calling on students, ensure a balanced representation of voices in the classroom [6].

2. Using Diverse Teaching Methods

Incorporating diverse teaching methods is another strategy to promote female students' participation. Group work and cooperative learning methods, such as those discussed by Guy-Evans, (2024) in Vygotsky theory of social constructivism, have been shown to create collaborative spaces where female students feel more comfortable contributing.

Technological tools, including interactive whiteboards, online discussion forums, and gamified learning platforms, have also been identified as effective interventions. Melak & Singh, (2021) found that integrating technology fosters engagement by providing alternative ways for students to participate.

Furthermore, adopting a variety of teaching styles to cater to different learning preferences has been advocated by Mihiretie, (2023) in her differentiation theory. Such an approach accommodates the diverse needs of female students, making the classroom more inclusive and supportive.

3. Building Student Confidence and Self-Efficacy

Building confidence and self-efficacy among female students is pivotal. Research by Encorporado et al., (2023) underscores the role of positive reinforcement in enhancing self-efficacy. Teachers who regularly provide constructive feedback and acknowledge female students' contributions help boost their confidence and willingness to participate.

Offering opportunities for individual and small-group work has also been found effective. According to Micari & Drane, (2011), small-group settings reduce the intimidation factor often associated with larger classroom discussions, enabling female students to express their ideas more freely.

Furthermore, techniques like think-pair-share, as discussed by Phan & Lan, (2021), encourage all students to first think individually, then discuss with a partner, and finally share with the larger group. This

structured approach has been shown to be particularly effective in drawing out female participants who may otherwise be hesitant.

4. Addressing Cultural and Societal Factors

Cultural and societal norms often influence female students' classroom participation. Research by [46] highlights the importance of raising awareness among teachers, students, and parents about the detrimental effects of gender stereotypes on learning outcomes. Programs that challenge traditional gender roles and advocate for gender equality have been successful in changing mindsets and fostering inclusivity.

Collaborative efforts with community members to promote gender equality have also been effective. For example, SWIFT-MORGAN, (2008) document a case study from Ethiopia where community-driven initiatives to empower female students led to increased school enrollment and classroom participation.

2.1.3. Impact of Classroom Participation on Academic Performance

Active classroom participation has a strong correlation with improved academic outcomes. According to Vygotsky's social constructivist theory, participation enhances cognitive development by enabling learners to engage with diverse perspectives [42]. Studies have shown that female students who participate regularly in classroom discussions tend to develop critical thinking and problem-solving skills, leading to better academic performance [26].

In Ethiopia, targeted interventions to boost female participation have demonstrated measurable improvements in academic achievement and retention rates among female students [36].

2.2. Theoretical Framework

2.2.1. Constructivism

Constructivism, a learning theory rooted in the work of theorists such as Jean Piaget, emphasizes the active role of students in the learning process. It views knowledge as constructed through experience and interaction rather than passively received. In the classroom context, participation becomes pivotal, as it fosters meaningful engagement and facilitates deeper understanding. Constructivist principles highlight that:

- **Sharing Ideas and Perspectives:** By contributing to discussions, students articulate their understanding, clarify doubts, and gain diverse viewpoints, reinforcing their conceptual frameworks [48].
- **Critical Thinking and Problem-Solving:** Participation allows students to question, analyze, and synthesize information, which are essential skills in problem-solving [49].
- **Feedback and Refinement:** Interactive participation enables immediate feedback from peers and instructors, helping students refine their understanding and correct misconceptions [50].
- **Connecting New and Existing Knowledge:** Active engagement in discussions aids in linking prior knowledge with new concepts, a process central to effective learning [51].

2.2.2. Sociocultural Theory

Lev Vygotsky's Sociocultural Theory underscores the significance of social interaction and cultural context in learning. According to this framework, classroom participation serves as a medium for:

- **Meaningful Dialogue and Peer Learning:** Collaborative activities like group discussions and projects enable students to learn from each other's strengths and perspectives [52].
- **Development of Communication Skills:** Through verbal and non-verbal participation, students enhance their ability to express ideas clearly and effectively [53].
- **Internalization of Knowledge:** Social interactions act as a scaffold for students to internalize concepts and skills, transitioning them from external to internal understanding [53].
- **Acquisition of Cultural Tools:** Classroom discussions expose students to cultural practices, terminologies, and tools that are critical for academic success [42].

2.3. Empirical Evidence

2.3.1. Correlation between Participation and Academic Performance

Research consistently demonstrates a strong positive relationship between classroom participation and academic outcomes. For instance:

- A study by BARFIELD, (2003) found that students who actively participated in class discussions achieved higher grades and reported greater satisfaction with their learning experience.
- Freeman et al., (2014) reported that active participation in student-centered classrooms improved test scores by an average of 6% compared to traditional lectures.

2.3.2. Benefits of Active Participation

Active participation in classroom activities has been shown to yield multiple academic and cognitive benefits:

- **Improved Academic Outcomes:** Students who engage in discussions and group work achieve better grades and retain knowledge longer [56].
- **Deeper Conceptual Understanding:** Participation encourages students to explore and master complex concepts through interaction and dialogue [57].
- **Enhanced Critical Thinking:** Asking questions and debating ideas helps develop analytical and problem-solving skills, as highlighted by Rusmin et al., (2024).
- **Communication Skills Development:** Regular involvement in class discussions improves students' ability to articulate thoughts clearly, a skill that translates into academic and professional success [59].

2.3.3. Inclusive Classroom Environments

Creating an inclusive environment is crucial for encouraging participation from all students. Studies such as those by O. M. Ali, (2024) highlight that supportive teaching strategies, such as personalized feedback and culturally responsive pedagogy, significantly increase student engagement.

2.4. Action Research in Education

Action research in education is a systematic, participatory approach that allows educators to identify, investigate, and address specific issues or challenges within their classroom, school, or educational setting

[61]. This type of research is distinct in that it is both a methodology for inquiry and a tool for professional development [62]. The primary goal of action research is to improve teaching and learning outcomes by enabling educators to reflect on their practices and make informed, evidence-based changes [63].

At its core, action research is collaborative and participatory. Educators, often with the involvement of students, colleagues, or even parents, actively engage in the research process [64]. This approach contrasts with traditional research methodologies that may be more passive or removed from the immediate educational context. By involving those who are directly affected by the problem or issue being studied, action research fosters a deeper sense of ownership and empowerment among participants [65].

2.4.1. Principles and Methodology

Action research is characterized by its cyclical nature, where phases of planning, acting, observing, and reflecting are repeated until the desired outcomes are achieved. This methodology, as explained by Akinyemi et al., (2019), is grounded in collaboration, encouraging educators to work closely with students and other stakeholders to address pressing issues. The process begins with identifying a specific problem or issue, such as low classroom participation among female students, which serves as a focal point for intervention. Data collection follows, utilizing various methods like observation, interviews, focus groups, and surveys to understand the context and dynamics of the problem [67]. After data collection, the information is analyzed to uncover patterns, insights, and potential causes of the issue. Based on these findings, interventions are designed and implemented, which may involve new pedagogical strategies, classroom policies, or mentorship programs. The effectiveness of these interventions is then evaluated through follow-up observations, feedback, and performance metrics. Finally, the process concludes with reflection on the outcomes, identifying areas for further refinement, and beginning a new cycle if necessary. This iterative process ensures continuous improvement and adaptation, aiming to achieve meaningful change in the classroom.

2.4.2. Relevance to the Study

Action research is particularly relevant to this study on enhancing female students' classroom participation in Economics and its impact on academic performance among 12th-grade social science students at Shaleka-Jateni Secondary School. As emphasized by Carr & Kemmis, (2003), action research provides a structured yet adaptable framework for addressing educational challenges within specific contexts. This approach is highly beneficial for this study for several key reasons. First, action research facilitates an in-depth exploration of the unique challenges faced by female students at Shaleka-Jateni Secondary School that may hinder their active participation in Economics classes. This includes investigating potential cultural, social, and pedagogical barriers specific to this setting. Second, the participatory nature of action research, as highlighted by Jacobs, (2018), is crucial. It ensures that any interventions designed to enhance participation are context-specific and developed collaboratively with stakeholders, including students, teachers, and school administrators. This collaborative approach increases the relevance and effectiveness of the interventions, as they are tailored to the specific needs and circumstances of the school community. Third, the iterative cycles inherent in action research allow for continuous monitoring and evaluation of the implemented strategies. This iterative process enables the researcher to assess the real-time impact of interventions, make necessary adjustments, and refine the

strategies over time to maximize their effectiveness in improving student outcomes. Finally, the findings and insights generated through this action research study can be disseminated to educators, school administrators, and other stakeholders within the study area. This dissemination contributes to broader educational reforms aimed at promoting gender equity in education and enhancing the learning experiences of female students in Economics and other related subjects.

2.4.3. Application in Enhancing Female Participation

Kuteesa et al., (2024d) underscore the effectiveness of action research in addressing gender disparities within educational settings. Specifically, action research has facilitated the development and testing of interventions aimed at promoting gender equity, such as inclusive teaching practices, gender-sensitive curricula, and supportive classroom environments.

In the context of this study, action research can serve as a strategic approach to:

- Implement mentorship programs specifically tailored to support female students.
- Provide training for educators in gender-responsive teaching methodologies.
- Cultivate a classroom culture that encourages and sustains the active participation of female students.

2.5. Gaps in the Literature

Although a substantial body of research has explored gender and education, the specific issue of female students' participation in classrooms in Ethiopia remains under-researched. Most studies on gender and education focus on broad issues such as enrollment rates, access to education, and gender-based disparities in academic achievement. However, there is a notable scarcity of studies that delve into the day-to-day classroom experiences of female students, particularly in secondary school settings where issues of participation, voice, and engagement may be influenced by cultural, societal, and institutional factors. While global research has highlighted the barriers that female students face in classroom participation—such as gender stereotypes, lack of confidence, and gendered teaching practices—there is a lack of context-specific studies that explore these dynamics within Ethiopian secondary school specifically in the study area.

Furthermore, while action research is a recognized method for improving educational practices, there is limited empirical evidence in the Ethiopian context regarding the effectiveness of action research interventions in addressing gender disparities in classroom participation. Action research, as a reflective and iterative process aimed at fostering change within specific educational settings, has shown promise in other contexts for promoting more inclusive teaching practices and increasing student engagement. However, studies that specifically evaluate the impact of action research on female students' participation and academic performance in secondary school classrooms are rare.

This gap in the literature underscores the need for research that not only examines the challenges and barriers preventing female students from participating in classroom discussions and activities but also explores targeted strategies that can enhance their involvement. By implementing tailored interventions aimed at increasing female students' participation and assessing their impact on academic performance, this study seeks to bridge these gaps in the literature, providing new insights into the potential of action research to foster a more inclusive and supportive learning environment for female students.

2.6. Conceptual Framework

The conceptual framework guiding this study integrates insights from existing literature to explore the relationship between female students' classroom participation and academic performance. It identifies key barriers to participation, effective intervention strategies, and the resulting impacts on learning outcomes, with an emphasis on action research to facilitate sustainable change.

Barriers to Female Students' Classroom Participation

Female students face a range of challenges that limit their active engagement in classroom settings. These include:

- **Socio-Cultural Barriers:** Gender stereotypes, traditional norms, and societal expectations often discourage female students from asserting themselves, particularly in mixed-gender environments.
- **Institutional Barriers:** Gender-insensitive teaching practices, inadequate classroom facilities, and a lack of female role models reduce female students' opportunities to participate meaningfully.
- **Psychological Barriers:** Limited self-confidence, fear of being judged, and concerns about stereotypes further deter participation.

Strategies to Enhance Classroom Participation

To address these barriers, researchers advocate for the implementation of targeted interventions, including:

- **Creating Inclusive Classrooms:** Establishing norms that promote equity and respect, addressing biases, and providing equal opportunities for all students to participate actively.
- **Employing Diverse Teaching Methods:** Techniques such as collaborative learning, technology integration, and differentiated instruction accommodate the diverse needs of students and encourage participation.
- **Building Confidence and Self-Efficacy:** Providing constructive feedback, offering leadership roles, and fostering safe spaces for discussion build female students' confidence.
- **Challenging Socio-Cultural Norms:** Raising awareness about the negative impacts of stereotypes and engaging communities in promoting gender equity can create a supportive environment for female learners.

Relationship between Participation and Academic Performance

Classroom participation is closely linked to improved academic outcomes, as active engagement fosters critical thinking, deeper understanding, and knowledge retention. Female students who are encouraged to participate actively tend to develop better problem-solving and communication skills, which contribute significantly to their academic success.

Role of Action Research

Action research is central to this framework, providing a structured yet flexible methodology for addressing participation challenges. Through iterative cycles of planning, action, observation, and reflection, this approach enables the development and refinement of context-specific strategies, ensuring sustained improvements in classroom participation and academic performance.

This conceptual framework underscores the interconnectedness of barriers, interventions, and outcomes, offering a structured pathway to enhance female students' engagement and success in academic settings (Figure 1).

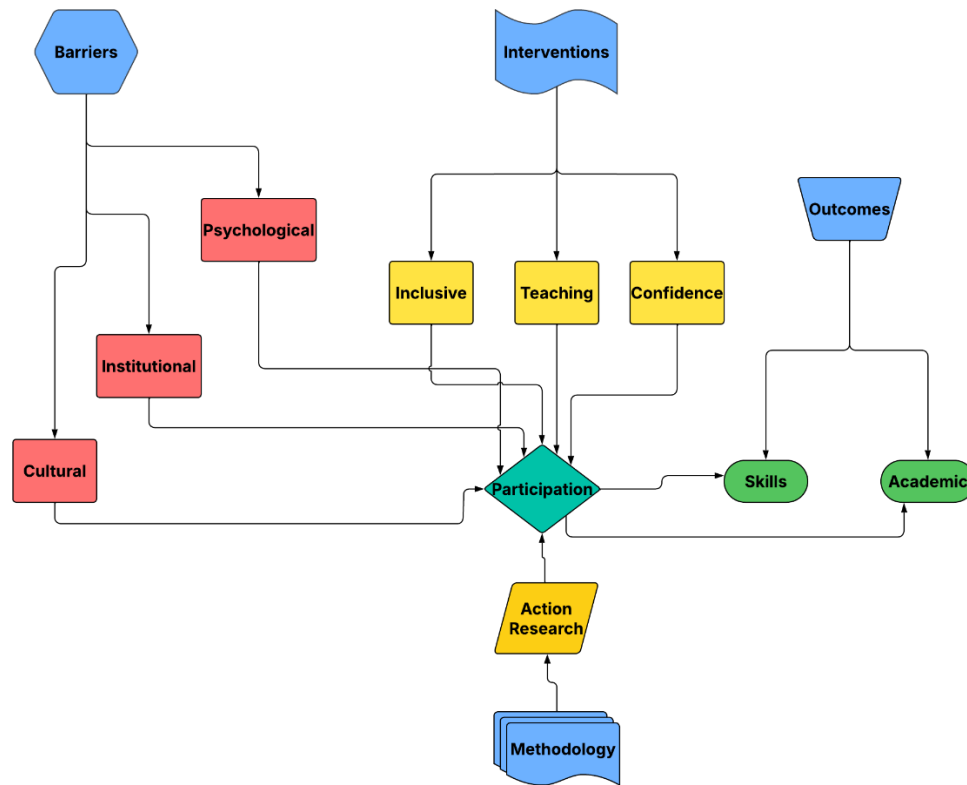


Figure 1: Conceptual framework of the study

3. Methodology

3.1. Description of the Study Area

The study is conducted at Shaleka-Jateni Secondary School, located in Yabello Town (Figure 2), the administrative center of Borana Zone in Oromia Regional State, Ethiopia. Yabello is situated approximately 570 km south of Addis Ababa and serves as a key educational and economic hub in the region [69]. The town has a predominantly pastoralist and agro-pastoralist community [70], influencing students' educational engagement, particularly among female students. Shaleka-Jateni Secondary School provides education to students from diverse socio-economic backgrounds, with a significant number of female students enrolled in the Social Science stream. However, cultural and socio-economic factors often contribute to gender disparities in classroom participation, making it a relevant setting for examining strategies to enhance female students' engagement in Economics education.

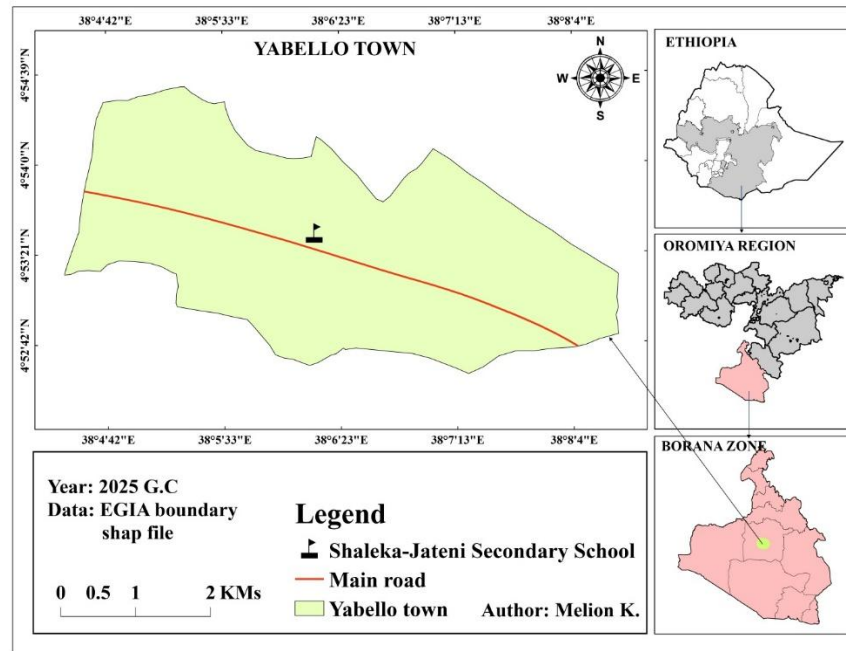


Figure 2: Study area map

3.2. Case study

Shaleka-Jateni Secondary School, located in Yabello Town, Borana Zone, Oromia Regional State of Ethiopia, recognizes the importance of equitable education for all its students. While the school strives to provide quality education, observations suggest that female students may participate less actively in classroom discussions and activities compared to their male counterparts. This disparity in classroom participation is a concern, as active engagement is widely recognized as a crucial factor in academic success (M. M. Ali & Hassan, 2018).

The disparity in participation can contribute to a less equitable learning environment and may limit female students' academic potential. Research has consistently demonstrated the positive correlation between classroom participation and improved learning outcomes, including increased self-confidence [26]. Conversely, limited participation can lead to feelings of marginalization and hinder academic progress [71].

In the School, the specific challenges faced by female students in classroom engagement require further investigation. While general factors like cultural norms and classroom dynamics may play a role, it is crucial to understand the context-specific barriers that impede their classroom involvement. These could range from traditional gender roles within the community to classroom environments that may unintentionally favor male participation. Understanding these specific barriers is essential for developing effective interventions.

While research on the importance of classroom participation for academic success is extensive, there is a relative lack of focused studies that examine the specific barriers to female students' participation in secondary schools within the Ethiopian context. Existing research such as research by Dagnaw et al., (2020); Teferi & Debelo, (2024); Tewachew & Abebe, (2024) often focuses on broader educational

settings and does not provide targeted solutions to address the unique challenges faced by female students in specific subjects. Furthermore, there is a need for action-oriented research that not only identifies these barriers but also implements and evaluates interventions designed to enhance female students' classroom engagement.

This research aims to address this gap by conducting a case study at Shaleka-Jateni Secondary School. The study investigated the specific barriers to female students' classroom participation in Economics classes and explored the relationship between participation and academic performance. By adopting a case study approach, this research seeks to provide practical, context-specific insights into enhancing female students' participation and, ultimately, improving their academic outcomes.

3.3. Research Design

This study employs an **Action Research Design** to explore and address the challenges of female students' classroom participation and its impact on academic performance. Action research is particularly suitable for this study, as it allows for a participatory and iterative approach to problem-solving within a specific educational context [63].

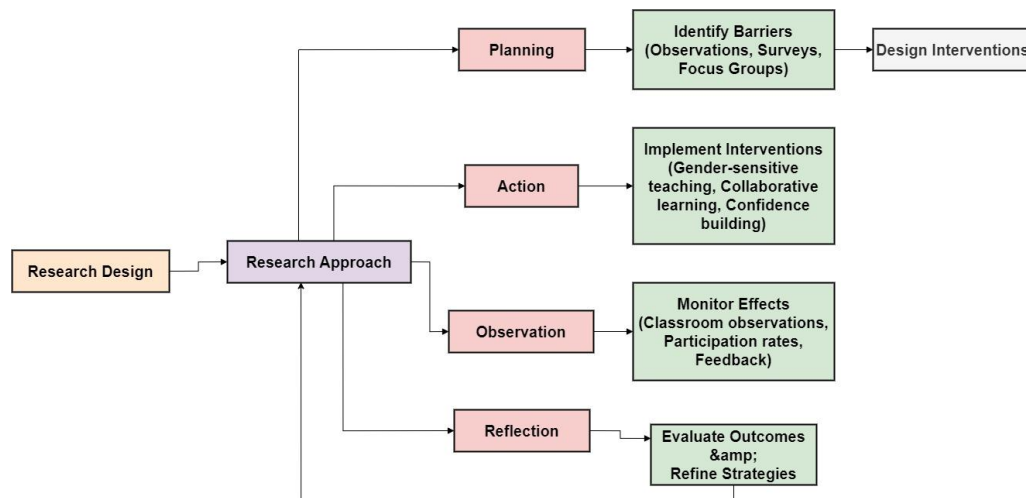


Figure 3: Flow chart of action research design used in this study

3.3.1. Research Approach

This study adopts a cyclical action research framework, grounded in the steps of planning, acting, observing, and reflecting. This iterative process allows for continuous improvement of strategies [61], designed to enhance female students' classroom participation and academic performance. A pre-test and post-test design was applied, as the findings of this research was analyzed based on the comparison between pre-intervention and post-intervention test results.

1. **Planning:** This phase involves identifying barriers to female students' classroom participation through preliminary observations, surveys, and FGD. Based on these findings, an intervention mechanism was selected, focusing on providing training on study skills. A pre-test was also administered to establish a baseline for female students' participation and academic performance. The intervention planning was include:

- Identifying female students for participation
 - Analyzing pre-test (Test I) results using descriptive statistics
 - Disseminating questionnaires to gather additional insights
 - Providing orientation on how to complete the questionnaires
 - Collecting, screening, and feeding data into Microsoft Excel
 - Identifying the major problems affecting female students' academic achievement.
2. **Action:** The intervention strategies were implemented to enhance classroom participation and performance. These strategies include:
- Providing tutorials and peer learning sessions (collaborative learning)
 - Conducting training sessions on study skills to improve academic performance
 - Promote participation and confidence-building strategies.
3. **Observation:** The effects of the interventions were systematically monitored through classroom observations, participation rates, and feedback from students and instructors. Additionally, a post-test (Test II) was conducted to assess the impact of the intervention on academic performance.
4. **Reflection:** The results of the post-test were compared with the pre-test to evaluate the effectiveness of the intervention. This phase includes:
- Collecting post-intervention exam results
 - Comparing pre-test and post-test results using descriptive statistics
 - Analyzing the findings to assess the impact of the intervention
 - Refining strategies based on the outcomes for future implementation
 - Writing a report on the findings and conclusions.

3.3.2. Participants

The study targets social science grade 12th I female students enrolled in the Economics class at Shaleka-Jateni Secondary School. Other participants include male students, who contribute to understanding classroom dynamics, and instructors, who provide insights into teaching practices and intervention outcomes.

3.3.3. Sample

The sample for this research was included female students, male students (for contextual understanding), and Economics instructors. A purposive sampling approach was employed to ensure the inclusion of participants directly involved in or affected by classroom participation activities. This method is deemed appropriate as it allows the researcher to select participants based on their relevance to the research question and their potential to provide rich, in-depth information [72].

The specific composition of the sample is as follows:

Female Students (Target Group): The total number of female students in the 12th-grade section I is 45. Due to the relatively small number of female students and the desire for a more inclusive approach to

capture the full range of experiences and perspectives, all 45 female students were participated in the study. This decision is based on the rationale that including the entire population of female students was provided a more comprehensive understanding of the challenges and opportunities related to their classroom participation. Additionally, this approach simplifies data collection and analysis, given the manageable size of the group, and is expected to yield richer and more representative results.

Male Students (For Context): While the primary focus is on female students, male students were included to provide contextual insights into overall classroom dynamics and to understand any gender-related differences in participation. In the study, all 21 male students were included. This is due to the relatively small class size, which allows for effective management, even though their role is to provide contextual information rather than being the primary focus of the study. Similar to the selection of female students, purposive sampling was used to select the male students.

Instructors: Three Economics instructors were involved in the study. Their participation is crucial as they are directly involved in classroom activities and can provide valuable insights into existing teaching practices and the impact of the interventions.

3.3.4. Data Collection Methods

This study employs a mixed-methods approach, combining qualitative and quantitative data collection methods to provide a comprehensive understanding of the factors influencing female students' classroom participation in Economics and the effectiveness of interventions designed to enhance it. Data was collected from both primary and secondary sources.

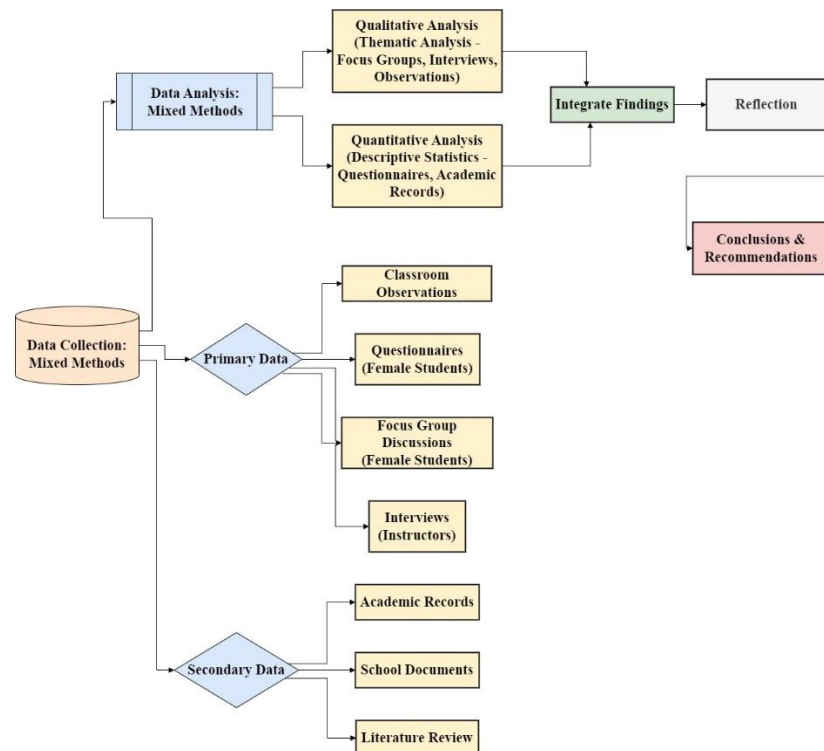


Figure 4: Source and methods of data collection and implementation flow chart

3.3.4.1. Primary Data Sources

Primary data was collected directly from the participants involved in the study. The following methods were used:

Classroom Observations

To systematically document the current levels of female students' classroom participation and to objectively evaluate the impact of the implemented interventions. Observations provide direct, real-time data on student behavior, including verbal participation, engagement in discussions, and interaction with the instructor and peers. Classroom observations offer a valuable, objective perspective on actual participation behaviors, which may differ from self-reported perceptions [73]. They allow researchers to track changes in participation over time, correlating them with the introduction of specific interventions [74]. By using a structured observation protocol, researchers can ensure consistency and reliability in data collection.

Questionnaires

Questionnaires were employed to gather quantitative data on female students' perceptions of the barriers they face to classroom participation, their experiences with the interventions, and their overall attitudes towards classroom dynamics. Questionnaires allow for the efficient collection of data from a large number of students, providing a broad overview of their experiences and perceptions [67]. They can be used to identify trends and patterns in responses, which can then be explored further through qualitative methods [75]. Quantitative data from surveys can also be used to measure the effectiveness of interventions by comparing pre- and post-intervention scores [76].

Focus Group Discussions

FCD were undertaken to explore female students' experiences with classroom participation in greater depth and to gather rich, qualitative insights into the factors that influence their participation. Focus groups provide a platform for students to share their perspectives in a more interactive and dynamic setting than individual interviews [77]. The group dynamic can encourage participants to build on each other's ideas and to express views that they might not share in a one-on-one setting [78]. Focus groups are particularly useful for exploring complex issues and generating diverse perspectives [77].

Interviews

An interview helps to understand instructors' perspectives on female students' classroom participation, their experiences with the implemented strategies, and their suggestions for improvement. Interviews with instructors provide valuable insights into the dynamics of the classroom from the perspective of those who are responsible for facilitating it [79]. Instructors can offer their observations on student behavior, their understanding of the challenges students face, and their assessment of the effectiveness of the interventions [80]. Interviews also allow for in-depth exploration of instructors' pedagogical approaches and their beliefs about gender and participation[81].

3.3.4.2. Secondary Data Sources

Secondary data was used to provide contextual background and support the primary data findings. The following sources were consulted:

Academic Records

The main purpose of academic record data is to assess changes in female students' academic performance metrics, such as grades, test scores, and classwork, as a potential outcome of increased classroom participation. Academic records provide objective, quantitative data on student achievement. By analyzing changes in academic performance over time, researchers can investigate the relationship between classroom participation and academic success. This data can be used to evaluate the overall impact of the interventions on student learning outcomes.

School Documents

Relevant school policies, reports, and demographic data may be consulted to provide contextual information about the school environment and student population.

Literature Review

Existing research on classroom participation, gender dynamics in education, and effective intervention strategies were reviewed to inform the study design, data analysis, and interpretation of findings. This was included academic journals, books, and reports.

By combining these diverse data collection methods, the study aims to provide a robust and nuanced understanding of the factors that influence female students' classroom participation and the effectiveness of strategies designed to enhance it. The mixed-methods approach allows for triangulation of data, increasing the validity and reliability of the findings.

3.3.5. Data Analysis

The data collected through various methods were analyzed using a mixed-methods approach, combining both qualitative and quantitative techniques to provide a comprehensive understanding of the research questions.

Qualitative Data Analysis

Qualitative data, gathered from FGD, interviews with instructors, and classroom observations, were analyzed using thematic analysis. This process involves systematically coding the data to identify recurring patterns, themes, and key concepts related to female students' classroom participation and the impact of the interventions [26]. The identified themes were interpreted in the context of the research questions and used to provide rich, descriptive insights into the lived experiences and perspectives of the participants.

Quantitative Data Analysis

Quantitative data, primarily derived from surveys and academic records, were analyzed using descriptive statistics. This was involved calculating measures of central tendency (such as, mean, median) and dispersion (such as, standard deviation) to describe participation rates, changes in academic performance metrics (such as, grades, test scores), and student perceptions. These statistical measures were used to identify trends, patterns, and potential correlations between classroom participation and academic outcomes. The integration of both qualitative and quantitative findings will allow for triangulation of data, enhancing the validity and robustness of the study's conclusions [82].

4. Results and discussions

4.1. Overview of Findings

The study aimed to assess female students' classroom participation in Economics and its impact on academic performance at Shaleka-Jateni Secondary School. The findings indicate that female students face significant challenges in active participation due to socio-cultural, institutional, and personal barriers. The data collected through classroom observations, student surveys, and teacher interviews reveal that female students' engagement in classroom discussions, question-answer sessions, and group activities is notably lower compared to their male counterparts. However, interventions designed to enhance participation, such as interactive teaching, collaborative learning, teacher encouragement, using of relatable content, additional support sessions, and the presence of female role models, showed promising improvements in engagement levels.

4.2. Female Students' Classroom Participation Levels

4.2.1. Observation Findings

In this study, direct classroom observations across multiple Economics lessons reveal that female students are generally less inclined to actively participate. They are more likely to be passive listeners rather than active contributors, often refraining from raising their hands or answering questions voluntarily. Additionally, during group activities, these students tend to adopt supportive roles rather than stepping into leadership positions and instances of initiating questions are noticeably fewer compared to their male counterparts.

4.2.2. Survey Results

Survey data from the students' highlights only about 17.8% of the respondents (combining strong agreement and agreement) reported active participation in discussions, while nearly 68.9% expressed a negative stance by disagreeing or strongly disagreeing. In the area of questioning during lessons, approximately 75.6% of the students disagreed or strongly disagreed, highlighting a significant reluctance. Furthermore, around 64.4% of the students lacked confidence in expressing their opinions, and only 24.4% positively engaged in group activities. Teacher encouragement also appears insufficient, as only 31.1% felt supported while 46.7% did not. Academic engagement, measured through assignment completion and presentation, was similarly low, with 53.3% of students showing reluctance, and 64.4% reported discomfort when collaborating with male classmates.

4.2.3. Teacher Perspectives

Interviews with Economics teachers provided additional insights into these trends. Teachers noted that while female students often display engagement through written tasks, they are hesitant to share their thoughts orally. This hesitation is partly due to societal and family expectations, which unintentionally encourage them to hold back their opinions. Some teachers also acknowledged that unconscious biases might be influencing classroom interactions, thereby reinforcing the existing gender disparities in participation.

4.2.4. Comparative Analysis with Male Students

A comparative analysis between male and female students' participation levels reveals that male students participate two to three times more frequently in classroom discussions. They are more inclined to challenge the teachers' viewpoints, whereas female students typically accept explanations without

engaging further. Despite this, female students tend to perform better in written assessments, which suggest that their understanding of the subject may not be fully reflected in their verbal contributions.

4.2.5. Implications for Academic Performance

The observed lower levels of participation among female students correlate with diminished confidence in subject mastery, potentially impacting their overall academic performance in Economics. Enhancing classroom participation could, therefore, play a vital role in improving their comprehension, critical thinking skills, and academic outcomes. These indicate a need for targeted interventions aimed at fostering a more supportive and inclusive classroom environment, promoting gender-inclusive teaching methods, and addressing the confidence barriers that currently hinder active participation.

The comprehensive analysis of female students' classroom participation levels indicates a clear need for educational strategies that can bridge the participation gap. Addressing these challenges not only promises to elevate the academic performance of female students but also contributes to creating a more equitable learning environment.

4.3. Factors Affecting Participation

The study identified several interrelated factors that affect female students' classroom participation. These factors can be broadly categorized into socio-cultural, psychological, classroom-related, and institutional influences. Traditional gender norms and cultural expectations play a significant role in shaping female students' behavior in the classroom. Societal beliefs that prioritize modesty and reserve in girls often discourage them from speaking up or challenging ideas publicly. This cultural backdrop creates an environment where female students may feel that active participation is contrary to expected gender roles.

Cultural and societal expectations significantly impact female students' classroom engagement. The survey found that 62% of the students agreed or strongly agreed with the statement that "cultural or societal expectations discourage my active classroom involvement." Additionally, family responsibilities were another major constraint, with 58% respondents acknowledging that their household duties limited their ability to engage in classroom activities. Gender bias in Economics classes emerged as a concern, with 67% of the students agreeing that such biases discouraged female participation. These socio-cultural pressures reinforce traditional gender norms, limiting female students' confidence and willingness to contribute in classroom discussions.

Psychological factors, such as low self-confidence and fear of making mistakes, were prominent barriers to participation. 78% of the students reported that they lacked confidence when speaking in front of the class, and an equal number expressed fear that making mistakes would lead to embarrassment or negative judgment. Anxiety associated with public speaking and the pressure to conform to perceived behavioral expectations for girls further inhibited participation. These internal barriers not only reduce engagement but also contribute to long-term hesitancy in academic and professional settings.

The classroom environment and teaching practices significantly impact student participation. When instructional methods do not encourage active engagement, students are less likely to contribute. 67% of the students agreed that the teaching methods used in Economics did not foster participation. Traditional, lecture-based teaching approaches that prioritize passive learning over interaction often fail to capture the interest of female students. In contrast, interactive and collaborative teaching strategies, such as group

discussions and problem-solving activities, have been shown to create a more inclusive learning environment.

Result from FGD indicates that peer relationships and social dynamics also play a role. In classrooms where male students are called on more frequently, or where a dominant peer group dictates participation norms, female students may hesitate to express their ideas. The presence of social cliques can create an intimidating atmosphere, making female students reluctant to engage actively. A gender-inclusive learning space, where teachers provide targeted encouragement and supportive feedback, is essential in fostering female students' confidence and participation.

Moreover, institutional factors further shape female students' engagement in Economics classes. A lack of gender-responsive policies and professional development for teachers has reinforced participation gaps. Schools that fail to implement gender-inclusive teaching strategies risk perpetuating inequalities, while institutions that actively promote engagement through teacher training and policy reforms tend to observe more balanced participation across genders [66]. Addressing these challenges requires a systemic approach, ensuring that female students receive the necessary support to overcome barriers to participation.

4.4. Effectiveness of Strategies Implemented

The strategies implemented to enhance female students' classroom participation yielded notable improvements. These strategies included interactive teaching, collaborative learning, teacher encouragement, using of relatable content, additional support sessions, and the presence of female role models. Their effectiveness was evaluated through follow-up classroom observations, student feedback, and academic performance analysis. Similar strategies have been shown to enhance female students' engagement in various studies, demonstrating their broader applicability.

Findings from a survey further reinforce the positive impact of these interventions. When asked if interactive and student-centered teaching methods helped them participate more, 44.44% students strongly agreed and 33.33% agreed, while only 11.11% remained undecided and another 11.11% disagreed. Likewise, 40% students strongly agreed and 37.78% agreed that group discussions and peer learning sessions encouraged their participation, with minimal disagreement. Teacher encouragement also played a crucial role, with 48.89% students strongly agreeing and 28.89 agreeing, demonstrating that active teacher support significantly influenced female students' willingness to engage in classroom discussions.

Classroom observations following the intervention phase confirmed these findings, indicating a clear increase in female students' participation, aligning with previous studies on gender-inclusive teaching. Female students were more inclined to raise their hands, contribute to discussions, and assume leadership roles in group activities compared to the pre-intervention phase. Similar patterns were noted in studies by [57], [60], which reported increased participation among students in schools following the introduction of inclusive teaching methods.

The effectiveness of using real-life examples and case studies in Economics also emerged from the survey, with 42.22% students strongly agreeing and 31.11% agreeing that these strategies enhanced their participation. Additionally, extra support sessions for female students showed similar trends, with 46.67% strongly agreeing and 26.67% agreeing. Having female role models in Economics was also perceived as

beneficial, as 37.78% students strongly agreed and 35.56 agreed, highlighting the importance of representation in fostering engagement. These results are consistent with previous research, such as [9], which found that gender-inclusive strategies, relatable content, and mentorship contributed to a more supportive learning environment for female students.

Teachers at Shaleka-Jateni played a vital role in encouraging participation, which was crucial to the success of the interventions. Similar to finding by [41], the teachers' active engagement in addressing biases, providing positive reinforcement, and ensuring equal opportunities for all students significantly improved female students' participation. Their proactive role in creating a fair classroom environment was a key in fostering confidence and reducing the fear of judgment, which often discourages female students from speaking up.

Improvements in academic performance further validated these strategies. Female students at Shaleka-Jateni showed notable progress, particularly in oral assessments, classroom presentations, and problem-solving activities. A comparative analysis of pre-intervention and post-intervention test scores revealed significant academic gains, reflecting findings from studies such as [38], [68], which highlighted the positive effects of gender-focused interventions on female students' academic achievements.

Despite these positive outcomes, challenges remain. Similar to the study by [21], some female students at Shaleka-Jateni continued to hesitate in participating, largely due to deeply ingrained cultural and social expectations. Although interventions fostered a more inclusive learning environment, a subset of students still struggled with confidence issues linked to gender norms. Addressing these challenges requires continuous reinforcement of the strategies, as emphasized by [38], who advocated for sustained teacher support, mentorship programs, and peer networks to ensure long-term success.

4.5. Impact on Academic Performance

The analysis of academic records reveals that female students at Shaleka-Jateni Secondary School exhibit significantly low academic performance in Economics. Their grades, test scores, and classwork indicate a persistent achievement gap compared to their male counterparts. This trend suggests that female students may not be fully benefiting from the learning process, raising concerns about the factors contributing to their lower performance.

Furthermore, an evaluation of school documents, including policies, reports, and demographic data, highlights that there has been insufficient institutional support specifically designed to enhance female students' participation and engagement in the classroom. The absence of targeted interventions addressing female students' active involvement has had a direct impact on their academic performance. Research suggests that students learn more effectively through active engagement rather than passive listening [34], [59], [71]. However, the lack of structured strategies to encourage female students' participation has limited their opportunities to interact, ask questions, and develop a deeper understanding of the subject matter.

To address these challenges, the implementation of strategies aimed at enhancing female students' classroom participation has led to increased engagement and significant improvements in academic performance in Economics. The findings of this study align with previous research, further reinforcing the effectiveness of gender-inclusive teaching strategies across diverse educational settings. These results

highlight the importance of active learning approaches and institutional support in fostering female students' academic success.

By creating an environment that encourages active participation, this study demonstrates that gender-responsive teaching strategies can bridge the academic performance gap and contribute to better learning outcomes for female students in Economics.

4.5.1. Quantitative Analysis of Academic Performance

Table 1, presents a comparative analysis of female students' academic performance before and after the intervention, based on the average results of 45 students. The data evaluates three key academic activities—Written Test, Oral Presentation, and Class Participation—by comparing their scores before and after the intervention, along with the percentage improvement. In the Written Test, students scored an average of 56% before the intervention, which increased to 83% after the intervention, showing an improvement of 27%. This suggests that the intervention helped students enhance their ability to understand and express knowledge in written form. Similarly, the Oral Presentation score improved from 52% to 75%, reflecting a 23% increase, which indicates that students gained better communication skills and confidence in presenting their ideas orally. The most significant improvement was observed in Class Participation, where the pre-intervention score was 48%, rising to 85% post-intervention, marking a 37% increase. This suggests that the intervention was highly effective in encouraging female students to actively engage in classroom discussions and activities.

The observed improvements are consistent with findings from previous studies, where similar interventions resulted in significant increases in students' test scores and classroom engagement. For example, Gutemberg Rapôso, (2023) found that 88% of students rated their oral presentations as satisfactory or very satisfactory following targeted interventions, indicating enhanced confidence and competence. Similarly, Richard et al., (2022) reported that such practices contributed to narrowing the performance gap. Moreover, Dawkins et al., (2017) suggested that supportive strategies could mitigate gender biases, potentially leading to improved academic performance among female students.

The more substantial improvements observed in the current study, particularly in class participation (37%), suggest that the intervention strategies employed—such as interactive teaching, collaborative learning, teacher encouragement, using of relatable content, additional support sessions, and the presence of female role models—were highly effective in fostering an inclusive and engaging learning environment. The results highlight the positive impact of targeted interventions on female students' academic performance, reinforcing the importance of implementing similar strategies to enhance learning outcomes.

Table 1: Comparison of Female Students' Academic Performance before and After the Intervention

Test Type	Pre-Intervention	Post-Intervention	Improvement
	Score (Average)	Score (Average)	(%)
Written Test	56%	83%	27%
Oral Presentation	52%	75%	23%
Class Participation	48%	85%	37%

4.5.2. Student Feedback

Both qualitative and quantitative data highlight the significant impact of enhanced classroom participation on female students' academic performance in Economics. The survey results indicate a strong positive correlation between active engagement and academic success. For instance, when asked whether their active participation in Economics improved their understanding of the subject, 51.11% students strongly agreed, 33.33% agreed, 8.89% were undecided, 4.44% disagreed, and 2.22% strongly disagreed—meaning that approximately 84% of respondents acknowledged a better grasp of the subject through participation. Similarly, 84% of students affirmed that engaging in class discussions helped them perform better in assessments, while 87% reported increased interest in Economics due to their active involvement. Furthermore, 87% of students recognized a noticeable improvement in their Economics grades since participating more actively in class.

These survey findings align with qualitative insights from student FGD, reinforcing the idea that reducing the fear of negative judgment fosters confidence and enhances academic performance. One student remarked:

"Before the intervention, I was afraid to answer in class. I felt like I might get it wrong and that everyone would laugh at me. But now, after practicing more and receiving encouragement from my teacher, I feel more confident. I can now give presentations without worrying."

Another student added:

"I always knew the answers, but I never wanted to speak out loud. After we started discussing more openly in class, I felt it was okay to make mistakes and learn from them. This made me try harder on my assignments, and I performed better."

These insights further support the notion that participation not only builds confidence but also improves students' performance in assessments and exams. In particular, survey results showed that 84% of students felt more confident answering Economics exam questions after participating in class discussions. This finding echoes the study by Tewachew & Abebe, (2024), which established a direct link between increased classroom participation and enhanced academic achievement.

4.5.3. Teacher Observations

Teacher observations provided further evidence of the positive impact on academic performance. One teacher noted:

"Before the intervention, the female students were mostly quiet, and their test scores reflected that. Now, they are more willing to participate and ask questions. I've seen an improvement in their understanding of the subject, and their test results are much better. It's clear that when they engage more, they perform better academically."

This observation is in line with findings from studies by Souidi & Remil, (2024); Tarusha & Bushi, (2024), where proactive teacher engagement and bias reduction led to improved academic outcomes for female students.

4.5.4. Correlation between Participation and Performance

Figure 5 illustrates the correlation between classroom participation and academic performance based on an intervention conducted with 45 female students. It presents the pre- and post-intervention scores for both participation (out of 10%) and academic performance (out of 100%). Before the intervention, the average classroom participation score was 4.8%, while the corresponding academic performance was 52%. However, after the intervention, the participation score increased to 8.5%, and the academic performance improved significantly to 81%. These results indicate a positive correlation between classroom participation and academic performance, as the increase in participation following the intervention led to a substantial improvement in academic outcomes. This suggests that interventions aimed at enhancing female students' engagement in classroom activities can be an effective strategy for improving their academic performance.

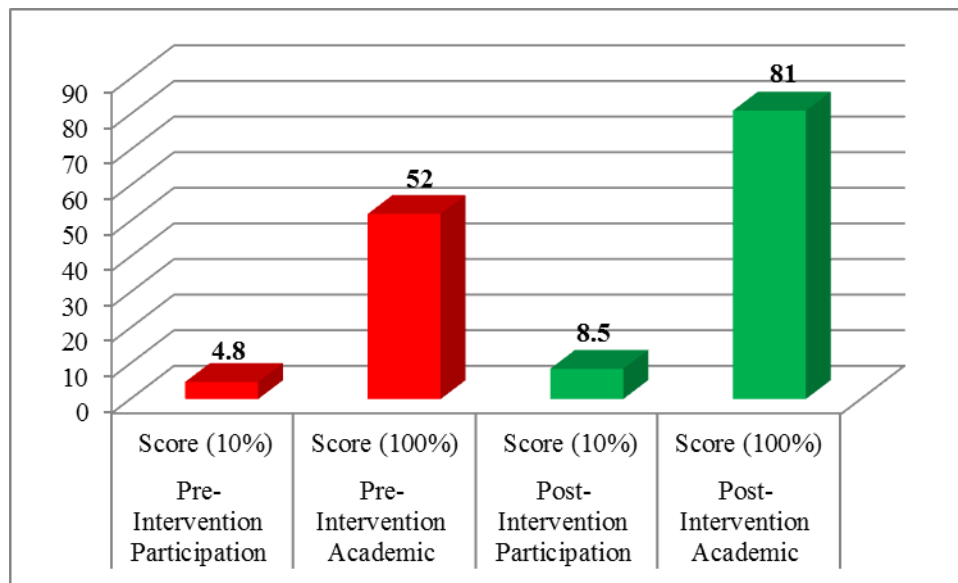


Figure 5: Correlation between Classroom Participation and Academic Performance

4.5.5. Comparison with Existing Literature

The findings from Shaleka-Jateni Secondary School provide compelling evidence of the impact of classroom participation interventions on female students' academic performance, aligning with broader research conducted in similar issues. Table 2 presents a comparative analysis of academic performance improvement between female and male students before and after the intervention. The data, based on the average scores of 45 female and 21 male students, reveal that female students initially had a lower academic performance, with an average pre-intervention score of 52%, compared to 70% for male students. After the intervention, female students' scores increased to 81%, while male students' scores rose to 86%. This indicates that both groups benefited from the intervention; however, female students demonstrated a greater percentage improvement (29%) compared to male students (16%). The significant improvement among female students suggests that the intervention effectively addressed barriers to their academic participation and performance. While male students maintained a higher average score post-intervention, the gap between the two groups narrowed, reinforcing the effectiveness of the strategies implemented.

Table 2: Comparison of Academic Performance Improvement between Female and Male Students

Group	Pre-Intervention	Post-Intervention	Improvement
	Score (Average)	Score (Average)	(%)
Female Students	52%	81%	29%
Male Students	70%	86%	16%

These findings are consistent with existing literature, where similar studies have documented that enhancing female student' participation leads to measurable improvements in academic performance. For example, NewsHour Productions, (2010) found that women who engaged in brief writing exercises about their personal values achieved higher grades compared to those who did not participate in such exercises. Similarly, Feng et al., (2023) reported that implementing gender-inclusive teaching strategies reduced the performance gap between male and female students, with female students showing significant progress in both written and oral assessments. Moreover, the higher percentage improvement among female students at Shaleka-Jateni Secondary School aligns with findings from [88], which highlighted that targeted interventions were particularly effective for female students, contributing to a narrowing of the gender performance gap.

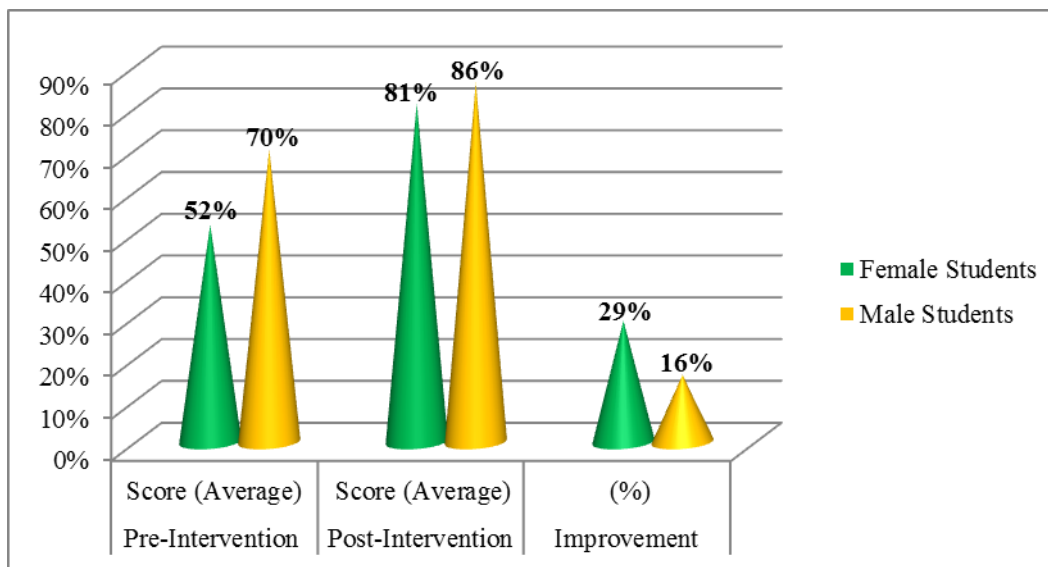


Figure 6: Comparison of Academic Performance Improvement between Female and Male Students

As shown in Figure 6, the strategies implemented at Shaleka-Jateni Secondary School have had a notable positive impact on female students' academic performance in Economics. Both quantitative and qualitative data demonstrate that increased engagement leads to better outcomes in written tests, oral presentations, and overall classroom participation. Furthermore, these results align with broader research of similar issues, reinforcing the effectiveness and applicability of gender-inclusive teaching strategies. Moving forward, sustained efforts to create a supportive learning environment, coupled with continued teacher engagement and mentorship programs, will be essential to maintaining and further enhancing these academic gains.

5. Conclusion and Recommendations

5.1. Summary of Key Findings

The study aimed to explore strategies for enhancing female students' classroom participation in Economics at Shaleka-Jateni Secondary School to improve their academic performance. The key findings of the study revealed that before the intervention, female students exhibited low levels of participation in Economics classes, which negatively impacted their academic performance. Many students were hesitant to speak in class due to fear of judgment and lack of confidence. However, the implementation of strategies, including interactive teaching, collaborative learning, teacher encouragement, using of relatable content, additional support sessions, and the presence of female role models, led to a noticeable increase in participation. Consequently, these strategies resulted in significant improvements in academic performance, with a 27% increase in written test scores, a 23% improvement in oral presentations, and a 37% increase in overall classroom participation. Both female students and teachers reported a positive change in classroom dynamics, with female students expressing increased confidence in their ability to participate, while teachers observed better engagement and improved academic outcomes. These findings are consistent with similar studies conducted in other school, which also reported positive effects of gender-inclusive teaching strategies on female students' classroom participation and academic performance.

5.2. Recommendations for Enhancing Female Students' Participation

Based on the findings of this study, the following recommendations are made to further enhance female students' participation in Economics and other subjects:

1. **Create Gender-Inclusive Learning Environments:** Teachers should continue to foster a supportive classroom environment where all students, especially females, feel valued and encouraged to participate. This includes using gender-neutral language, providing equal opportunities for both male and female students to contribute, and addressing any biases that may discourage female students from speaking out.
2. **Promote Confidence-Building Activities:** Schools should implement more activities that promote confidence-building, such as group discussions, peer tutoring, and class presentations. These activities allow female students to practice speaking in front of their peers in a safe and supportive environment.
3. **Ongoing Teacher Training:** Teachers should undergo continuous professional development to better understand and address the challenges faced by female students in the classroom. Training should focus on gender-responsive teaching methods, active listening skills, and techniques for encouraging reluctant students to participate.
4. **Mentorship and Peer Support Programs:** Establishing mentorship programs where senior female students guide their peers could further enhance confidence and participation. Peer support networks can help create a more inclusive environment where female students feel empowered to share their thoughts and ideas.
5. **Encourage Parental Involvement:** Schools should engage with parents to raise awareness about the importance of female students' participation in education. Parents can be encouraged to support their daughters' academic engagement at home, fostering a positive attitude towards education.

5.3. Limitations of the Study

5.4. Suggestions for Future Research

Future research could build upon the findings of this study by addressing the following areas:

1. **Longitudinal Studies:** Future studies should investigate the long-term impact of gender-inclusive teaching strategies on female students' participation and academic performance. A longitudinal approach would help assess whether the improvements observed in this study are sustained over time.
2. **Wider Geographical Coverage:** Future research should expand to include schools in different regions of Ethiopia, particularly rural and urban areas, to assess the broader applicability of the strategies. This would help determine if the interventions are equally effective in diverse educational contexts.
3. **Focus on Other Subjects:** Future studies could explore the impact of gender-inclusive teaching strategies in other subjects, such as mathematics, science, and social studies, to examine whether the strategies can be generalized to other areas of the curriculum.
4. **Examining the Role of Socio-Cultural Factors:** It would be valuable to explore how socio-cultural factors, such as family expectations, community norms, and gender roles, influence female students' participation in school. Understanding these factors could inform more tailored strategies for encouraging female students' engagement.
5. **Impact of Technology on Participation:** Research could also investigate the role of educational technology in enhancing female students' classroom participation, where digital tools could foster interactive learning environments and improve engagement.

Ethics approval

Not applicable.

Funding

This research received no funding from any source.

Availability of data and material

The datasets used and/or analyzed during the current study are available in the article/from the corresponding author on request.

CRedit authorship contribution statement

Melion Kasahun: Writing – original draft, Resources, Methodology, Formal analysis, Data curation, Conceptualization.

Getachew Hailemariam: Writing – review & editing, Formal analysis, Data curation.

Tihitina Tadele: Writing – review & editing, Formal analysis, Data curation.

Obsitu Duba: Writing – review & editing, Data curation.

Tesfaye Lemma: Writing – review & editing, Supervision

Burje Kore: Writing – review & editing, Supervision

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

Reference

- [1] United Nations, “Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all — SDG Indicators.” Accessed: Feb. 08, 2025. [Online]. Available: <https://unstats.un.org/sdgs/report/2017/goal-04/>
- [2] K. N. Kuteesa, C. U. Akpuokwe, and C. A. Udeh, “GENDER EQUITY IN EDUCATION: ADDRESSING CHALLENGES AND PROMOTING OPPORTUNITIES FOR SOCIAL EMPOWERMENT,” *Int. J. Appl. Res. Soc. Sci.*, vol. 6, no. 4, Art. no. 4, Apr. 2024, doi: 10.51594/ijarss.v6i4.1034.
- [3] P. A. Gyasi, L. Zhou, and E. N. A. Amarteifio, “Socio-cultural and economic determinants of girl child education in Ashaiman municipality of the Greater Accra region of Ghana,” *Cogent Soc. Sci.*, Dec. 2023, Accessed: Feb. 08, 2025. [Online]. Available: <https://www.tandfonline.com/doi/abs/10.1080/23311886.2023.2275431>
- [4] K. O. Ahmed, “Educational Challenges Affecting Girls’ Academic Achievement in Public Secondary Schools in Burao, Somaliland,” *Am. J. Arts Hum. Sci.*, vol. 3, no. 4, Art. no. 4, Nov. 2024, doi: 10.54536/ajahs.v3i4.3567.
- [5] K. N. Kuteesa, C. U. Akpuokwe, and C. A. Udeh, “GENDER EQUITY IN EDUCATION: ADDRESSING CHALLENGES AND PROMOTING OPPORTUNITIES FOR SOCIAL EMPOWERMENT,” *Int. J. Appl. Res. Soc. Sci.*, vol. 6, no. 4, Art. no. 4, Apr. 2024, doi: 10.51594/ijarss.v6i4.1034.
- [6] F. C. Vilhena, R. Bencivenga, M. L. Belloso, C. Leone, and A. C. Taramasso, “Participatory Strategies to Integrate Gender+ Into Teaching and Research,” *Int. Conf. Gend. Res.*, vol. 7, no. 1, Art. no. 1, Apr. 2024, doi: 10.34190/icgr.7.1.2233.
- [7] M. Guenaga, A. Eguíluz, P. Garaizar, and A. Mimenza, “The Impact of Female Role Models Leading a Group Mentoring Program to Promote STEM Vocations among Young Girls,” *Sustainability*, vol. 14, no. 3, Art. no. 3, Jan. 2022, doi: 10.3390/su14031420.
- [8] M. Mčilongo and K. Strydom, “The significance of mentorship in supporting the career advancement of women in the public sector,” *Heliyon*, vol. 7, no. 6, p. e07321, Jun. 2021, doi: 10.1016/j.heliyon.2021.e07321.
- [9] N. Ohamadike, “Addressing the education gender gap in Africa | Good Governance Africa.” Accessed: Feb. 08, 2025. [Online]. Available: <https://gga.org/addressing-the-education-gender-gap-in-africa/>
- [10] O. Chabaya, S. Rembe, and N. Wadesango, “The persistence of gender inequality in Zimbabwe: factors that impede the advancement of women into leadership positions in primary schools,” *South Afr. J. Educ.*, vol. 29, no. 2, pp. 235–251, May 2009.
- [11] Vuyokazi Nomlomo, Alawia I. Farag, and Halla Holmarsdottir, “Challenges to gender equality and access in education: Perspectives from South Africa and Sudan,” ResearchGate. Accessed: Feb. 08, 2025. [Online]. Available: https://www.researchgate.net/publication/277813292_Challenges_to_gender_equality_and_access_in_education_Perspectives_from_South_Africa_and_Sudan

- [12] N. Tabassum and B. S. Nayak, "Gender Stereotypes and Their Impact on Women's Career Progressions from a Managerial Perspective," *IIM Kozhikode Soc. Manag. Rev.*, Feb. 2021, doi: 10.1177/2277975220975513.
- [13] A. S. Beyene, C. Chojenta, H. S. Roba, A. S. Melka, and D. Loxton, "Gender-based violence among female youths in educational institutions of Sub-Saharan Africa: a systematic review and meta-analysis," *Syst. Rev.*, vol. 8, no. 1, Art. no. 1, Dec. 2019, doi: 10.1186/s13643-019-0969-9.
- [14] K. N. Kuteesa, C. U. Akpuokwe, and C. A. Udeh, "GENDER EQUITY IN EDUCATION: ADDRESSING CHALLENGES AND PROMOTING OPPORTUNITIES FOR SOCIAL EMPOWERMENT," *Int. J. Appl. Res. Soc. Sci.*, vol. 6, no. 4, Art. no. 4, Apr. 2024, doi: 10.51594/ijarss.v6i4.1034.
- [15] FundsforNGOs, "Promoting Girls' Education in Rural Areas: Breaking the Cycle of Poverty and Inequality - fundsforNGOs - Grants and Resources for Sustainability." Accessed: Feb. 08, 2025. [Online]. Available: <https://www.fundsforngos.org/proposals/promoting-girls-education-in-rural-areas-breaking-the-cycle-of-poverty-and-inequality/>
- [16] R. Booth, "Emerging Issues in East Africa for Girls' Education in East Africa," The Institute of Development Studies and Partner Organisations, report, Jan. 2022. doi: 10.19088/K4D.2022.007].
- [17] T. Molla and D. Cuthbert, "Qualitative inequality: experiences of women in Ethiopian higher education," *Gend. Educ.*, Nov. 2014, Accessed: Feb. 08, 2025. [Online]. Available: <https://www.tandfonline.com/doi/abs/10.1080/09540253.2014.970614>
- [18] M. F. Hailu, "Examining the role of Girl Effect in contributing to positive education ideologies for girls in Ethiopia," *Gend. Educ.*, vol. 31, no. 8, pp. 986–999, Nov. 2019, doi: 10.1080/09540253.2018.1440284.
- [19] D. B. Dhiman, "Education's Role in Empowering Women and Promoting Gender Inequality: A Critical Review," 2023, Accessed: Feb. 08, 2025. [Online]. Available: <https://www.authorea.com/doi/full/10.36227/techrxiv.24329284.v1?commit=be54e08c3114cc7c4f42de46899656bb364d6672>
- [20] A. O. Nur, "The Academic Success Among the Students of Low-Income Families.," International Journal of Research and Innovation in Social Science. Accessed: Feb. 08, 2025. [Online]. Available: <https://rsisinternational.org/journals/ijriss/articles/the-academic-success-among-the-students-of-low-income-families/>
- [21] P. S. Bangura and A. W. Mambo, "Barriers to Female Education and its Impact on Slow Socio-Economic Development of the Family: A Case of Africa International University," *Res. J. Educ. Teach. Curric. Stud.*, vol. 1, no. 1, Art. no. 1, Aug. 2023, doi: 10.58721/rjetcs.v1i1.280.
- [22] L. Naven, J. Egan, E. M. Sosu, and S. Spencer, "The influence of poverty on children's school experiences: pupils' perspectives," Oct. 2019, doi: 10.1332/175982719X15622547838659.
- [23] D. B. Asmamaw, T. Z. Tafere, and W. D. Negash, "Prevalence of teenage pregnancy and its associated factors in high fertility sub-Saharan Africa countries: a multilevel analysis," *BMC Womens Health*, vol. 23, no. 1, p. 23, Jan. 2023, doi: 10.1186/s12905-023-02169-7.
- [24] A. H. Shibeshi *et al.*, "Teenage pregnancy and its associated factors in Kenya: a multilevel logistic regression analysis based on the recent 2022 Kenyan demographic and health survey," *Int. J. Adolesc. Youth*, vol. 29, no. 1, p. 2401531, Dec. 2024, doi: 10.1080/02673843.2024.2401531.
- [25] R. Otienoh, "CONDUCTING ACTION RESEARCH IN KENYAN PRIMARY SCHOOLS: A NARRATIVE OF LIVED EXPERIENCES," *Can. J. Action Res.*, vol. 16, no. 1, Art. no. 1, Mar. 2015, doi: 10.33524/cjar.v16i1.179.
- [26] A. Tewachew and T. Abebe, "Assessing the Classroom Participation of Female Students in EFL Speaking Sessions in the Course of Communicative Skills I at Debark University, Ethiopia," *ResearchGate*, Oct. 2024, doi: 10.36348/merjll.2024.v04i02.002.
- [27] T. Semela and M. Tsige, "Gendered Policies in Ethiopian Higher Education: Are Policy Promises Vanishing with Time?," *High. Educ. Policy*, vol. 37, no. 3, pp. 568–589, Sep. 2024, doi: 10.1057/s41307-023-00320-5.

- [28] M. Abera, A. Nega, Y. Tefera, and A. A. Gelagay, "Early marriage and women's empowerment: the case of child-brides in Amhara National Regional State, Ethiopia," *BMC Int. Health Hum. Rights*, vol. 20, no. 1, p. 30, Dec. 2020, doi: 10.1186/s12914-020-00249-5.
- [29] R. Dawit, "Understanding the Consequence of Early Marriage on Girls' Education: The Case of South Sudanese Refugee Girls in Nguenyiel Refugee Camp, Gambella Peoples' National Regional State, Ethiopia," Addis Ababa University, 2023. Accessed: Feb. 08, 2025. [Online]. Available: <https://etd.aau.edu.et/handle/123456789/3912>
- [30] M. F. Hailu, "Examining the role of Girl Effect in contributing to positive education ideologies for girls in Ethiopia," *Gend. Educ.*, vol. 31, no. 8, pp. 986–999, Nov. 2019, doi: 10.1080/09540253.2018.1440284.
- [31] M. T. Teferi and D. B. Debelo, "Exploring the experience of female middle managers in secondary schools of Jimma town, Ethiopia," *Soc. Sci. Humanit. Open*, vol. 10, p. 101003, Jan. 2024, doi: 10.1016/j.ssaho.2024.101003.
- [32] A. Melak and S. Singh, "Women's Participation and Factors Affecting Their Academic Performance in Engineering and Technology Education: A Study of Ethiopia," *Sustainability*, vol. 13, no. 4, Art. no. 4, Jan. 2021, doi: 10.3390/su13042246.
- [33] D. M. Mihiretie, "The pedagogy of teacher education in Ethiopia: Reconstructing understandings and practices on teaching about teaching and learning to teach," *Bahir Dar J. Educ.*, vol. 23, no. 2, Art. no. 2, Jun. 2023, doi: 10.4314/bdje.v23i2.3.
- [34] M. M. Ali and N. Hassan, "Defining Concepts of Student Engagement and Factors Contributing to Their Engagement in Schools," *Creat. Educ.*, vol. 9, no. 14, Art. no. 14, Oct. 2018, doi: 10.4236/ce.2018.914157.
- [35] V. Nyiransabimana, D. B. Jarbandhan, and C. J. Auriacombe, "Key Socio-Economic and Cultural Determinants Influencing Gender Inequality in Education in Developing Countries with Reference to the Case of Rwanda," *Administratio Publica*. Accessed: Feb. 09, 2025. [Online]. Available: https://journals.co.za/doi/10.10520/ejc-adminpub_v32_n1_a10
- [36] T. B. Wube, S. G. Asgedom, Z. M. Jemal, and L. G. Gebrekirstos, "Academic performance and associated factors among female university students," *Glob. Epidemiol.*, vol. 8, p. 100175, Dec. 2024, doi: 10.1016/j.gloepi.2024.100175.
- [37] A. Dagnew, A. Yirdaw, and S. Asrat, "Challenges that contribute to low participation of women in educational leadership at government primary schools, Ethiopia," *Contemp. Educ. Res. J.*, vol. 10, no. 3, Art. no. 3, Aug. 2020, doi: 10.18844/cej.v10i3.4968.
- [38] E. D. Ananga, "Gender Responsive Pedagogy for Teaching and Learning: The Practice in Ghana's Initial Teacher Education Programme," *Creat. Educ.*, vol. 12, no. 4, Art. no. 4, Apr. 2021, doi: 10.4236/ce.2021.124061.
- [39] E. Lapon and L. Buddington, "The impact of peer mentoring in first-year education students," *Int. J. Mentor. Coach. Educ.*, vol. 13, no. 1, pp. 73–87, Oct. 2023, doi: 10.1108/IJMCE-01-2023-0002.
- [40] N. Rudhumbu, "A Gender-Based Analysis of Classroom Interaction Practices: The Effect Thereof on University Students' Academic Performance," *Int. J. Learn. Teach. Educ. Res.*, vol. 21, no. 5, Art. no. 5, May 2022, Accessed: Feb. 09, 2025. [Online]. Available: <https://ijlter.org/index.php/ijlter/article/view/5140>
- [41] C. F. Souidi and N. E. H. Remil, "Investigating the Impact of Gender Bias on Classroom Interaction The Case of Second-Year EFL Students at Saida's University," ResearchGate. Accessed: Feb. 09, 2025. [Online]. Available: https://www.researchgate.net/publication/381323443_Investigating_the_Impact_of_Gender_Bias_on_Classroom_Interaction_The_Case_of_Second-Year_EFL_Students_at_Saida's_University
- [42] O. Guy-Evans, "Vygotsky's Sociocultural Theory Of Cognitive Development." Accessed: Feb. 12, 2025. [Online]. Available: <https://www.simplypsychology.org/vygotsky.html>
- [43] M. V. Encorporado, S. Y. Razonable, J. B. Ababon, B. Pasilang, M. P. Regulacion, and R. A. A. Sasan, "Correlation Between Reinforcers and Level of Self-Esteem," *J. Learn. Dev. Stud.*, vol. 3, no. 3, Art. no. 3, Nov. 2023, doi: 10.32996/jlds.2023.3.3.3.

- [44] M. Micari and D. Drane, "Intimidation in small learning groups: The roles of social-comparison concern, comfort, and individual characteristics in student academic outcomes," *Act. Learn. High. Educ.*, vol. 12, no. 3, pp. 175–187, Nov. 2011, doi: 10.1177/1469787411415078.
- [45] H. Phan and D. T. M. Lan, "Using Think-Pair-Share Strategy to Support Students in Speaking Lessons," *J. Engl. Lang. Teach. Appl. Linguist.*, vol. 3, no. 4, Art. no. 4, Apr. 2021, doi: 10.32996/jeltal.2021.3.4.1.
- [46] Md. Rakib, "Exploring the Impact of Gender Stereotypes on Academic Pursuits among Students," *International Journal of Research and Innovation in Social Science*. Accessed: Feb. 12, 2025. [Online]. Available: <https://rsisinternational.org/journals/ijriss/articles/exploring-the-impact-of-gender-stereotypes-on-academic-pursuits-among-students/>
- [47] J. SWIFT-MORGAN, "What Community Participation in Schooling Means: Insights from Southern Ethiopia," *Harv. Educ. Rev.*, vol. 76, no. 3, pp. 339–368, Sep. 2008, doi: 10.17763/haer.76.3.e475j32j69q27x63.
- [48] A. Saleem, H. Kausar, and F. Deebea, "Social Constructivism: A New Paradigm in Teaching and Learning Environment," *Perenn. J. Hist.*, vol. 2, no. 2, Art. no. 2, Dec. 2021, doi: 10.52700/pjh.v2i2.86.
- [49] P. Saarsar, "Exploring the Constructivist Approach in Education: Theory, Practice, and Implications," *ResearchGate*. Accessed: Feb. 12, 2025. [Online]. Available: https://www.researchgate.net/publication/379669385_Exploring_the_Constructivist_Approach_in_Education_Theory_Practice_and_Implications
- [50] L. Zhu and S. M. Atompag, "The Application of the Constructivism Theory in Enhancing Classroom Teaching," *J. Contemp. Educ. Res.*, vol. 7, no. 12, Art. no. 12, Dec. 2023, doi: 10.26689/jcer.v7i12.5792.
- [51] J. Zajda, "Constructivist Learning Theory and Creating Effective Learning Environments," in *Globalisation and Education Reforms: Creating Effective Learning Environments*, J. Zajda, Ed., Cham: Springer International Publishing, 2021, pp. 35–50. doi: 10.1007/978-3-030-71575-5_3.
- [52] E. R. Amalia, "Withdrawn: Collaborative Learning: The Concepts and Practices in the Classroom," Oct. 23, 2018, *OSF*. Accessed: Feb. 12, 2025. [Online]. Available: https://osf.io/xn67t_v1
- [53] H. Mahn and V. John-Steiner, "Vygotsky and Sociocultural Approaches to Teaching and Learning," in *Handbook of Psychology, Second Edition*, John Wiley & Sons, Ltd, 2012. doi: 10.1002/9781118133880.hop207006.
- [54] R. L. BARFIELD, "Students' Perceptions of and Satisfaction with Group Grades and the Group Experience in the College Classroom," *Assess. Eval. High. Educ.*, vol. 28, no. 4, pp. 355–370, Aug. 2003, doi: 10.1080/0260293032000066191.
- [55] S. Freeman *et al.*, "Active learning increases student performance in science, engineering, and mathematics," *Proc. Natl. Acad. Sci.*, vol. 111, no. 23, pp. 8410–8415, Jun. 2014, doi: 10.1073/pnas.1319030111.
- [56] R. Li, "How Can Group Work Be More Effective in Classroom?," *Lect. Notes Educ. Psychol. Public Media*, vol. 6, pp. 255–261, May 2023, doi: 10.54254/2753-7048/6/20220302.
- [57] Triyanto, "Understanding student participation within a group learning," *ResearchGate*, Nov. 2024, doi: 10.15700/saje.v39n2a1629.
- [58] L. Rusmin, Y. Misrahayu, F. Pongpalilu, R. Radiansyah, and D. Dwiyanto, "Critical Thinking and Problem-Solving Skills in the 21st Century," *Join J. Soc. Sci.*, vol. 1, no. 5, Art. no. 5, Aug. 2024, doi: 10.59613/svhy3576.
- [59] N. Susilowati, A. Mahmud, and P. N. Sari, "Communication Skill, Student Engagement and Self-Efficacy: Flow on Effect on Student Online Learning," *J. Educ. Technol.*, vol. 6, no. 1, Art. no. 1, Mar. 2022, doi: 10.23887/jet.v6i1.41941.
- [60] O. M. Ali, "Culturally Responsive Teaching: Strategies for Inclusive Education," *ResearchGate*. Accessed: Feb. 13, 2025. [Online]. Available: https://www.researchgate.net/publication/383273450_Culturally_Responsive_Teaching_Strategies_for_Inclusive_Education

- [61] J. S. Clark, S. Porath, J. Thiele, and M. Jobe, "What is Action Research for Classroom Teachers?," 2025, Accessed: Feb. 13, 2025. [Online]. Available: <https://kstatelibraries.pressbooks.pub/gradactionresearch/chapter/chapt1/>
- [62] W. Carr and S. Kemmis, *Becoming Critical: Education Knowledge and Action Research*, 0 ed. Routledge, 2003. doi: 10.4324/9780203496626.
- [63] J. McNiff, *Action Research*, 0 ed. Routledge, 2013. doi: 10.4324/9780203112755.
- [64] J. Peters, "Teachers engaging in action research: challenging some assumptions," *Educ. Action Res.*, Dec. 2004, doi: 10.1080/09650790400200267.
- [65] S. D. Jacobs, "A History and Analysis of the Evolution of Action and Participatory Action Research," *Can. J. Action Res.*, vol. 19, no. 3, Art. no. 3, Dec. 2018, doi: 10.33524/cjar.v19i3.412.
- [66] A. F. Akinyemi, S. Rembe, J. Shumba, and T. M. Adewumi, "Collaboration and mutual support as processes established by communities of practice to improve continuing professional teachers' development in high schools," *Cogent Educ.*, Jan. 2019, Accessed: Feb. 13, 2025. [Online]. Available: <https://www.tandfonline.com/doi/abs/10.1080/2331186X.2019.1685446>
- [67] S. M. S. Kabir, "METHODS OF DATA COLLECTION," in *ResearchGate*, 2016. Accessed: Feb. 13, 2025. [Online]. Available: https://www.researchgate.net/publication/325846997_METHODS_OF_DATA_COLLECTION
- [68] K. N. Kuteesa, C. U. Akpuokwe, and C. A. Udeh, "GENDER EQUITY IN EDUCATION: ADDRESSING CHALLENGES AND PROMOTING OPPORTUNITIES FOR SOCIAL EMPOWERMENT," *Int. J. Appl. Res. Soc. Sci.*, vol. 6, no. 4, Art. no. 4, Apr. 2024, doi: 10.51594/ijarss.v6i4.1034.
- [69] S. T. Gifawesen, D. H. Feyssa, and G. L. Feyissa, "Analysis of forest cover change in Yabello Forest, Borana Zone, Ethiopia," *Int. J. Biodivers. Conserv.*, vol. 12, no. 4, pp. 350–362, Oct. 2020, doi: 10.5897/IJBC2018.1222.
- [70] S. T. Gifawesen, "Assessment of the Key Drivers of Forest Cover Change and Its Associated Livelihood Impacts in Yabello District, Borana Zone, Ethiopia," *Int. J. Sustain. Green Energy*, vol. 8, no. 1, Art. no. 1, Feb. 2019, doi: 10.11648/j.ijrse.20190801.11.
- [71] V. S. Vaghela and D. F. Parsana, "Teaching and Learning: Fostering Student Engagement, Critical Thinking, and Lifelong Learning Skills," *Educ. Adm. Theory Pract.*, vol. 30, no. 6(S), Art. no. 6(S), May 2024, doi: 10.53555/kuvey.v30i6(S).5324.
- [72] S. Campbell *et al.*, "Purposive sampling: complex or simple? Research case examples," *J. Res. Nurs.*, vol. 25, no. 8, pp. 652–661, Dec. 2020, doi: 10.1177/1744987120927206.
- [73] F. Tarusha and J. Bushi, "The Role of Classroom Observation, Its Impact on Improving Teacher's Teaching Practices," *Eur. J. Theor. Appl. Sci.*, vol. 2, no. 2, Art. no. 2, Mar. 2024, doi: 10.59324/ejtas.2024.2(2).63.
- [74] T. E. Virtanen, G. S. Vaaland, and S. K. Ertesvåg, "Associations between observed patterns of classroom interactions and teacher wellbeing in lower secondary school," *Teach. Teach. Educ.*, vol. 77, pp. 240–252, Jan. 2019, doi: 10.1016/j.tate.2018.10.013.
- [75] S. Tenny, J. M. Brannan, and G. D. Brannan, "Qualitative Study," in *StatPearls*, Treasure Island (FL): StatPearls Publishing, 2025. Accessed: Feb. 13, 2025. [Online]. Available: <http://www.ncbi.nlm.nih.gov/books/NBK470395/>
- [76] G. C. Davis, R. Baral, T. Strayer, and E. L. Serrano, "Using pre- and post-survey instruments in interventions: determining the random response benchmark and its implications for measuring effectiveness," *Public Health Nutr.*, vol. 21, no. 6, pp. 1043–1047, Apr. 2018, doi: 10.1017/S1368980017003639.
- [77] G. Guest, E. Namey, J. Taylor, N. Eley, and K. McKenna, "Comparing focus groups and individual interviews: findings from a randomized study," *Int. J. Soc. Res. Methodol.*, Nov. 2017, Accessed: Feb. 13, 2025. [Online]. Available: <https://www.tandfonline.com/doi/abs/10.1080/13645579.2017.1281601>

- [78] T. O.Nyumba, K. Wilson, C. J. Derrick, and N. Mukherjee, "The use of focus group discussion methodology: Insights from two decades of application in conservation," *Methods Ecol. Evol.*, vol. 9, no. 1, pp. 20–32, 2018, doi: 10.1111/2041-210X.12860.
- [79] M. S. Schwartz and K. W. Fischer, "Interviewing: An Insider's Insight into Learning," in *The Developmental Relations among Mind, Brain and Education: Essays in Honor of Robbie Case*, M. Ferrari and L. Vuletic, Eds., Dordrecht: Springer Netherlands, 2010, pp. 149–175. doi: 10.1007/978-90-481-3666-7_7.
- [80] K. W. Haile, T. G. Olamo, and M. A. Yemiru, "Utilizing communication strategies to enhance reflective learning in Ethiopian EFL classrooms," *Heliyon*, vol. 10, no. 13, p. e32585, Jul. 2024, doi: 10.1016/j.heliyon.2024.e32585.
- [81] J. E. Ho, "What counts? The critical role of qualitative data in teachers' decision making," *Eval. Program Plann.*, vol. 91, p. 102046, Apr. 2022, doi: 10.1016/j.evalprogplan.2021.102046.
- [82] J. W. Creswell and J. D. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th edition. Los Angeles: SAGE Publications, Inc, 2018.
- [83] G. Rapôso, "Enhancing Oral Presentation Skills in the Classroom of a Public School," in *ResearchGate*, 2023. Accessed: Mar. 04, 2025. [Online]. Available: https://www.researchgate.net/publication/384809634_Enhancing_Oral_Presentation_Skills_in_the_Classroom_of_a_Public_School_by_RAPOSO_2023
- [84] M. Richard, J. Delgado, S. LeGresley, and C. J. Fischer, "Implementing Competency-Based Grading Improves the Performance of Women and First Generation Students in Introductory Physics," Jun. 21, 2022, *arXiv*: arXiv:2206.10574. doi: 10.48550/arXiv.2206.10574.
- [85] H. Dawkins, H. Hedgeland, and S. Jordan, "The impact of scaffolding and question structure on the gender gap," Apr. 24, 2017, *arXiv*: arXiv:1704.07447. doi: 10.48550/arXiv.1704.07447.
- [86] NewsHour Productions, "Study Suggests Simple Fix to Help Women Succeed in Science," PBS News. Accessed: Mar. 04, 2025. [Online]. Available: <https://www.pbs.org/newshour/science/closing-the-achievement-gap-study-suggests-simple-intervention-to-help-women-succeed-in-science-1>
- [87] Q. Feng, H. Luo, W. Li, T. Chen, and N. Song, "Effects of gender diversity on college students' collaborative learning: From individual gender to gender pairing," *Heliyon*, vol. 9, no. 6, p. e16237, May 2023, doi: 10.1016/j.heliyon.2023.e16237.
- [88] M. Abraha, A. Dagnew, and A. Seifu, "Gender Responsive Pedagogy: Practices, Challenges & Opportunities - A Case of Secondary Schools of North Wollo Zone, Ethiopia," *J. Educ. Soc. Behav. Sci.*, pp. 1–17, May 2019, doi: 10.9734/jesbs/2019/v30i330128.