



## **Influence Of Aberrant Response Behaviours On Academic Achievement Of Secondary School Students With Physical Disability Status In Niger State, Nigeria**

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**Abstract.** The purpose of this study was to assess the influence of aberrant response behaviour on academic achievement of secondary school students with physical disability. A quasi-experimental design was carried out in 66 public secondary school within Niger State. The study adopted, through a purposive sampling method 98 students with various and varying degrees of physical disabilities, specifically, 75 orthopaedic and 23 visual impaired students currently in SSS III classes. Two self-developed instruments were utilized to collect data; Mathematics-English-Language-Achievement-Test (MELAT); and Proforma for Achievement Scores of Students with Physical Disability (PASS-PD). Data collected were analyzed using descriptive statistics of percentages and Analysis of Variance (ANOVA) at 0.05 level of significant difference. The findings of the investigation revealed that, with cheating and plodding as observed aberrant response behaviours among the subjects, there is statistically significant difference in the academic achievement of students with orthopaedic and visual impairments in Mean Cumulative Academic Achievement (MCAA), Pre-test and Post-test MELAT. This assertion is based on the evident results of 30.32 for difference in the academic achievement of students with orthopaedic impairment, and 13.41 for difference in the academic achievements of students with visual impairments, which are greater than the probability value of 0.00. Academic integrity policies to promote ethical conduct of tests and specialized support services to enhance improved learning experiences and valid outcomes of students with these impairments were recommended.

**Keywords:** Physical disability, Aberrant response pattern, Item response theory, Orthopaedic impairment, Cheating and Plodding

### **1. Introduction**

The journey of academic success or failure, after the conventional treatment of teaching and learning begins with the process of quantifying individual's educational and psychological qualities, such as achievement, personality, attitudes or skills relative to some defined objectives. The numerical outcomes are used to evaluate students which are subsequently expressed in grades such as excellent, good, fair or fail. All these processes are systematically followed to ascertain the quality of education received by the students, which is a fundamental human right for all citizens of the country. The fundamental human right advocates for all the right to quality education and without any form of discrimination. In Nigerian schools and education sector, discrimination against disabled persons varies from peers 'attitude towards disabilities to outright denial of educational opportunities, isolation and stigmatization imposed in forms of social and physical barriers (Talafha, 2022). Disability, though defined as a condition that makes it difficult for a person to perform certain tasks, includes but not limited to intellectual, mental health, hearing and vision disabilities (Ugoma, 2018).

Physical disability is a physical condition that limits a person's ability to function and perform activities ranging from moving, to communicating, to taking

care of themselves, which could be temporary or permanent, mild or severe, apparent or invisible (Banaszak, Clause and Chapel, 2023). Banaszak et al, further opined that, there are many types of physical disabilities ranging from those that affects person's ability to walk, lift objects, or perform other gross motor tasks. While some impede a person's ability to use their senses through sight, hearing, or touch, others impair a person's ability to communicate. Persons with Albinism, though usually may be as healthy as their peers, can be classified as disabled because of the associated visual impairments, Burger (2016), ascertained. However, the effects of physical disability on persons experience in academics vary even for children with the same diagnosis or condition.

The response pattern of children with physical disabilities could be a source for establishing their strength and weaknesses in academics, as such Talafha (2022) emphasized, that: "academic achievement assessment is generally a process of documenting in measurable terms, knowledge, skills, or attitudes which students are required to demonstrate mastery by performing tasks". And from a general perspective, as reported by Nneka and Dickson (2017); poor academic achievement is alleged as a major underlying problem among children that suffers with physical disabilities, hence, a belief that a physical disability in any form is also academic disabilities for students who are admitted into the schools to learn.

Item Response Theory (IRT) is a mathematical theory about examinee (student) item and test performance and how performances relate to the abilities that are measured by the items in test (Ojerinde, Poppola, Ojo and Onyeneho, 2019). Mahmud (2017) proffered that it is an important methodology which has been globally used to analyze students' responses to test items with a goal of improving measurement accuracy and reliability. The focus is on the pattern of responses, where the item responses are considered the outcome variables, and the student's ability and item characteristics are the predictor variables (Bentler, 2021). However, the measurement model may fail to accurately reflect the real aspects of students' responses, thereby showing unusual irregularities, thus compromising the validity of tests scores (Mousavi and Cui, 2020). One of such failure can be found when unusual or unexpected (aberrant) response patterns are produced by the students.

Aberrant response patterns explain the possibility of an examinee obtaining correct answers for wrong reasons when responding to dichotomous scored test items (Kukumi and Maurice, 2018). Aberrant behaviors are usually exhibited in various forms, and

gives room for aberrant scores that is not likely to be true. These behaviors according to Smith and Lamprianou (2016) are such various possible reasons which include cheating, distractions, guessing, copying, extreme creativity, test anxiety, special knowledge among others.

It is therefore important that the validity of academic achievement of students with physical disability at the level of secondary education, especially in inclusive learning programmes be ensured. This has been a source of concern to the researcher, the reason for the investigation on the influence of aberrant response behaviors on their academic achievements.

### 1.1 Statement of the Problem

Developing a valid, reliable and usable measuring instrument, and administering same to accurately portrays students' knowledge level, skill level and/or ability can be a challenging task. It becomes more difficult, especially, where students with physical disabilities and obvious challenges are involved and are expected to be measured and evaluated without overestimating or underestimating their ability in an inclusive learning. It becomes essential that investigation on the effect of aberrant behaviors on academic achievement of secondary schools students with physical disability be launched.

### 1.2 Objective of the Study

- To examine the difference in the academic achievement of students with Orthopedic Impairment status in MCAA, Pre-test MELAT and Post test MELAT.
- To determine the difference in the academic achievement of students with Visual Impairment status in MCAA, Pre-test MELAT and Post test MELAT.

### 1.3 Research Questions

- What is the significant difference in the academic achievement of students with Orthopedic Impairment status in MCAA, Pre-test MELAT and Post test MELAT?
- Is there significant difference in the academic achievement of students with Visual Impairment status in MCAA, Pre-test MELAT and Post test MELAT?

### 1.4 Hypothesis

- There is no significant difference in the academic achievement of students with

Orthopedic Impairment status in MCAA, Pre-test MELAT and Post test MELAT.

- There is no significant difference in the academic achievement of students with Visual Impairment status in MCAA, Pre-test MELAT and Post test MELAT.

## 2. Theoretical Framework

This study utilized Items Response Theory (IRT). The theory was initially developed by a Psychometrician for educational testing services, Frederic Mather Lord in the 1950's and 1960's. IRT refers to a family of mathematical models in the field of psychometrics that attempt to explain the relationship between latent traits (unobservable characteristic) and their manifestation (observed responses/achievement). It connotes and theoretically "assumes that there exists a relatively common trait/characteristic that can be used to determine an individual's ability to succeed with a particular task" (Ojerinde et'al 2019). Such tasks may be in terms of the individual's response by thinking (cognitive), feeling (affective) and acting (psychomotor). It predicts person's scores based on his/her ability, describes and check whether the test/exams administered to students with similar characteristics have similar difficulty, discrimination, guessing and other manifestation of aberrancy (carelessness) level.

This theory, therefore, is particularly relevant to this study because, students with physical disability whose true latent score may be compromised, but owe to the provision made by the different types of parameter models, effects of biases caused by aberrant manifestation in the students' responses to test items can be noticed. The responses will point to the true ability estimate.

## 3. Conceptual Issues

### 3.1 Types Of Physical Disability

These disabilities are disturbances at the level of the organ, which includes defects in and loss of limbs, organ or other body structure (Ghoshal, 2018). This category of disability includes people with different types of physical and observable disorder, including upper or lower limb(s) disability, absence of a body part, polio, visual and auditory disorders, or disability in co-ordination with different organs of the body (Kamal and Hussain, 2019). Short and stunted also fall into this category (Khanal, 2015).

For ease of identification and purpose of placement, two dimensions of physical disability are recognized,

namely; Orthopedic Impairment and Visual Impairment.

#### 3.1.1 Orthopedic Impairment

This condition of impairment is on bones and associated with muscles and joints disorder. Opinion from Squires and Burnell (2018) adds that "the categories of children with this type of challenges are found with withered upper arms and lower arms, crippled or hunchback". They find it difficult or impossible to use legs, arms, or body trunk effectively due to paralysis, stiffness, pain, or other impairments (Lekuta, 2019).

#### 3.1.2 Visual Impairment

A child who has visual disorder may not be able to easily comprehend what is seen and get muscle linked up fast enough to keep pace with others (Haruna, 2017). Hence, completion of academic work will hardly be ever completed by the affected child. Albinism is often associated with visual problems resulting from involuntary eye movement, squinting and astigmatism which are from birth and lifelong, but not progressive (Nwosu, Unachukwu, Nwasor, and Ezennaka, 2019). For their associated visual impairments, Burger (2016) suggested its classification as disabled.

#### 3.1.3 Aberrant Response Behavior/Pattern

A response to examination items that is inconsistent with expectation is said to be aberrant. Item response models don't often take into cognizance true individual response probabilities because of the presence of response disturbance, such as Guessing, Cheating, or Plodding (Hambleton, 2018). Many various possible reasons leading to aberrant response pattern of students have been suggested by Eckerly (2017) as behaviors such as plodding, cheating, guessing, sleeping, alignment errors, test anxiety, creativity among many. For example, "student with low ability may randomly guess correctly on a multiple-choice test item, the test score might be inflated leading to a higher than the actual impression of the respondent" (Hambleton, 2018; Jia et'al, 2019).

##### 3.1.3.1 Guessing

This behavior is from test takers who form an opinion and respond to items on a test from little or no evidence of its correctness by random-picking an answer blindly on medium-to-difficult items.

##### 3.1.3.2 Cheating

This behavior is manifested by usually low ability students that struggle to answer medium-to-difficult items. After futile attempt they resorts to looking off a high-ability neighbor’s answer sheet to respond to the most difficult items on the test/examination.

**3.1.3.3 Plodding**

This occurs when a test taker writes very slowly and methodically, refusing to answer the next item(s) on the test until satisfied that the current item is satisfactorily answered correctly. Plodding test taker may have high ability level, but may not be reflected in the overall score.

**3.1.3.4 Deficiency of Sub-Abilities**

Items with relative difficulty may not align with particular content area in which the examinee has little or no knowledge about. Students with deficiencies in sub-abilities may show some aberrant response behavior.

**4. Students Academic Achievement and Physical Disability Status**

Academic Achievement is the knowledge attained, or skill developed in school subjects, usually determined by test scores which are assigned by the examiner/teacher (Kamal and Hussaini, 2022). In a normal classroom setting where teaching and learning is all inclusive, “both the physically challenged students and non-physically challenged students are expected to carry out learning activities at the same time allotted for the teacher to teach, give classroom assignment and to have equal academic achievement irrespective of their challenges” (Nneka and Dickson, 2017). However, despite the individual characteristic nature, each of these students attends school with their unique nature, potentials and ability to cope with learning task”. Some of them are able to learn and make adjustment with ease, while other learners

The following aberrant behaviours were observed:

**Table 1:** Observed Aberrant Response Behaviors from Students with Physical disability in Public Secondary Schools in Niger State of Nigeria.

Aberrant Responses	A1%	A2%	A3%	A4%	Remark
Guessing	9	5	27	59	NM
Cheating	80	17	2	2	M
Deficiency of sub-abilities	3	2	15	80	NM
Plodding	55	32	9	5	M

**Note:** A1=High; A2=Moderate; A3=Low; A4=Very low NM=Not manifest; M=Manifest

encounter varying degrees of difficulties with related achievement output (Ugoma, 2018).

Children with orthopedic impaired challenges involving the movement skills, or visually impaired with complete or partial visual problem struggle to catch up (Gary and Abang, 2021). But when they are not able to meet up, and neither consideration from their teachers, nor help from fellow students who are non-physically challenged, lack of interest for learning and discouragement may set in, which can also affect academic achievement (Teubert, 2019).

**5. Research Methodology**

The study used a quasi-experimental design among 98 (75 orthopaedic disabled and 23 visual disabled) students with various and varying degrees of physical disabilities purposively selected and discovered from 66 public secondary schools of SSS III in Niger State of Nigeria. The researcher developed two instruments for data collection, namely; Mathematics, English Language Achievement Test (MELAT) for measurement of students’ achievement and ability in compulsory subjects; and a proforma, titled ‘Proforma for Achievement Scores of Students with Physical Disability (PASS-PD) for harvesting test scores/records of Mean Cumulative Academic Achievement (MCAA) - SS II continuous assessment/promotion examination 2022/23 session, Pre-test and Post test MELAT. The subjects have high, average and low ability levels as categorized by the Mean Cumulative Academic Achievement (MCAA) scores. Pre-test (MELAT) was administered in a strictly invigilated separate class, while same subjects were tested again (post-test) using the same instrument (MELAT) but with altered arrangement of items in an inclusive class, after two weeks, with loosed invigilation to observe possible aberrant behaviours and response patterns. Data was analyzed using descriptive statistics of percentages to answer research questions, and Analysis of Variance (ANOVA) to test the hypotheses at the 0.05 level of significance.

Data on Table 1 shows four different types of aberrant response behaviours observed among students, namely: guessing, cheating, deficiency of sub-abilities, and Plodding. Cheating appears to be the most prevalent aberrant response behaviour among the students with 80% and plodding (55%).

## 6. Results

### Answering Research Questions

The results of this study are presented in tables 2 and 3.

**Table 2:** Academic Achievement of Students with Orthopaedic Impairment in Niger State

Performance	MCAA		Pre-Test MELAT		Post-Test MELAT	
	Freq	Percent	Freq	Percent	Freq	Percent
Excellent	7	9	6	8	2	3
Good	14	19	0	0	4	5
Fair	41	55	14	19	41	55
Poor	13	17	55	73	28	37
Total	75	100	75	100	75	100

**NB:** Prevalent Aberrant Response Pattern: (1). Cheating and copying (2). Plodding

Table 2 provides an insightful check of the academic achievement levels of students with orthopaedic impairments. The data reveals that in MCAA 9% fall into the category of excellent, 19% in the category of Good, 55% in Fair and 17% in Poor category. In Pre-test MELAT, 8%, 19% and 73% fall in the categories of Excellent, Fair and Poor, respectively. No representation in the category of Good. In Post-test MELAT, 3%, 5%, 55% and 37% fall in the respective order of Excellent, Good, Fair and Poor.

**Table 3:** Academic Achievement of Students with Visual Impairment in Niger State

Performance	MCAA		Pre-Test MELAT		Post-Test MELAT	
	Freq	Percent	Freq	Percent	Freq	Percent
Excellent	5	22	17	74	7	30
Good	11	48	5	22	16	70
Fair	6	26	0	0	0	0
Poor	1	4	1	4	0	0
Total	23	100	23	100	23	100

**NB:** Prevalent Aberrant Response Pattern: (1). Cheating and copying (2). Plodding

In Table 3 an overview of the academic achievement of students with visual impairments is provided. MCAA results reveals 22% of students attained the coveted "Excellent" performance level. Concurrently, a substantial proportion of 48% demonstrated a "Good" level of performance, while 26% and 4% of students fell within the "Fair" and "Poor" categories, respectively. Pre-test MELAT results unveil a remarkable transformation, with an overwhelming majority of 74% of students ascending to the pinnacle of "Excellent" academic achievement. This seismic shift is further complemented by a contraction of the "Good" performers to 22%, while the "Fair" and "Poor" categories were not represented. Post-test MELAT data exhibits a divergent narrative, with a recalibration of performance levels. Specifically, 30% of students maintained their status within the "Excellent" stratum, while a substantial 70% consolidated their position within the "Good" category. Notably, the "Fair" and "Poor" performers were entirely absent from the post-test results.

### Testing of Hypothesis

The results of this study are presented in tables 4 and 5.

Table 4 below shows the difference in academic achievement levels of students with orthopaedic impairments for MCAA, Pre-test and Post-test MELAT.

**Table 4:** Difference in the Academic Achievements of Students with Orthopaedic Impairment in Niger State

	Type III sum of Squares	DF	Mean Square	F	P	$\eta^2$
Treatment	13638.32	2	6819.16	30.32	<.001	0.42
Residual	49924.03	222	224.88			
Total	63562.354	224				

df = n-1

The results of ANOVA shows that  $F = 30.32$ , and the  $P$ -value =  $<0.001$ . This implies, there is statistical significant difference in the academic achievement of students in MCAA, Pre-test and Post-test MELAT. Hence, the null hypothesis is rejected.

**Table 5:** Difference in the Academic Achievements of Students with Visual Impairment in Niger State

	Type III sum of Squares	DF	Mean Square	F	P	$\eta^2$
Treatment	3752.91	2	1876.45	13.41	<.001	0.39
Residual	9232.17	66	139.88			
Total	12985.08	68				

df = n-1

Table 5 shows the difference in academic achievement levels of students with visual impairments. The results of ANOVA shows that  $F = 13.41$ , and the  $P$ -value =  $<0.001$ . By implication, there is statistical significant difference in the academic achievement of students in MCAA, Pre-test and Post-test MELAT. Therefore, the null hypothesis is not accepted.

### 7. Discussion of Findings

The focus of this study was to assess the influence of aberrant response behavior on academic achievement of secondary school students with physical disability in Niger State public schools. The results of the findings show there is statistical significant difference in the academic achievement of students with orthopaedics and visual impairments in MCAA, Pre-test and Post-test MELAT. Recall that among guessing, cheating, deficiency of sub-abilities, and Plodding as observed aberrant response behaviours among the subjects during the administration of Post-test MELAT, cheating (80%) appears to be the most prevalent followed by plodding (55%). This is in agreement with the findings of Idika, Shogbesan and Ogundakin (2016), who discovered that, the nature of compromise, which can be described as cheating, can produce an inflated score which would essentially be

a misrepresentation of that individual’s achievement in test, thus yielding an in-accurate estimate of academic achievement index.

These findings under-scores the obstacles the students encounter in achieving satisfactory academic outcomes, and that despite the challenges, there are individual students with physical disabilities within the group (as in the case of the students with visual impairments) who excel academically, possibly owing to their resilience, effective support structures, or personalized teaching methodologies.

However, a concerning issue emerges regarding the number of visual impaired students classified in the categories of excellent, particularly in the Pre-Test and post-test MELAT, where a significant 74% dropped to 30% despite the prevalent and manifested aberrant behaviours exhibited due to loosed invigilation in post-test MELAT. Students with orthopaedic impairments seems to have utilized the opportunity of the loosed invigilation, but only for a significant 73% to drop to 37% at poor category in pre-test and post-test MELAT respectively. This raises questions about the impact of unsupervised testing conditions on students’ academic achievements, suggesting that students with physical disabilities may face challenges

and distractions when responding to test items even with loosed invigilation.

## 8. Conclusion

The results of the study showed a substantial percentage of students with visual impairment achieving excellent and good performance levels in testing conditions. This emphasized the need for tailored educational interventions, effective monitoring and support systems to address the unique challenges faced by these vulnerable students.

## 9. Recommendations

- Comprehensive academic integrity policies, along with educational programs and support systems to promote ethical conduct and address the root causes of aberrant behaviours should be developed and implemented.
- Establish specialized support services, including assistive technologies, and tailored instructional methods to enhance improved learning experiences and valid outcomes of students with orthopaedic and visual impairments.

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## Empowering Equality through Education: Deconstructing Patriarchy in the Social Studies Classroom - Strategies for Gender-Neutral Teaching in Nigeria

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**Abstract.** This paper explores the importance of gender-neutral education by deconstructing patriarchal norms in the classroom. It examines the impact of gender stereotypes on classroom dynamics, academic choices, and career prospects. The study highlights the need for gender-neutral education to cultivate critical thinking, empathy, and a more comprehensive range of career options. Strategies include challenging stereotypes, providing diverse role models, and creating inclusive learning environments. The article also addresses common misconceptions and concerns, highlighting global progress and successful initiatives. Social studies teachers are crucial in shaping inclusive curricula and promoting active engagement in advocating for gender-neutral education.

**Keywords:** Gender-neutral education, Patriarchal norms, Inclusive curriculum, Gender stereotypes, Classroom environment, Social study education, Gender equality

### 1. Introduction

The dominance of men in various societal domains, including politics, business, and education, is known as patriarchy. This system is distinguished by the unequal allocation of resources, opportunities, and power based on gender, with males typically holding leadership positions (Hazarika et al., 2023). This article explores the complex implications of patriarchy, concentrating on how it affects educational institutions. Throughout history, patriarchy has significantly influenced education, influencing both the curriculum's academic matter and its students' interpersonal interactions (Koseoglu et al., 2020). Deeply ingrained gender roles reinforce stereotypes and conventional notions of masculinity and femininity in educational institutions (Hausmann et

al., 2014). These conventions stem from patriarchal views, have restricted people's potential, and impede society's advancement (Semartini et al., 2020).

Patriarchal standards are sneaky, showing up in covert ways that frequently go unreported. These standards govern how students, instructors, and administrators should behave in the educational system, which feeds a cycle of inequity (Braunstein et al., 2014). The subjects deemed appropriate for boys or girls are determined by gender norms, which also shape goals and restrict professional options (Alordiah et al., 2022). For instance, the sciences are frequently related to masculinity, but careers in childcare are associated with femininity. As a result, people are discouraged from pursuing activities that are seen as inconsistent with their given gender roles, which feeds a vicious cycle (Galano et al., 2023).

Additionally, patriarchal norms affect the dynamics in the classroom. Some students may experience uneven involvement and lowered self-esteem due to male students being pushed to be forceful while female students are supposed to be cooperative (Carlsson et al., 2019). Although biased interactions between instructors and pupils may go unnoticed, they nonetheless contribute to treating disadvantaged genders differently and the lack of possibilities for them (Khoumich et al., 2020, Alordiah, 2015).

Adopting gender-neutral education becomes an effective tactic to combat and change patriarchal attitudes in the face of these difficulties. An atmosphere where all students have equal access to education, resources, and opportunities is created via gender-neutral education, which attempts to eradicate gender-based prejudice and stereotyping (Patel, 2014). Gender-neutral techniques aim to establish a just and inclusive learning environment by destroying the

uneven power relations embedded in conventional education (Hazarika et al., 2023). This paper thoroughly explains how patriarchy affects education, the need for gender-neutral education and its numerous benefits, practical strategies for implementing gender-neutral education, potential obstacles and resistance, ways to gauge implementation success and progress, and a global perspective comparing gender-inclusive education policies.

## 2. Patriarchy's Impact on Education

A patriarchal social structure is one in which men predominate in political leadership positions, moral authority, social privilege, and resource control. By preferring the interests and viewpoints of males above those of women and other gender identities, this system tends to reproduce and perpetuate gender-based inequality (Alordiah et al., 2022; Lari et al., 2022). Investigating the historical foundations of patriarchy is crucial to understanding how deeply it affects schooling now. Civilizations have given men and women different duties through the ages, establishing a framework that permeates the field of education. The idea that boys were the only ones who benefited from knowledge and intellectual progress was reinforced in many ancient cultures because education was sometimes only available to boys (Lindner et al., 2022). Due to historical discrimination, male voices have historically been prized over female voices in schools, perpetuating uneven gender relations (Danielescu, 2020).

Stereotypes concerning expected or regarded proper traits, actions, roles, and features for people based on their perceived gender are preconceived and frequently oversimplified views or assumptions (Xiang et al., 2018). Based on whether someone is perceived as masculine, feminine, or not adhering to established gender standards, these stereotypes can influence how society perceives and treats people (Salerno et al., 2019). The way that students interact, behave, and view themselves in educational environments is undoubtedly impacted by gender stereotypes (Xiang et al., 2018). These prejudices influence how teachers anticipate their pupils to behave in the classroom depending on their ascribed genders. For instance, whereas females may be directed toward caring behaviors, boys may be urged to assume leadership responsibilities. These hidden biases are also seen in interactions between teachers and students. Male students may be acknowledged and praised for their efforts, whereas female students' accomplishments may be minimized or ignored (Kovalkova, 2021).

Unaware prejudices displayed by teachers have a significant impact on the experiences of pupils. For instance, research has revealed that lecturers commonly call on male students, allowing them to predominate in-class debates (Yu, 2023). This inadvertent discrimination may result in unequal speaking chances, reinforcing that male students are more intelligent or competent (Igurardottir et al., 2022). Gender stereotypes significantly shape the academic and professional objectives of students. Gender stereotypes frequently apply to specific topics and professional routes, which results in differences in enrolment and achievement (Olsson et al., 2018). For instance, science and math have historically been viewed as more suited to men, discouraging female students from majoring in STEM disciplines. Similarly, due to traditional conceptions of masculinity, males may be discouraged from engaging in arts or literature-related disciplines (Chan et al., 2022).

How gender is portrayed in instructional materials greatly influences how students see themselves and other people. Books, literature, and the media frequently promote gender prejudices, which helps to maintain unfair standards (Guichot-Reina et al., 2023). A skewed self-perception results when children are exposed to instructional materials that primarily highlight one gender while undervaluing others. Due to this lack of representation, students may feel excluded and doubt their ability to pursue particular disciplines or objectives (Meeussen et al., 2022). Students who are female, for instance, can absorb the idea that their voices don't matter as much as those of men. Traditional gender roles continue to exist due to educational resources that reinforce them. These materials normalize a distorted perception of society's roles by continually portraying men as leaders and women as careers (Abdelhay et al., 2015). As a result, students are less inclined to question these standards and can unintentionally uphold them in the future (Comber et al., 2021).

The perniciousness of patriarchal standards also extends to the pervasiveness of harassment and violence against women in educational settings. These actions are frequently rooted in the patriarchal system's toxic masculinity and unequal power dynamics (Hadi, 2018). Patriarchy encourages power disparities that generate an atmosphere conducive to gender-based violence and harassment. In educational settings, male dominance and entitlement, supported by patriarchal standards, can result in verbal, physical, or emotional abuse against oppressed genders. These actions frequently reflect a desire to assert control and uphold imagined hierarchies (Shah, 2021). In

educational settings, gender-based violence and harassment have significant negative repercussions. Such situations might leave students feeling low self-worth, anxious, and depressed. Their emotional health is impaired, making it difficult to concentrate on their schoolwork. Additionally, these encounters may result in absenteeism, harming their general development and academic performance (Merma-Molina et al., 2021; Alordiah, 2020)).

### 3. Gender-Neutral Education

Gender-neutral education, often called gender-inclusive or gender-sensitive education, is a method of instructing and learning that seeks to foster an atmosphere in which pupils of all genders feel respected, appreciated, and included (Guerrero et al., 2023). This method questions conventional gender norms and prejudices and aims to provide all students equal chances and assistance, regardless of gender identification.

A key weapon for eradicating the profoundly rooted patriarchal standards that have long impeded social development is gender-neutral education. Breaking out from these conventions has various advantages beyond the classroom (Hazarika et al., 2023). Critical thinking and creativity amplify when kids are exposed to multiple ideas and experiences. The limitations patriarchal conventions place on the contributions of particular genders are eliminated by gender-neutral education (Whitford et al., 2022). Students are given the freedom to investigate various concepts and points of view, helping create dynamic and creative learning environments. Students who get gender-neutral education develop empathy and respect for others. Students learn to value diversity and develop more genuine connections when an environment that honors each person's unique talents is fostered. The development of healthy relationships based on comprehension and respect is promoted in such an atmosphere, which also aids in dispelling damaging prejudices and biases (Croft et al., 2021).

Both men and women have been constrained in pursuing their professional objectives by historically gendered job choices (Johnson, 2014). These restrictions are contested by gender-neutral education, which broadens the perspectives of all pupils. By encouraging students to study subjects that may have previously been unavailable owing to cultural conventions, gender roles that aren't strictly enforced enable a more inclusive and varied workforce (Meadows et al., 2020). The ability of gender-neutral education to question and subvert deeply rooted assumptions gives it its transformational potential

(Montecinos et al., 2015). Inclusionary environments where all students, regardless of gender identification, feel appreciated and heard are made possible through gender-neutral education. By destroying preconceptions, teachers foster a climate where different ideas are valued, resulting in more engaging classroom discussions and a greater understanding of other points of view (Teelken et al., 2021). Students are freed from the restrictions of traditional gender roles thanks to gender-neutral education. This emancipation allows Individuals to follow their hobbies and passions without feeling constrained by societal norms (Chan, 2022). A more balanced and equitable educational environment is created when boys feel as at ease exploring the arts and literature as girls do pursuing STEM subjects. By providing pupils with a wide range of role models and opportunities, gender-neutral education is essential for broadening their perspectives.

Gender-neutral education breaks down these barriers in sectors historically dominated by one gender. Students are inspired to picture themselves in roles that were previously regarded as unconventional by showcasing successful people of all genders in fields like STEM (Science, Technology, Engineering, and Mathematics) and the humanities, which contributes to a more inclusive professional landscape (Dele-Ajayi et al., 2020). Students who get gender-neutral education are given the skills they need to follow their passions with unflinching tenacity. Students are encouraged to explore their interests without concern for society's criticism or restrictions based on gender stereotypes by supporting an environment that promotes self-expression and personal growth (Chan, 2022).

Academic achievement and student wellbeing are directly impacted by inclusive, gender-neutral education. Traditional educational institutions based on patriarchal ideals can make minority genders feel inadequate and excluded. However, gender-neutral education overcomes these inequalities, which leads to higher engagement and lower dropout rates among these students. Individuals' dedication to study is strengthened when they feel noticed and respected (Merma-Molina et al., 2021). Academic performance depends on a conducive learning environment. An atmosphere where pupils may thrive without meeting social gender norms is fostered via gender-neutral education. This environment enables students to express their thoughts, ask questions, and actively participate in their studies, eventually leading to better academic results (Kollmayer et al., 2020).

## 4. Strategies for Implementing Gender-Neutral Education

### 4.1 Curriculum and Instruction

Promoting gender-neutral education requires the development of an inclusive curriculum. Educators may incorporate different viewpoints by using resources that represent a wide range of genders, races, and backgrounds. This may entail choosing literature, historical accounts, and case studies that emphasize the voices of those who are underrepresented (Rogers et al., 2019). To impart real-world ideas and experiences, educators can also arrange guest lectures or virtual exchanges with people from other backgrounds. Education-related language and examples may unintentionally promote gender stereotypes. A deliberate effort must be made to change language and examples in gender-neutral education to be inclusive (Xiang et al., 2018). This entails eliminating pronouns particular to one gender and adopting gender-neutral language whenever feasible. Additionally, teachers can check textbooks and course materials to ensure that examples and drawings of both genders are evenly balanced (Lewandowski, 2014). Also, assessment items should be structured in a way that they will be gender-bias-free (Alordiah & Agbajor, 2014)

Specific topics have historically been identified with particular genders, which might support gender stereotypes. To promote involvement from all genders, educators must reframe these topics in the context of gender-neutral education. For instance, instead of being linked to gender-specific talents, mathematics might be portrayed as a helpful skill to everyone. This change in thinking may help remove barriers connected to gender in the educational system (Kollmayer et al., 2020).

### 4.2 Classroom Environment

Establishing unambiguous rules that uphold equality and respect is the first step in creating a diverse learning environment in the classroom (Kuchynka et al., 2022). Teachers can establish ground rules that prevent gender prejudice and promote free discussion. Students are given the confidence to express themselves without worrying about being judged when these standards are regularly upheld, promoting a sense of belonging for both genders (Kovaleva et al., 2022).

Gender-neutral education requires equal involvement from all students. To ensure that all students, regardless of gender, have opportunities to contribute,

teachers might employ strategies including random selection, rotating group roles, and peer-led debates (Shah, 2021). This strategy fosters a collaborative and inclusive learning environment, preventing dominating voices from overshadowing others. A proactive approach to addressing and avoiding gender-based harassment is necessary for gender-neutral education (Domínguez-Martínez et al., 2019). Education professionals can put in place anti-bullying initiatives that focus on gender-related concerns. They can encourage conversations on polite conduct, consent, and wholesome relationships. Clear reporting procedures and support systems ensure students feel secure and inspired to report harassment (Lewis et al., 2022).

### 4.3 Teacher Training and Professional Development

Comprehensive gender-sensitive training is the first step in providing educators with the resources to build gender-neutral classrooms. Workshops can address issues, including detecting unconscious biases, analyzing the effects of gender stereotypes, and fostering inclusive language. These programs provide educators with knowledge and methods for fostering environments that challenge patriarchal norms (Wang, 2023).

Unaware prejudices may have an impact on educators' judgments and behaviors. To promote gender-neutral education, continuous work is required to identify and control these prejudices. To become more conscious of their prejudices, educators might engage in reflective activities like journaling or peer conversations (Wang, 2023). They can also use strategies like self-interruption to stop themselves from acting on prejudiced ideas and keep their behaviour in line with gender-neutral ideals. Developing understanding and empathy among pupils depends on open conversations on gender-related issues. Teachers may promote intelligent discussions on gender norms, stereotypes, and equality through planned activities, debates, and role-playing games (Croft et al., 2021).

### 4.4 Parent and Community Involvement

The effectiveness of gender-neutral education depends heavily on parental participation. Educators can organize parent-teacher conferences and seminars promoting inclusive education's value. The efficacy of these tactics can be increased outside of the classroom by providing materials and instructions for promoting gender-neutral attitudes at home (Themane et al., 2019). Schools can collaborate with nonprofit groups

focusing on gender equality to host events, workshops, and awareness-raising initiatives. These collaborations give students, parents, and the community a bigger platform to support gender-neutral education (Kwok., 2018).

A calculated strategy is needed to spread the importance of gender-neutral education. During certain months devoted to gender equality, schools might host awareness initiatives. Panel discussions, movie screenings, and art exhibitions that stress the significance of confronting patriarchal norms and fostering a more inclusive school atmosphere may be a part of these efforts (Chapman et al., 2021).

#### **4.5 Overcoming Challenges and Resistance**

The idea that gender-neutral education compromises cultural values and customs is a common fallacy (Karlidag-Dennis et al., 2020). However, gender-neutral education attempts to create an atmosphere where all genders have equal opportunities rather than eradicating cultural history (Datzberger et al., 2018). Teachers may show how gender-neutral education is consistent with cultural ideals for a just and peaceful society by emphasizing the shared values of respect, empathy, and fairness (Eriksson et al., 2020). Traditional gender norms are questioned by gender-neutral schooling, which some people may view as a danger to the stability of society. Teachers can address this issue by stressing that change is not the same as erasure (Huyge et al., 2015). Educators may promote acceptance and understanding by encouraging open discussion and showing how gender-neutral education can strengthen traditional values via fair participation and mutual respect (Arar, 2014).

The efficiency and advantages of gender-neutral education must be shown to effectively combat resistance, which requires research-based arguments supported by actual data. Many studies demonstrate the benefits of gender-neutral schooling (Shutts et al., 2017). According to studies, kids achieve higher academic standards, have better social connections, and exhibit greater confidence in classrooms that value diversity of viewpoints and equitable participation (Zubiri-Esnaola et al., 2020). To demonstrate the sound effects of gender-neutral education, educators might use specific instances of schools that have successfully adopted it. To debunk misconceptions and biases about gender-neutral education, data-driven techniques are valuable. (Gill et al., 2014). For instance, evidence indicating increased learning results for both genders may be used to dispel the myth that gender-neutral education hurts academic achievement. Additionally, educators may utilize facts

to disprove preconceptions by showing that, given equal chances, people of both genders can succeed in various fields and occupations (Krishna et al., 2020).

#### **5. Measurable Indicators of Gender-Neutral Education's Impact**

It is critical to identify precise success indicators that represent the transformative changes that gender-neutral education wants to bring about to assess this approach's efficacy. Changing students' views and behaviour about gender roles is crucial to success (Griffith et al., 2014). Students' perceptions of their and classmates' talents might alter over time, which can be observed and measured through surveys and observations. Teachers may measure the beneficial effects of gender-neutral education on classroom dynamics by keeping track of the decline in gender stereotypes, the rise in respect for other viewpoints, and the improvement in collaboration among students of all genders (Shutts et al., 2017). Examining test results and grades of students before and after using gender-neutral practices can show benefits for both sexes (Xiang et al., 2018). This can assist in determining whether removing obstacles linked to gender increases engagement, understanding, and general academic success.

The methods used to collect data are essential for obtaining quantitative and qualitative insights on how gender-neutral education is developing.

There are ways to collect qualitative data from kids, parents, and educators through surveys, focus groups, and interviews (Pacheco-Montoya et al., 2022). Structured surveys can measure how students' experiences in the classroom, their perceptions of gender roles, and the effects of gender-neutral tactics have changed. Focus group discussions and interviews enable participants to offer personal experiences and ideas that quantitative data alone might not be able to convey (Sheaffer et al., 2021) fully. Educators can determine if gender-neutral education has resulted in various professional pathways, leadership positions, and general success by tracking students after they complete their academic careers. This information can demonstrate the long-lasting effects of gender-neutral education on students' decisions and successes (Fernández-Cornejo et al., 2016).

#### **6. Conclusion**

Throughout this article, we have examined the many facets of gender-neutral education and how crucial it is in questioning and changing patriarchal attitudes that are deeply embedded in educational institutions.

We looked at the historical background of gender roles in education, how they are still prevalent, and the far-reaching effects of stereotypes, uneven representation, and violence against women. By looking at these concerns, we created the framework for understanding the necessity and importance of adopting gender-neutral education. It is impossible to exaggerate the value of gender-neutral education. It represents an effective way to escape the constraints of patriarchal traditions that have impeded advancement, restricted possibilities, and sustained inequity. Gender-neutral education liberates people of all genders from the limitations imposed by social expectations by questioning established gender roles and establishing an inclusive learning environment. As we come to a close, we must understand our contribution to the cause of gender-neutral education. Recognizing the effects of gender inequality in educational settings and committing to challenging these norms are the first steps in advocating for change. Your voice and actions are essential whether you are a teacher, student, parent, or part of the community. It's time to have dialogue, confront prejudices, and proactively assist programs that advance inclusive and equitable education for everyone. The movement for gender-neutral education envisions a day where respect, empathy, and the free pursuit of knowledge prevail in the classroom. By tearing down patriarchal conventions, we open the door for a generation of students free of sexist expectations, secure in their skills, and prepared to make a real difference in creating a more fair and equitable society. Beyond the classroom, this vision promotes a culture where people are encouraged to question gender norms in all spheres of life, resulting in a more inclusive and peaceful global community.

## 7. Implications of this study to social studies teachers

Teachers of social sciences should pay close attention to the consequences of the study "Deconstructing Patriarchy in the Classroom: Strategies for Gender-Neutral Education." Teachers of social studies significantly impact how pupils see society, history, culture, and the forces that shape these things. The results of this study may have the following effects on social studies teachers:

**Recognizing Historical Gender Norms:** Teachers of social studies can assist students in identifying and critically evaluating past gender norms. Teachers may impart an understanding of how patriarchy has influenced countries through time by teaching about the history of gender roles, disparities, and fights for gender rights. Students can situate contemporary

gender issues within historical narratives thanks to this understanding.

**Challenging Stereotypes:** Social studies programs often include social standards and stereotypes. Teachers can actively combat conventional gender stereotypes that could be present in historical documents or textbooks by using the study's findings. Teachers may enable students to examine and dismantle these prejudices by encouraging dialogue and critical thinking.

**Inclusive Curriculum Design:** Social studies instructors can use the study's recommendations to create a more inclusive curriculum. Teachers may assist students in understanding the contributions made by people of all genders throughout history by including varied voices, viewpoints, and experiences. Student's grasp of the diversity of human cultures and the roles that different genders have played is improved by this method.

**Facilitating Constructive Conversations:** The study emphasises the value of encouraging civil discourse on gender-related issues. Social studies teachers may provide safe environments where students can speak openly about gender conventions, inequality, and current gender concerns. Teachers may ensure that talks are inclusive and fruitful by following the study's recommendations.

**Engaging with Global Perspectives:** Global cultures and communities are frequently studied in social studies. Teachers may help students better grasp how other civilisations deal with gender norms and issues by looking at the worldwide perspectives on gender-neutral education offered in the research. This may aid critical thinking and cross-cultural understanding.

**Promoting Civic Engagement:** The study's call to action is pertinent to the objective of social studies, which is to cultivate accountable and involved citizens. Social studies teachers can motivate their students to actively promote gender-neutral education and oppose patriarchal conventions outside the classroom. The emphasis on civic engagement and social transformation in social studies is consistent with this involvement.

**Using Evidence-Based Approaches:** Social studies teachers might utilise the study's evidence-based solutions to dispel doubt or opposition to gender-neutral education. Teachers may reaffirm the legitimacy and advantages of using gender-neutral practices by providing facts, studies, and examples from throughout the globe.