

## BRIDGING GENDER DISPARITY FACTORS IN ADVANCED PEDAGOGY: IMPLICATIONS FOR CURRICULUM DELIVERY IN KADUNA STATE

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### Abstract

*Bridging gender disparity factors requires systemic changes in policy and social interactions at all levels of society, including the family, workplace, school, public services, and media. This study, therefore, investigates the difference in the recruitment process for male and female teachers in Kaduna State; ascertain the difference in the pedagogy skill endowments of male and female teachers in Kaduna State; and find out the difference in the pedagogy practice between male and female teachers in Kaduna State. In line with the stated specific purpose, three corresponding research questions were raised, and three null hypotheses were formulated in the study. The study adopted a descriptive survey design with a population of 5,712 respondents comprising 370 principals, 5,113 teachers and 229 ministries of education officials. Random sampling was used to select the sample size of 365 respondents, consisting of 340 teachers, 15 principals and 10 ministry of education officials. Data was collected using a standardised questionnaire created by the researcher. The Cronbach Alpha method was used to determine the instrument's reliability. The pilot test yielded a coefficient of 0.86, which was deemed high enough to make the instrument reliable for the study. Frequency counts, mean and standard deviation were used to answer the research questions, while Kruskal-Wallis was used to test the three null hypotheses at 0.05 level of significance. Findings revealed that; the recruitment exams, interview, and other procedures administered to female teacher applicants are the same with those given to male teacher applicants. However, the study also discovered that male and female teachers have different pedagogy skill endowments and practise. Hence, it was recommended among others that: Kaduna State government should promote policy reforms that ensure women have equal protections and rights in terms of education, recruiting, on-the-job training, support initiatives for women, school management and leadership.*

### Keywords

*Gender disparity,  
advanced pedagogy,  
pedagogy skill  
endowments &  
practice*

### Introduction

**G**ender disparity persists worldwide, especially among teachers in Kaduna State, Nigeria, and is a key hurdle to achieving

gender equality. "Teachers either favoured or disfavoured female students, depending on whether they wanted to bring female students up to the level of male students or if they

wanted to focus on male students because they thought they would do better in certain subject areas. Regardless, teachers accepted the belief that male students excelled in science and arithmetic while female students excelled in literature and communication. Previous experiences, on the other hand, revealed that female students were not as bright as male students. This was accepted as reality since it was repeated and internalised throughout the educational system. On the other hand, men and women are thought to differ in achievement-oriented traits such as agency, competence, and instrumentality, as well as social and service-oriented traits such as communion, warmth, and expressivity. Traditional gender norms require guys to be powerful, aggressive, and assertive, while girls are expected to be nurturing, courteous, and beautiful”.

Teachers are an important starting point for achieving gender equity at school since their gender-stereotyped ideas and educational methods have significantly impacted student gender discrepancy (Gunderson et al., 2012; Heyder et al., 2020). “Equality in pedagogical practice means that male and female teachers enjoy equal opportunity to succeed and perform depending on their particular talents and efforts. To promote equal opportunities for pedagogic practise, school careers, academic degrees, and employment policies should not be differentiated based on gender. Furthermore, equality in the learning process means that girls and boys receive equal treatment and attention and equal learning chances. This means that both girls and boys are taught the same curriculum, yet the content of the curriculum may be delivered differently to accommodate different learning styles. Simply put, it means that all students ought to be

exposed to stereotype-free and gender-neutral teaching techniques and materials. Furthermore, it implies that both boys and girls should be free to learn, explore, and develop talents in all academic and extracurricular activities”.

Bridging disparities in educational attainment have long been a priority for international education policy, and one of the United Nations Millennium Development Goals (MDGs) explicitly mentions it. Although many developing countries' policies (including Nigeria's) reflect this commitment, gender disparities persist in teacher pedagogical practices in Kaduna State secondary schools. Increased recruitment of female teachers is one significant policy associated with providing successful gender responsive pedagogy (UNESCO, 2012; Herz & Sperling, 2004; UN cited in Karthik & Ketki, 2013). Female teachers are vital in ensuring that girls and boys have equal access to learning opportunities. They may spread a gender-balanced culture through education, not just in classrooms but also in local communities. However, Kaduna State continues to struggle to attract and retain these women appropriately, and resolving this must become a top priority if any significant progress is to be achieved in reducing the state's alarming gender inequality figures.

Advanced pedagogy is “one in which the academic, social and physical environments take into account the unique requirements of both girls and boys (Forum for African Women Educationalists – FAWE, 2018). This implies that all stakeholders understand the educational ideas and practises that promote gender equality. For example, gender-responsive pedagogy is driven by teaching methodologies, language use,

educational materials, classroom set-up, interactions, and physical environment, but the most significant barrier is one that cannot be overcome solely through high-level policies: cultural barriers to girls' education. In Kaduna State, parents are still hesitant to send their girls to school. This makes her more inclined to marry young, and the girl may be coerced into a child marriage in some situations. Kaduna State still has one of the highest rates of child marriage in the country, with an estimated 38 % of 20–24 year old girls in Kaduna Local Government Area reporting they were married before they turned 15, and 38 % of girls in Soba Local Government Area reporting they were married before they turned 15 (The Guardian, 2021). Female teachers have the power to change this scenario”.

Teachers' classroom language can either reinforce negative gender stereotypes or encourage gender equality and inclusiveness (FAWE, 2018). “It is imperative for teachers to use both gender pronouns when citing examples and refer to all students with respect, regardless of their gender. Gender-responsive teachers plan classes with gender in mind, taking into consideration variances in students' learning needs based on their various social backgrounds and learning styles. The teaching and learning materials, techniques, activities, and classroom arrangement are all considered in a gender-sensitive lesson plan. The skill endowment in advanced pedagogy entails teacher ability to develop or adapt materials that are gender inclusive and ensure they promote messages of gender equality in society. Gender-equal textbooks and resources should be used. Top-down pedagogical approaches that believe teachers possess and convey all knowledge are common, yet they can lead to student passivity and acquiescence”. It is

critical to embrace more innovative curriculum and pedagogical approaches that boost student learning and promote gender equality in order to develop each student's life skills and various bits of intelligence. This paper, therefore, addressed gender disparity factors in advanced pedagogy and its implications on curriculum delivery in Kaduna State.

### **Review of Relevant Literature**

Advanced pedagogy according to Rajeshree (2015), is the skilful construction of a functioning system through which a goal can be conveniently realised. Strategies are never the same; they change depending on the scenario. Advanced pedagogy also refers to the establishment of a relationship between teaching and learning by determining some policy through preparation before presenting the contents, with the help of which the student's demand is faced and the teaching objectives are met. Advanced pedagogy has long been considered a broad teaching method category. Teachers must adapt tactics and skills to deal with the fast-changing and dynamic environment, including gender disparity, internal efficiency, external competition, and being a worldwide educational leader. Teachers need to be creative. They must anticipate the possibilities of future technologies, look outside the curriculum and beyond disciplines, and create connections that enhance and value learning in other subjects in order to use this knowledge and reinforce their teaching and students' learning. Both male and female teachers ought to be proficient in the use of communication and information technologies, as well as how to enable, stimulate, control, moderate, and manage them. Rajeshree (2015) and Finsterwald et al. (2013) averred that male and female teachers are expected to integrate different innovative

teaching strategies, techniques, ICT tools, decision-making tools, and so forth into their teaching, also design and implement different modes of learning processes through alternative delivery systems to bridge gender disparity.

In the context of this research, gender disparity occurs when teachers have a bias or belief that one gender is superior to other gender identities (Kollmayer, Schober & Spiel, 2018; FAWE, 2018). When gender discrepancy does exist, it is almost always in favour of men. Gender disparity often results from living in a patriarchal society where the male/masculine controls the female/feminine. It is also founded on the concept of power, which states that certain groups of people have the authority to dominate or control other people and objects. The concept that there are two 'natural' sexes, with the male/masculine being stronger and more powerful than the female/feminine or other gender identities, underpins patriarchy as a 'power over' system (FAWE, 2018). Teachers must become aware of any gender-disparity beliefs, attitudes, or prejudices they may have learned and seek to overcome them. They can accomplish this through self-reflection, training, reading, peer support, exposing themselves to examples and stories that defy gender preconceptions, and the implementation of national and school policies on gender equality.

Despite legally equal educational possibilities for men and women, there are still significant gender differences in academic motivation and accomplishment, which lead to gender-specific educational and vocational goals (Kollmayer, Schober & Spiel, 2018). In Kaduna State, female teachers account for 23% of secondary

school teachers (UNESCO, 2018). Women are still underrepresented in science, technology, engineering, and mathematics (STEM) fields, whereas men are underrepresented in health and other socially oriented fields (Boniol et al., 2019; European Commission, 2019). This underrepresentation begins in school, when girls have poorer intellectual self-concepts in STEM courses than boys, even after achievement is taken into account, whereas boys' self-concepts in reading and languages are similar (Wigfield et al.; Meece et al. cited in Kollmayer et al., 2020). In general, gender differences in motivation and achievement are minor in early childhood and the first years of school, but they become more noticeable in adolescence (Evans et al.; Hyde, cited in Kollmayer et al., 2020).

When teacher recruitment process and pedagogy skill endowment are not gendered sensitive, girls sometimes fall behind their male contemporaries and do not perform well. To buttress this, Karthik and Ketki (2013) found that girls who have a female teacher in a given year have higher annual test score gains than if she had a male teacher. Boys, on the other hand, perform similarly regardless of their teacher's gender. As a result, a policy of hiring more female instructors is expected to favour girls, and overall educational performance is likely to improve due to the lack of any balancing effect on boys. In other words, female teachers are more effective than male teachers at eliminating achievement gaps between genders. Karthik and Ketki (2013) test the robustness of the 'gender-match' result by including interactions between student gender and each of the teacher pedagogy skill endowments on which female and male teachers differ, and find that the estimates above remain essentially unchanged. These

findings corroborate evidence of gender inequalities in advanced pedagogy in both wealthy and low-income nations (Fryer & Levitt, 2010; Bharadwaj et al., 2012).

A teacher with advanced pedagogy skills considers the specific needs and gender considerations of girls and boys in their lesson plans and in all aspects of teaching and learning, such as teaching and learning materials, teaching methodologies, learning activities, classroom arrangement, and so on. Some study has been done on the gender dimensions of classroom teaching materials, albeit much of it is now out of date (e.g. Etim; Erinosh, cited in Unterhalter et al., 2015). It is undeniable that some instructional resources encourage student involvement and take into account various learning styles, while others incorporate gender prejudices. As a result, there have been mixed findings in favour and/or opposition to the idea that female teachers lack the necessary skills to deal with this. Kollmayer et al. (2018) observed that female teachers lack the necessary skills and approaches to deal with this circumstance, but Li and Wong (2016) discovered that men teachers are more adept at dealing with it. However, FAWE (2018) advocated that teachers are to draw up a list of female heroines for a history textbook that only depicts male heroes. If a science textbook portrays solely male scientists as inventors, teachers are to include a discussion of female scientists who are inventors. This requires teachers to assess and adapt the gender responsiveness of the language used in the teaching and learning materials to encourage both girls and boys to aspire for all professional vocations. However, recent research by Unterhalter et al. (2015) found that a member of the research team at a major educational

publishing company in Nigeria demonstrated a high level of awareness of the importance of gender sensitive-editing in textbooks, as well as the need for editorial staff to be trained in gender-sensitive editorial techniques.

Teachers can start by identifying gender disparity and gender-responsive language. Furthermore, the classroom is an excellent opportunity to improve learners' knowledge of how language perpetuates gender gaps so that they can be active participants in establishing a more inclusive culture in the classroom and community. An example of language that reinforces gender disparities in the classroom, according to FAWE (2018) includes "When everyone contributes his own ideas, the discussion will be a success" whereas teachers can reconstruct to promote gender equality, as thus "When everyone contributes her or his own ideas, the discussion will be a success". On the other hand, the amount of time teachers and students spend together during the school day significantly impacts maintaining gender gaps or encouraging gender equality. According to Dee's findings and cited in Yifan (2016), male teachers are more likely to teach with a more aggressive, disciplinary approach toward boys.

In contrast, both female and male teachers are more likely to ignore disruptive behaviour of boys than that of girls if it is not aggressive. Male teachers are more supportive of male students, according to Dee quoted in Yifan (2016), but female teachers are more supportive and expressive of all students and produce a more favourable classroom environment than male teachers. Teachers will continue to use educational methods that do not meet the special needs of boys and girls, use gender-insensitive materials, and propagate gender

differences without proper training and "unlearning" gender-biased ideas and behaviours. Girls, for example, are asked fewer questions, are assumed to be better readers, and are frequently assigned domestic roles in the classroom, such as cleaning and fetching water, whereas boys receive more praise and attention, are held to higher standards, are given more leadership roles, and are expected to perform more strenuous physical tasks (Frei & Leowinata, 2014). Teachers may not intentionally treat female and male students different but they tend to passively reinforce gender disparities in the classroom (Eccles & Jacobs; Hall cited in Yifan, 2016).

Teachers, in general, appear to lack effective techniques to address the often-unwanted gender discrepancies in their classrooms, as this topic is rarely addressed in regular teacher education (Gray & Leith, 2004). Most interventions to reduce gender disparities in schools directly target students (Lamb et al., 2009; Brinkman et al., 2011) and focus exclusively on promoting girls in STEM subjects (Good, Aronson & Inzlicht, 2003; Zhao et al., 2018). However, training programmes for teachers who work with hundreds of students in their professional lives and can thus act as multipliers are significantly more sustainable. Interestingly, Lüftenegger et al. (2012) found gender differences in motivation decreased when teachers fostered aspects of individualization and autonomy in their classrooms. Teachers who opt to foster autonomy and individualization in their classrooms appear to be less influenced by unconscious gender differences and more focused on their students' unique abilities and needs. According to Kollmayer et al. (2020), encouraging autonomy and individualization in the classroom implies allowing each student to choose assignments or

learning settings that are appropriate for their interests and skills. This creates a positive motivational climate in which diversity is viewed as a natural occurrence that a teacher is aware of, concerned about, and prepared to deal with. Therefore, this paper addressed gender disparity factors in advanced pedagogy and its implications on curriculum delivery in Kaduna State.

### **Theoretical Framework**

This study is based on Feminist Theory in its attempt to analyse inequality in gender-related issues. Feminist Theory is a theory that uses the conflict approach to examine the maintenance of gender roles and inequalities (Lumen Learning, 2022). Although writings classified as "feminist" or incorporating the perspectives and experiences of women have emerged throughout history, the history of Western feminist thought typically begins with the works of Mary Wollstoncraft (1759 – 1797), one of the liberation tradition's first feminist thinkers. Radical feminism, in particular, emphasises the role of the family, teachers, and government policies in maintaining male domination (Ford, 2017). Men's efforts are valued more highly in patriarchal society than women's. As a result, women's voices are frequently hushed or marginalised to the point of being dismissed.

Patriarchy refers to a set of institutional structures (like property rights, access to positions of power, career choice, relationship to sources of income, role performance) that are based on the belief that men and women are dichotomous and unequal categories (Lumen Learning, 2022). The idea that physiological sex differences between males and females are tied to differences in character, behaviour, and ability is central to patriarchy's gender ideology on sexual

differences (i.e., their gender). These distinctions are utilised to legitimise a gendered division of social duties and disparities in recruitment, rewards, power, and privilege. The question that feminists ask therefore is: How does this distinction between male and female, and the attribution of different qualities to each, serve to organize our institutions (e.g., the family, law, the occupational structure, social role performance, religious institutions, the division between public and private) and to perpetuate inequality between the sexes?

In light of those mentioned above, the researchers concluded that gender inequality in advanced pedagogy is perpetuated when teacher holds a prejudice or belief that one gender is superior to other gender identities. When gender disparity occurs, it nearly invariably favours men. Therefore, this theory is relevant to support this investigation because it aids in predicting and hypothesising the existing occurrence of gender disparity factors.

### Objectives of the Study

The study was set to:

1. determine the difference in the recruitment process for male and female teachers in Kaduna State;
2. ascertain the difference in the pedagogy skill endowments of male and female teachers in Kaduna State; and
3. find out the difference in the pedagogy practice between male and female teachers in Kaduna State.

### Research Questions

The following research questions guided the conduct of the study:

- i. What is the difference in the recruitment process for male and female teachers in Kaduna State?

- ii. What difference exist in the pedagogy skill endowments of male and female teachers in Kaduna State?
- iii. What difference exist in pedagogy practice between male and female teachers in Kaduna State?

### Hypotheses

The following null hypotheses were tested in the course of the study at 0.05 alpha level of significance:

- Ho<sub>1</sub>: There is no significant difference in the recruitment process for male and female teachers in Kaduna State.
- Ho<sub>2</sub>: There is no significant difference in the pedagogy skill endowments between male and female teachers in Kaduna State.
- Ho<sub>3</sub>: There is no significant difference in the pedagogy practice between male and female teachers in Kaduna State.

### Methodology

The study adopted a descriptive survey research design to explore the views of participants in this research. According to Cohen, Manion and Morrison cited in Alasoluyi (2021), descriptive survey research concerns the following: existing circumstances or relationships; prevalent practices; held values, points of view, or attitudes; ongoing processes; felt effects; or emerging patterns. In lieu of the emerging patterns, i.e. gender disparity prevalent in pedagogy practice, descriptive survey research was deemed appropriate in the current study. The population of the study was 5,712 respondents which comprised 370 principals, 5,113 teachers and 229 ministry of education officials. The sample size was 365 respondents, consisting of 340 teachers, 15 principals and 10 ministry of education

officials. The sample size was calculated using the sample size table recommended by Research Advisors (2006), which suggested that the sample size needed for the population of 5,001 to 7,500 people is 365. To avoid bias, the hat-and-draw method of random sampling was employed to obtain the sample size. Serial numbers of the elements in the sampling frame were recorded on pieces of papers folded and mixed thoroughly before the researcher asked to pick them at once without replacement. No stringent criteria were placed on the selection of the sample, rather than the fact that every member of the population has an equal chance of being chosen. Data was collected using a standardised questionnaire created by the researchers.

The questionnaire was divided into three parts ("A, B, and C"), with 10 items on each part. Part 'A' drew information on the recruitment process for male and female teachers, part 'B' collected data on the pedagogy skill endowment of male and female teachers while part 'C' sought the opinions of respondents on differences that exist in the pedagogy practice between male and female teachers. The instrument was a four-point rating scale with a criterion mean of 2.5 and weighted as follows: strongly agree (SA) = 4, agree (A) = 3, disagree (D) = 2, and strongly disagree (SD) = 1. To ensure that the instrument

measures what it intended to measure, it was validated by two experts in the Department of Educational Foundations and Curriculum, and one in Measurement and Evaluation, all in Ahmadu Bello University, Zaria. The instrument's reliability was determined through a pilot test that produced a Cronbach Alpha coefficient of 0.86, which was deemed high enough to make the instrument reliable for the study. Data collected in the study was analysed using descriptive and inferential statistics. The descriptive level used frequency counts, mean, and standard deviation to answer the research questions. In contrast, at the inferential level, Kruskal-Wallis was used to test the null hypotheses at 0.05 level of significance.

### Result and Analysis

This section presents the analysis of the data collected in the study. The research questions were answered using frequency, mean, and standard deviation.

**Research Question 1:** What are the differences in the recruitment process for male and female teachers in Kaduna State?

To answer this research question, the data collected from the respondents was analysed using mean and standard deviation. The summary of the analysis is presented in Table 1:

**Table 1: Difference in the recruitment process for male and female teachers in Kaduna State**

SN	Item Statements	Respondents	Mean	SD	Remark
1.	Staggered recruitment drives that only occur every few years, led to gender disparity among teaching candidates.	MOE	2.700	0.483	Positive
		Principals	2.600	1.320	
		Teachers	2.567	1.117	



2.	In Kaduna State, recruitment criteria or processes are frequently altered to favour male applicant instructors.	MOE	2.300	0.674	Negative
		Principals	2.071	1.014	
		Teachers	2.410	1.199	
3.	Policies for hiring teachers, determining promotion, and selecting school leadership are gender responsive.	MOE	2.800	0.421	Positive
		Principals	3.166	1.060	
		Teachers	3.052	1.123	
4.	The soft skills assessment included in the teacher recruiting process promote gender parity.	MOE	1.800	0.816	Negative
		Principals	2.133	0.355	
		Teachers	2.064	0.119	
5.	The recruitment exams administered to female teacher applicants are different from those given to male applicants.	MOE	2.100	0.316	Negative
		Principals	1.933	1.234	
		Teachers	2.302	1.158	
6.	Interview questions are being made more gender responsive, including questions that support women pedagogy capabilities.	MOE	2.700	0.699	Positive
		Principals	2.466	1.334	
		Teachers	2.970	1.083	
7.	Women are more recruited into the health and other socially oriented sectors than men.	MOE	2.600	0.875	Positive
		Principals	2.833	1.046	
		Teachers	2.673	0.969	
8.	Female candidates are interviewed by the Ministry of Education officials while the male candidates are interviewed by staff or committee from individual schools.	MOE	1.500	0.527	Negative
		Principals	2.133	1.302	
		Teachers	1.494	0.923	
9.	Recruitment of more female teachers encouraged girls in the same way as boys to develop skills, and choose careers that give them the best chance of employment.	MOE	2.700	0.483	Positive
		Principals	2.566	1.279	
		Teachers	2.891	0.971	
10.	Despite the fact that women and men have equal education opportunities, women are still underrepresented in STEM fields.	MOE	2.900	0.875	Positive
		Principals	2.533	1.457	
		Teachers	2.632	1.168	
			<b>2.45</b>	<b>0.91</b>	

Table 1 present the responses of 365 respondents (Ministry of Education Officials, Principals, and Teachers), with an average response mean of 2.45, which is less than the benchmark mean of 2.5 revealed that there is no difference in the recruitment process for male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), with the response mean of 2.100, 1.933 and 2.302 respectively strongly disagreed that the recruitment exams administered

to female teacher applicants are different from those given to male applicants.

**Research Question 2:** What difference exist in the pedagogy skill endowments of male and female teachers in Kaduna State?

In order to answer this research question, the data collected from the respondents was analysed using mean and standard deviation. The summary of the analysis is presented in Table 2:

**Table 2: Difference in the pedagogy skill endowments of male and female teachers in Kaduna State**

SN	Item Statements	Respondents	Mean	SD	Remark
1.	The pedagogy skill endowments of women workforce decreases as they progress in the teaching profession.	MOE	2.600	0.264	
		Principals	3.333	0.112	Positive
		Teachers	2.650	1.364	
2.	Male teachers generally display greater skill endowments in the application of gender-responsive methodology than women.	MOE	2.900	0.316	
		Principals	3.400	1.055	Positive
		Teachers	2.908	1.346	
3.	Female teachers are more endowed with pedagogy skills to build a positive relationship with each student.	MOE	2.700	0.483	
		Principals	2.533	1.302	Positive
		Teachers	2.550	1.401	
4.	Men generally display greater skill endowments on high skill profession than women.	MOE	2.800	0.421	
		Principals	2.666	1.099	Positive
		Teachers	2.238	1.096	
5.	Female teachers create a learning environment which promotes value and respect among students.	MOE	3.500	0.527	
		Principals	2.566	1.222	Positive
		Teachers	3.241	1.097	
6.	Female and male teachers have equal skills to analyse textbooks for all subjects and other materials for gender responsiveness.	MOE	2.200	0.527	
		Principals	2.266	1.011	Negative
		Teachers	1.885	1.056	
7.	Female teachers listen to their students, share ideas with their colleagues, and reflect on classroom interaction than their male counterparts.	MOE	1.700	0.483	
		Principals	2.033	1.486	Negative
		Teachers	1.114	1.113	

8. Female teachers are more endowed with skills that are flexible and responsive to the values, needs and interests of individual learners.	MOE	2.350	0.632	
	Principals	2.866	1.684	Positive
	Teachers	2.964	1.296	
9. Because of disparities in on-the-job training and self-confidence, male teachers tend to have better communication skills than female teachers.	MOE	1.900	0.316	
	Principals	2.133	1.245	Negative
	Teachers	2.008	1.220	
10. Shortages of soft skills such as communication and self-organisation skills are prevalent with female teachers than their male counterparts.	MOE	2.900	1.370	
	Principals	3.333	1.234	Positive
	Teachers	2.520	1.253	
		<b>2.56</b>	<b>0.97</b>	

Table 2 present the responses of 365 respondents (Ministry of Education Officials, Principals, and Teachers), with an average response mean of 2.56, which is higher than the benchmark mean of 2.5 revealed that there was difference in the pedagogy skill endowments of male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), with the response mean of 2.200, 2.266 and 1.885 respectively strongly disagreed that female and male

teachers have equal skills to analyse textbooks for all subjects and other materials for gender responsiveness.

**Research Question 3:** What difference exist in pedagogy practice between male and female teachers in Kaduna State?

In order to answer this research question, the data collected from the respondents was analysed using mean and standard deviation. The summary of the analysis is presented in Table 3:

**Table 3: Difference in the pedagogy practice between male and female teachers in Kaduna State**

SN	Item Statements	Respondents	Mean	SD	Remark
1.	The teaching aids used by female teachers are devoid of gender stereotypes as compared to their male counterparts.	MOE	3.100	1.100	
		Principals	2.800	1.373	Positive
		Teachers	2.511	1.304	
2.	The textbooks and other materials used by both female and male teachers are free from any gender stereotypes.	MOE	1.900	1.349	
		Principals	2.466	0.457	Negative
		Teachers	2.317	1.263	
3.	Male teachers use explicit teaching strategies to support students to have confidence in themselves than the female teachers.	MOE	2.500	0.549	
		Principals	2.733	0.457	Positive
		Teachers	2.552	0.170	

4.	Differences in female and male teachers' use of pedagogical skills and responsibilities tend to widen the gender disparity in classroom.	MOE	3.500	0.823	
		Principals	2.600	1.298	Positive
		Teachers	3.750	1.291	
5.	Female teachers used motivation techniques better than the male teachers to help students overcome fear (such as fear of speaking, fear of science, technology and math) and inhibition.	MOE	2.800	0.229	
		Principals	2.420	1.397	Positive
		Teachers	2.666	1.237	
6.	The male teachers use gender-biased language in the classroom than their female counterparts.	MOE	2.300	0.527	
		Principals	1.666	1.387	Negative
		Teachers	2.429	1.241	
7.	Both male and female teachers are using gender-responsive lesson plans.	MOE	2.800	0.421	
		Principals	3.600	1.242	Positive
		Teachers	2.670	1.161	
8.	Male teachers do apply relevant pedagogy techniques to ensure that both boys and girls participate equally in the lesson than their female teachers.	MOE	2.900	0.316	
		Principals	2.742	1.112	Positive
		Teachers	2.673	1.281	
9.	The performance of students in science subjects taught by female teachers for every term and in national examinations are the same with those taught by their male counterparts.	MOE	1.800	0.918	
		Principals	2.200	1.424	Negative
		Teachers	2.805	1.327	
10.	Both male and female teachers are aware of gender-biased language in use in the classroom.	MOE	2.100	0.994	
		Principals	1.866	1.125	Negative
		Teachers	2.141	1.460	
			<b>2.57</b>	<b>1.00</b>	

Table 3 present the responses of 365 respondents (Ministry of Education Officials, Principals, and Teachers), with an average response mean of 2.57, which is higher than the benchmark mean of 2.5 revealed that there was difference in the pedagogy practice between male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), with the response mean of 2.900, 2.742 and 2.673 respectively strongly agreed that male teachers do apply relevant

pedagogy techniques to ensure that both boys and girls participate equally in the lesson than their female teachers.

**Hypothesis 1:** There is no significant difference in the recruitment process for male and female teachers in Kaduna State.

Respondents' opinion was analysed and tested using Kruskal-Wallis. Table 4 gives the summary of the analysis conducted on hypothesis one.

**Table 4: Summary of Kruskal-Wallis test on the recruitment process for male and female teachers in Kaduna State**

Group	N	Mean Rank	Chi-square ( $\chi^2$ )	df	$\alpha$	P-value	Decision
MOE	10	77.189					
Principal	15	75.041	1.396	2	0.05	.430	Retained
Teacher	340	85.250					

Table 4 revealed that there was no significant difference in the recruitment process for male and female teachers in Kaduna State. The table showed the group chi-square ( $\chi^2$ ) of 1.396 with p-value of .430 at 2 degrees of freedom. Since the p-value (.430) was higher than the alpha level (0.05), the hypothesis which says that there was no significant difference in the recruitment process for male and female teachers in Kaduna

State was retained. This connotes that the hypothesis is not statistically significant.

**Hypothesis 2:** There is no significant difference in the pedagogy skill endowments between male and female teachers in Kaduna State.

Respondents' opinion was analysed and tested using Kruskal-Wallis. Table 5 gives the summary of the analysis conducted on hypothesis two.

**Table 5: Summary of Kruskal-Wallis test on the pedagogy skill endowments between male and female teachers in Kaduna State**

Group	N	Mean Rank	Chi-square ( $\chi^2$ )	df	$\alpha$	P-value	Decision
MOE	10	251.64					
Principal	15	164.24	37.787	2	0.05	.002	Rejected
Teacher	340	159.63					

Table 5 revealed a significant difference in the pedagogy skill endowments between male and female teachers in Kaduna State. The table showed the group chi-square ( $\chi^2$ ) of 37.787 with p-value of .002 at 2 degrees of freedom. Since the p-value (.002) was lesser than the alpha level (0.05), the hypothesis that there was no significant difference in the pedagogy skill endowments between male and female teachers in Kaduna

State was rejected. This connotes that the hypothesis is statistically significant.

**Hypothesis 3:** There is no significant difference in the pedagogy practice between male and female teachers in Kaduna State.

Respondents' opinion was analysed and tested using Kruskal-Wallis. Table 6 gives the summary of the analysis conducted on hypothesis three.

**Table 6: Summary of Kruskal-Wallis test on the pedagogy practice between male and female teachers in Kaduna State**

Group	N	Mean Rank	Chi-square ( $\chi^2$ )	df	$\alpha$	P-value	Decision
MOE	10	206.68					
Principal	15	206.94	15.353	2	0.05	.004	Rejected
Teacher	340	161.26					

Table 6 revealed a significant difference in the pedagogy practice between male and female teachers in Kaduna State. The table showed the group chi-square ( $\chi^2$ ) of 15.353 with p-value of .004 at 2 degrees of freedom. Since the p-value (.004) was lesser than the alpha level (0.05), the hypothesis which says that there was no significant difference in the pedagogy practice between male and female teachers in Kaduna State was rejected. This connotes that the hypothesis is statistically significant.

**Discussion of Findings**

To have a better understanding of how male and female teachers are recruited in Kaduna State, findings from the analysis carried out revealed that there was no difference in the recruitment process for male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), strongly disagreed that the recruitment exams administered to female teacher applicants are different from those given to male applicants. This revelation is consistent with the result of the test on hypothesis which revealed that the hypothesis is not statistically significant. Consequently, hypothesis one which says that there was no significant difference in the recruitment process for male and female teachers in Kaduna State was retained. This finding agrees with the findings of Kollmayer, Schober and Spiel (2018) which

indicated equal educational and recruitment opportunities for women and men. However, this finding veer greatly from the findings of UNESCO (2018) which stated that there are still massive gender disparities in teacher recruitment. For instance, female teachers make up 23 per cent of secondary school teachers in Kaduna State (UNESCO, 2018). Additionally, women are still underrepresented/recruited in STEM while men are less recruited in health and other socially oriented sectors (Boniol et al., 2019; European Commission, 2019).

Findings also revealed differences in the pedagogy skill endowments of male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), strongly disagreed that female and male teachers have equal skills to analyse textbooks for all subjects and other materials for gender responsiveness. This revelation is consistent with the result of the test on hypothesis which revealed that the hypothesis is statistically significant. Consequently, hypothesis two, which says there was no significant difference in the pedagogy skill endowments between male and female teachers in Kaduna State, was rejected. There is no gainsaying the fact that some pedagogy skill endowments encourage student engagement and consider different

learning styles while others contain gender stereotypes. Thus, there has been mixed findings in support and/or against that the female teachers lack the requisite skill to address this. Kollmayer et al. (2018) revealed that female teachers lack the right skills and techniques to address this scenario while Li and Wong (2016) found that male teachers tend to be more adept in tackling this situation. The findings of Karthik and Ketki (2013) also correlate this result as it revealed that female teachers differ from male teachers on several pedagogy skill endowments that may be correlated with teacher quality. Fryer and Levitt (2010); Bharadwaj et al. (2012) as well substantiate this finding with evidence of gender gaps in advanced pedagogy documented in both high and low-income countries.

Overall, findings revealed that there was difference in the pedagogy practice between male and female teachers in Kaduna State. For instance, respondents (Ministry of Education Officials, Principals and Teachers), strongly agreed that male teachers do apply relevant pedagogy techniques to ensure that both boys and girls participate equally in the lesson than their female teachers. This revelation is consistent with the result of the test on hypothesis which revealed that the hypothesis is statistically significant. Consequently, hypothesis three, which says there was no significant difference in the pedagogy practice between male and female teachers in Kaduna State, was rejected. Teacher's pedagogy practice have a large impact in reinforcing gender disparities or promoting gender equality. This is also the view of many scholars. According to Dee cited in Yifan (2016) male teachers are more likely to teach with a more aggressive, disciplinary approach towards boys while both female and male teachers tend to ignore the disruptive behaviour of boys more than

that of girls if it's not aggressive. Dee cited in Yifan (2016) also found that male teachers tend to be more supportive of male students but female teachers tend to be more supportive and expressive to all students and provide a more positive classroom overall than male teachers. Rajeshree (2015) and Finsterwald et al. (2013) discovered that male and female teachers integrate different innovative teaching strategies, techniques, ICT tools, decision making tools, etc. in their instructional delivery systems. Eccles and Jacobs; Hall cited in Yifan (2016) averred that teachers may not intentionally treat female and male students differently but tend to reinforce gender disparities in the classroom passively. The foregoing is undoubtedly a challenge to bridging gender disparity factors in advanced pedagogy, especially in Kaduna State's post pandemic era.

### **Conclusion and Recommendations**

Bridging gender disparity factors requires systemic changes in policy and social interactions at all levels of society, including the family, workplace, school, public services, and media. Hence, it can be inferred from the study that equity in the recruitment process for male and female teachers in Kaduna State is the dimension that could bridge the gender disparity in advanced pedagogy. It is also expedient to conclude that differences in the pedagogy skill endowments and practice between male and female teachers in Kaduna State tend to amplify gender disparities in advanced pedagogy. Based on this, recommendations were made that:

1. Kaduna State government should promote policy reforms that ensure women have equal protections and rights in education, recruiting, on-the-job training, support initiatives

- for women, school management and leadership.
2. Kaduna State ministry of education should provide gender-responsive teaching training to teachers and principals, including equity issues, conflict resolution, and addressing and preventing sexual harassment.
  3. Teachers should acquire the relevant soft skills for planning classes with gender in mind in order to remove implicit or overt barriers to girls' participation in pedagogical practice.
  4. Male teachers should become conscious of any gender-biased language, both verbal and non-verbal they may have learned and seek to overcome it. They can accomplish this through introspection, on-the-job training, and exposure to models and stories on gender equality.
  5. Kaduna State government should identify the several access points for closing the gender disparity, which include employment policies and practices, curriculum relevance, teacher deployment, work environment, security, new technologies, and resource allocation.

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