Theoretical Implications of Gendered Subject Selection and Participation in Zimbabwean A-Level Schools: A Case of Masvingo District

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Abstract

This study examines gendered subject selection and participation in Zimbabwean A-Level education through the lens of James Lull's Theory of Gendered Hegemony (TGH). Its objectives were to: distinguish male and female learners' subject perceptions; consider the influence of gender stereotypes on subject selection; review schools' attempts to address gender imbalances; examine how learners' gendered perceptions influence their participation; and suggest curriculum strategies for improving gender equity. While TGH highlights how cultural hegemony, media representation and ideological control reinforce traditional gender roles in education; the current study goes further by analysing empirical findings from Zimbabwean schools. Two purposively identified schools participated for an embedded case study involving gender-balanced cohorts of twelve learners per school, as well as five teachers. After conducting learner Focus Group Discussions (FGDs), one-on-one teachers' interviews and document analysis, the study introduces the Gender Dynamics Framework (GDF) as a real-world model emerging from field data. GDF identifies learner-centred dynamics, societal influences, teacher interactions and resource availability as key elements in shaping gender disparities. This framework offers a transformative approach to fostering gender-equitable learning environments, an approach that updates TGH postulated by Lull in 2011.

Key words: Gendered subject selection; Educational equity; Gender Dynamics Framework; Theory of Gendered Hegemony; Gender-responsive pedagogy

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1.0 Introduction

Gendered subject selection remains a pressing concern in Zimbabwean education, where societal norms, institutional structures, and cultural expectations continue to influence female and male learners' academic choices (Batsirai, 2020; Mavima, 2023; Mukundi, 2021). Empirical data from Zimbabwean institutions indicate a persistent trend: boys gravitate towards sciences and technical subjects, while girls dominate Arts and Humanities (Bhunu & Green, 2023; Chari, 2023). These patterns reflect deeply ingrained gender perceptions, as teachers often misjudge female learners' subject preferences, aligning more accurately with boys' choices (Mukundi, 2021; Ndlovu & Chikohomero, 2023).

To understand how dominant ideologies sustain these disparities, the Theory of Gendered Hegemony (TGH) by Lull (2011) illustrates how societal narratives, cultural expectations and historical gender roles shape learners' academic decisions, reinforcing the division between masculine and feminine academic domains. According to Lull (2011), hegemonic norms are not imposed through coercion but are maintained through institutions such as schools, families and the media. Within education, these norms manifest through gendered subject selection, where STEM fields are perceived as male-dominated, while Arts and Humanities are regarded as female-oriented (Mukundi, 2021; UNFPA, 2021). Teachers, school policies and social institutions further entrench these norms by reinforcing stereotypical expectations about male and female academic capabilities (Chari, 2023; Mavima, 2023).

Empirical literature suggests that the heritage-based A-Level curriculum in Zimbabwe reflects these gendered divisions, with male learners predominantly selecting Sciences, while female learners favour Arts and Humanities (Batsirai, 2020; Mukundi, 2021). Societal norms and cultural expectations, reinforced through families, the media and religious institutions, contribute to these choices (Hlaise, 2023; UNFPA, 2021). This has significant implications for learners' academic participation and career opportunities, as female learners often experience reduced confidence in STEM subjects, while male learners face social stigma when pursuing Humanities (Dube & Mavhunga, 2020; Gwatura, 2021; Mukundi, 2021).

Given the influence of gendered perceptions on subject selection, various interventions have been introduced to promote gender equity in education. Schools have implemented STEM promotion initiatives for girls, inclusive counselling services for boys, and gender-responsive educational policies (Mavima, 2023; Mwebaza, 2020; Zinyama & Mashava, 2023). However, these efforts have yielded mixed results, as entrenched societal norms and institutional barriers continue to limit progress (Hlaise, 2023; Maphosa & Bhebhe, 2019; UNFPA, 2021). Professional development for educators, mentorship programmes, and community engagement are essential strategies for addressing these disparities (Chari, 2023; Konyana & Motalenyane, 2022). Increasing the visibility of diverse role models in STEM and Humanities can also broaden learners' academic and career aspirations, challenge traditional gender roles and expanding opportunities (Chimoto, 2023; Dube & Mavhunga, 2020; Mavima, 2023).

This study adopts an interpretive case study approach to examine gendered subject selection among A-Level learners in Zimbabwe. By incorporating perspectives from learners, teachers and institutional documents, it seeks to identify the underlying factors influencing subject selection and assess the effectiveness of existing interventions. The study introduces the Gender Dynamics Framework (GDF) as an emerging conceptual model that moves beyond ideological analysis to propose structured grassroots interventions for addressing gender inequalities in education (Carlstrom, 2022). Rooted in school-level practices and learners' lived experiences, the GDF aligns with broader gender reform strategies and offers a practical approach to fostering more equitable subject selection processes and progressively democratic academic participation (Chari, 2023; Ndlovu, 2021; UNFPA, 2021).

The study aimed to examine the gendered patterns of subject selection among A-Level learners in Zimbabwean schools, explore the societal factors influencing male and female learners' academic choices and assess the link between these trends and institutional practices. Additionally, it sought to evaluate the implications of learners' gendered subject perceptions on their academic participation and propose a theoretical framework for addressing gender disparities in subject selection and educational engagement.

2.0 Methodology

2.1 Research Paradigm

The study adopted an interpretivist paradigm, which emphasises understanding social reality through subjective experiences and meanings (Carlstrom, 2022). This paradigm was considered appropriate for studying the gender dynamics of subject selection and participation as it allowed for the exploration of learners' perceptions, societal influences and the role of teachers in shaping educational pathways and experiences. Interpretivism recognises that knowledge is constructed through interaction and interpretation (Cardano, 2020), making it suitable for analysing narratives from learners, teachers and school records.

2.2 Research Approach

Gender disparities in subject selection among A-Level learners in Zimbabwean schools were explored through a qualitative approach. Qualitative research is well-suited for investigating social phenomena as it enables an in-depth understanding of participants' perspectives and lived experiences (Busetto et al., 2020). In this study, it examined the factors shaping subject selection and participation among female and male learners, allowing for an in-depth understanding of participants' subjective experiences, perceptions and social contexts (Creswell & Creswell, 2020). The qualitative approach provided the flexibility to capture the context-specific experiential insights that may not be fully represented in quantitative data. Thus, the qualitative approach facilitated a rich, holistic exploration of gendered subject selection, capturing the interplay of personal, institutional and societal factors that influence learners' educational trajectories.

2.3 Population and Sampling

In-depth perspectives on gender dynamics within A-Level education were obtained from purposively sampled participants. The study population comprised A-Level learners and teachers from selected schools, ensuring a diverse representation of subject specialisations and experiences. Sampling frames included class registers, departmental records and teacher rosters, which facilitated the identification of participants with relevant insights. Learners were selected based on their enrolment

in A-Level subjects, with attention to gender distribution across disciplines, while teachers were chosen for their direct involvement in curriculum delivery and student guidance. Inclusion criteria required learners to have completed at least one academic term within the A-Level curriculum to ensure familiarity with subject selection patterns and gendered experiences. Teachers, on the other hand, needed a minimum of two years of experience in A-Level instruction to provide informed perspectives on gender dynamics in subject selection and participation. Additionally, documentary analysis included class registers and performance records to triangulate findings for a credible research. The approach ensured data saturation by capturing a comprehensive range of viewpoints on the influence of gender perceptions in A-Level subject selection and participation.

2.4 Data Collection Methods

A multi-instrument approach was employed to enhance the credibility of findings through triangulation (Cardano, 2020; Creswell & Creswell, 2020). The data collection instruments included:

2.4.1 FGDs

FGDs were conducted with female and male A-Level learners to capture their perceptions and experiences regarding subject selection. Each discussion involved twelve participants and was gender-balanced, ensuring diverse perspectives while maintaining manageability. Semis-structured discussions were guided by open-ended questions to encourage in-depth responses and uncover underlying motivations and constraints affecting subject selection and participation. The FGDs provided insights into societal expectations, gendered stereotypes and personal career aspirations influencing learners' decisions and participation thereafter.

2.4.2 Teachers' interviews

These were administered on teachers to examine their perspectives on gendered subject selection and their role in shaping learners' choices. The use of a semi-structured interview instrument allowed flexibility in questioning while ensuring coverage of key themes such as gender biases, classroom interactions and

institutional policies. The interviews provided valuable contextual understanding and professional insights into the observed trends in educational gender dynamics.

2.4.3 Document analysis

School records, including class registers and subject performance data, were analysed to complement qualitative findings. Document analysis helped verify trends in subject enrolment, gender distribution and academic performance disparities. It also provided an empirical basis to assess the extent of gendered subject selection and the influence of school policies on learners' participation.

2.5 Data Analysis

Data analysis followed a thematic approach, involving systematic coding and categorisation of recurring themes (Busetto et al., 2020; Cardano, 2020). The researchers transcribed the FGDs and interviews word-for-word and drew out key themes through a thorough review of the transcripts. Thematic coding enabled the identification of patterns related to learner-centred dynamics, societal influences, teacher interactions as well as resource availability in subject selection and participation. Document analysis findings were integrated with qualitative data to validate emerging themes and reinforce interpretations. The study employed reflexivity to minimise researcher bias, ensuring that interpretations remained grounded in participants' narratives (Smilde & Hanson, 2023).

2.6 Ethical Principles Considered

This research obtained ethical clearance from the appropriate educational authorities and secured informed consent from all participants – including guardians in the case of learners aged below eighteen, and anonymity was maintained by assigning pseudonyms to learners and teachers. Participants were assured of confidentiality, and data was stored securely to prevent unauthorised access. Thus, the study adhered to ethical research principles, ensuring voluntary participation and respect for the dignity and perspectives of all respondents.

2.7 Limitations

While the qualitative approach provided rich insights into gendered subject selection, its findings are not statistically generalisable. Additionally, social desirability bias may have influenced some responses, particularly in FGDs. However, data triangulation helped enhance the study's credibility. The rigorous qualitative methodology illumines the socio-institutional factors shaping gendered subject selection among A-Level learners in Zimbabwe.

3.0 Findings

Field data collected from Zimbabwean schools indicate that gender disparities in subject selection are influenced by multiple interacting factors. The study synthesises these factors into GDF, which presents four core dimensions that shape subject selection and participation:

3.1 Learner-Centred Dynamics

Boys and girls express distinct academic preferences based on perceived difficulty, career aspirations and social expectations. Male learners gravitate towards STEM subjects due to perceived prestige and economic potential, while female learners tend to favour Arts and Humanities due to societal reinforcement and accessibility. Table 1 below summarises the FGD and interview contributions related to personal learner discernments.

Table 1: Field findings supporting learner-centred dynamics of subject selection and participation

Verbatim Quotes from Participants	Interpretation by Researcher
We are told to not be misled by O-Level passes in difficult subjects because as a woman grows, she loses endurance gradually. Girl 5, FGD2	Female learners frequently view STEM subjects as overly difficult and unsuitable, influenced by societal norms and gender expectations. They often favour narrative-based subjects that prioritise expression over strict calculations. Social and family expectations encourage them to pursue subjects aligned with traditional gender roles. Meanwhile, male learners associate STEM with prestige and financial success, while societal pressures deter them from Arts, reinforcing its perceived lack of economic value.
We girls happen to enjoy narratives, naturally, but the old History syllabus involved mathematical cramming of dates, which we hated. Girl 2, FGD2	
I am not studying Commercial subjects, yet one of my dreams is to become a successful businesswoman. Society is awash with examples of businesswomen who studied Arts. I have come to believe that Arts subjects teach us girls to be resourceful. Girl 2, FGD1	

Verbatim Quotes from Participants	Interpretation by Researcher
We are made to believe that Arts are for boys who hail from the underclass because artistic professions are typical examples of begging. The son of a rich person will be contradicting his status if he goes forth to study Arts. Boy 4, FGD2	
As the eldest son of my entrepreneur parents, I am motivated to study Business Management considering that I should inherit my family's enterprises. Society deems me the rightful heir to inherit the businesses after my parents. Boy 1, FGD2	
Girls seem to prefer subjects considered less demanding, like Family and Religious Studies (FRS), while viewing Sciences as too difficult because of the rigorous career paths they entail. Conversely, Arts subjects are seen as more manageable and suitable for those who juggle multiple tasks. Female Teacher 1, School 1	
Girls' reluctance to pursue Sciences tends to enhance boys' confidence, as choosing these subjects becomes a source of masculine pride. Female Teacher 1, School 1	
Whenever I am presenting or conducting an experiment, the teacher poses questions which switch off my confidence. Girl 6, FGD2	

Document analysis confirms gendered subject selection, with boys dominating STEM and Commercial subjects due to societal prestige and career expectations, while girls favour Arts, influenced by accessibility and traditional roles. Performance disparities align with classroom interactions, where boys excel in STEM and girls in narrative-based subjects. Subject transfers reflect societal pressure, with boys avoiding Arts and girls withdrawing from STEM. Classroom records show boys engaging more in STEM discussions, reinforcing their confidence. These findings highlight entrenched biases requiring targeted interventions for equitable academic participation.

3.2 Societal Influences

Parents, peers, and community perceptions play a crucial role in subject selection. Many learners reported feeling pressured to conform to traditional gender norms, discouraging girls from pursuing Sciences and technical subjects. Field contributions of learners and teachers that support the role of societal influences are summed up on Table 2:

Table 2: Field findings attributing gendered subject selection and participation to societal influences

Verbatim Quotes from Participants	Interpretation by Researcher
Society condones parental dictatorship and yet most parents want their boys to study Sciences being custodians of industrialisation, to the extent of transferring the boys to another school if the current school will not grant this wish. Girl 4, FGD2	Societal norms and parental influence reinforce gender stereotypes in subject selection. Girls face pressure to avoid STEM, favouring traditional feminine roles, while boys are steered towards financially rewarding fields, dismissing Arts and domestic roles. Cultural beliefs and career expectations sustain gendered academic divisions, with schools struggling against deep-rooted societal influences that shape learners' educational and career choices.
We think twice if not thrice before choosing any one of the subjects that society previously reserved for boys. We believe it was like that for a reason. Girl 1, FGD1	
Shona traditions say that girls must not pursue education too far up because they will cease to be ideal future wives. Further education is deemed a potential source of problems for wives who end up being uncontrollable. Boy 2, FGD2]	
I was raised with the belief that as a girl I should go to school for enlightenment only and not as preparation for any economic roles as my future husband will be the breadwinner. As a result, I have been comfortable with enlightening subjects offered in the Arts class. Girl 4, FGD1	
Role models for girls as depicted in media are largely in Arts-based professions. Boy 5, FGD2	
Girls choose less demanding categories like Arts because they have a lot of womanly duties to perform back home. Male Teacher 1, School 1	
The local job market admits girls who studied Arts and Humanities as well as boys who did Sciences in general. There is less risk of not finding a job in this order. Female Teacher 2, School 2	
Industry threatens women while reassuring men. As a result, boys comfortably study industrial-oriented subjects like Sciences and Engineering, while girls study them only insecurely. Male Teacher 2, School 2	

The analysed class registers and records of marks support the findings that societal influences significantly shape subject selection. Boys dominate STEM fields due to parental expectations and economic prospects, while girls lean towards Arts, aligning with cultural beliefs about femininity and domestic roles. Marks analysis reveals

gendered performance trends, reinforcing confidence disparities. Subject transfers reflect societal pressure, with boys moving into sciences and girls withdrawing due to perceived difficulty. These patterns highlight entrenched gender biases in education and career aspirations.

3.3 Teacher Interactions

Educators' attitudes significantly influence subject choices. Some teachers reinforce gender biases, either subtly by discouraging girls from taking challenging STEM subjects or overtly through differentiated classroom treatment. Interview and FGD responses attaching gendered subject selection and participation to teacher interactions are given on Table 3.

Table 3: Insights from interviews and FGDs gendered subject selection and participation to teacher interactions

Verbatim Quotes from Participants	Interpretation by Researcher
We senior girls do not feel confident in our current school uniforms. The school seems bent on very long skirts, but as a postmodern girl, I feel awkward in such a skirt. As a result, I might not do well in subjects which demand utter confidence. Girl, FGD1	Teachers' interactions shape gendered subject selection and performance by reinforcing stereotypes. Some discourage girls from STEM by emphasising difficulty or expressing surprise at their success, while boys receive more encouragement and hands-on opportunities. Gendered expectations also see boys steered away from Arts. Classroom dynamics often reflect biases, influencing learners' confidence and reinforcing academic divisions.
My teacher is always failing me whenever she marks my work. I realised that it is sheer favouritism when I copied word-for-word the work of someone else. I failed and the copied person passed. This showed me that either the teacher does not mark at all or there is some issue between us. Personally, I've given up on the subject but I don't have the courage to alert my guardian who pays my school fees reliably. Girl 1, FGD1	
Boarding masters allow boys to be in the classrooms even throughout the night. This is actually mentioned by boys who chide other boys saying, 'You can't be beaten by a girl, man. You have all the time to read while girls sleep, man.' This actually explains why boys often outperform girls in sciences because these subjects are revision-intensive. Girl 6, FGD1	
I'm too shy to approach the teacher on my own, but in a group of learners, it feels different. I think the teacher sees me differently when I'm part of a group, and working together helps protect me from any bias. Girl 4, FGD2	

Verbatim Quotes from Participants	Interpretation by Researcher
If you choose sciences, you really need time to revise. We are privileged to have such time which the girls don't necessarily have due to extra chores outside study time. Boy 5, FGD1	
Girls do not match boys in their range of capabilities as viewed from sociocultural lenses. Girls generally have a narrower choice in the Arts and Humanities unlike boys who are customarily cut for studying Sciences. Male Teacher 2, School 2	
The school has encouraged teachers to be role models in championing gender equality. We have therefore inspired learners to pursue their educational goals without gender limitations. However, while girls are increasingly gathering courage to tackle Sciences due to this, female teachers are lacking in the Sciences department. Female Teacher 2, School 2	
Our school has established counselling services and support networks that specifically cater to the needs of male learners. In fact, there are similar services arranged for girls too. The school recognises that boys may require a different approach to address their emotional and mental health concerns. Male Teacher 2, School 2	

Document analysis of class registers and academic records corroborates the influence of teacher interactions on gendered subject selection. Boys' dominance in STEM is reinforced by greater encouragement, longer study hours, and fewer domestic responsibilities, while girls often lack confidence due to discouragement and unequal revision opportunities. Marks and teachers' comments reveal disparities linked to perceived favouritism, possibly unconscious bias. Subject transfers further reflect these trends, as girls withdraw from sciences due to discouragement, while boys avoid Arts, mirroring classroom biases.

3.4 Resource Availability

Unequal access to ICT tools and study materials disproportionately affects subject participation. Male learners often have better access to digital resources, while female learners face structural disadvantages, particularly in rural settings. Table 4

summarises the learners' and teachers' views that ascribe gendered subject selection and participation to resource availability.

Table 4: Participant quotes citing resource availability as influencing subject selection and participation

Verbatim Quotes from Participants	Interpretation by Researcher
What depresses us worst is the fact that we pay equal school fees but boys get more food and more exercising outside. Girl 5, FGD1	Resource availability influences gendered subject selection and performance, with boys often having better access to food, leisure, ICT tools and study resources. Girls face mobility restrictions and limited digital engagement, disadvantaging them in STEM subjects. Structural inequalities and socioeconomic factors further widen the gap, reinforcing gender disparities in technological proficiency, academic confidence and subject selection.
The food inequality is serious and it affects our concentration in academic and extracurricular work. Sometimes we boycott the activities quietly because we are shy to protest openly. Girl 1, FGD1	
My parents said, "Pick subjects that won't waste money. If you fail, it's a small loss, but if you pass, you must get a job quickly." That's why I didn't choose Sciences. Girl 3, FGD1	
STEM created conditions for imperfect competition in the A-Level classes. There was a literal stampede to enrol in sciences, not necessarily out of career drives but for the allure of funding. To forge a picture of gender equitableness, the initiative enrolled even under-qualified girls who soon failed to endure as demonstrated by the sudden drop of female numbers after a few years. Girl 5, FGD2	
Families, especially those with limited resources, often view investing in a girl's education as risky. They prefer she chooses subjects that will guarantee immediate returns. Male Teacher 2, School 2	
Families are generous with money when funding boy education, but when it comes to girl education, the cheapest choices are considered excellent. Male Teacher 4, School 1	
To achieve gender balance in the A-Level curriculum, we need to start by ensuring that our instructional materials and resources are designed to be gender-neutral; including gender-fair educational content and inclusive examples. Female Teacher 1, School 1	
In some extracurricular activities like sports, there may still be disparities in resources and opportunities between male and female students, affecting their performance and confidence. Female Teacher 1, School 1	

The analysis of class registers and marks aligns with findings on resource disparities. Boys' higher enrolment in STEM subjects correlates with greater access to ICT tools, study materials and revision time. Meanwhile, girls' lower participation rates and higher dropout levels in sciences reflect structural barriers, including financial constraints and societal expectations. Performance records further reveal that boys benefit from technological engagement, while girls' academic struggles in resource-intensive subjects reinforce gendered subject selection patterns, perpetuating educational inequalities.

4.0 Discussion and Analysis

This section compares the principles of Lull's TGH with the findings of the current study in light of the emerging GDF and within the context of subject selection and participation.

4.1 Learner-Centred Dynamics

The study's findings on gendered subject selection largely align with Lull's TGH, which argues that culture–through media–shapes individual choices and reinforces gendered behaviours. Male learners drifted towards STEM subjects due to perceived prestige and economic potential, reflecting cultural narratives that associate masculinity with technical and business success as represented in public media (Hlaise, 2023; Lull, 2011). This mirrors past literature, which highlights the tendency for boys to favour technical fields, influenced by both culture and familial pressures (Chari, 2023; Konyana & Motalenyane, 2022; Mangena & Waliaula, 2021; Mavima, 2023). Conversely, female learners tended to prefer Arts and Humanities, with subjects like FRS seen as more manageable and aligned with traditional feminine roles (Hlaise, 2023; Lull, 2011). This trend is supported by past studies, noting how girls are often discouraged from pursuing STEM due to perceived difficulty and cultural beliefs about their suitability for such fields (Mavima, 2023; Zinyama & Mashava, 2023). However, the study updates TGH by illustrating a more learner-centred dynamic where learners actively negotiated their subject selection in response to both external pressures and personal agency, rather than defencelessly yielding to public media trends. For instance, some girls, while facing societal discouragement towards STEM, actively pursued these fields, motivated by aspirations beyond traditional

gender roles. Similarly, some of the boys, while culturally expected and encouraged to excel in STEM, expressed discomfort with Arts subjects, despite no overt familial or societal discouragement. These clues highlight that learners are not passive recipients of cultural norms and media narratives but engage with them in complex, sometimes resistant ways. This challenges TGH's more deterministic view of culture's role in shaping subject selection and underscores the importance of considering individual agency in educational choices.

4.2 Societal Influences

The findings of this study align with TGH in suggesting that the influence of parents, peers and community expectations on subject selection reflects deeply ingrained gender stereotypes. Girls faced societal pressure to avoid STEM subjects, which were perceived as unsuitable due to cultural beliefs about their roles as future wives and mothers (Lull, 2011). This is consistent with other previous studies where girls are discouraged from pursuing technical fields, as these subjects are seen as masculine and financially unappealing for women (Chari, 2023; Ndlovu, 2021). On the other hand, TGH assumes boys are steered towards sciences, viewed as economically rewarding and aligned with traditional masculine roles. This is reflected in the findings, where male learners, driven by parental expectations and career prospects, dominated STEM subjects. However, the current study differs from TGH by illustrating that the pressures of social institutions on both genders are more complex and dynamic than traditionally understood. While TGH suggests a clear-cut gendered division, the findings reveal that girls' resistance to societal norms was more pronounced, with some actively seeking to challenge institutions and their expectations, even in the face of adversity (Maphosa & Bhebhe, 2019; Sibanda, 2020). Furthermore, the study reveals that boys, despite societal pressures to excel in STEM, face subtle discouragements in non-technical fields, indicating a more delicate interaction between gender roles and subject selection. This highlights the need to update TGH by considering the active agency of learners in navigating and resisting sociocultural influences on their academic choices, rather than focusing exclusively on institutions as sole perpetrators.

4.3 Teacher Interactions

The study aligns with TGH by highlighting how teachers' biases—both subtle and overt—affect learners' confidence and subject selection, perpetuating gendered educational divisions. Girls, for instance, were often discouraged from pursuing STEM subjects through negative reinforcement, such as surprise at their success or a lack of encouragement. Female learners felt unsupported in STEM areas due to perceived biases and unequal revision opportunities, reinforcing Ndlovu and Chikohomero's (2023) call to retrain teachers to counteract these biases as schools may end up perpetuating inequalities (Lull, 2011). Furthermore, the study reflects TGH's connection of masculinity with rationality and academic success in technical fields, with boys receiving greater encouragement and more opportunities to engage with revision-intensive subjects like sciences, supported by extended study hours and fewer domestic responsibilities. However, the study departs from TGH by showing a more complex interaction between teacher behaviours and gendered subject selection. While TGH suggests teachers and schools consciously perpetuate gender roles, the findings in this study suggest that teacher bias may also be unconscious, reflecting a broader societal norm rather than intentional discrimination. For example, the lack of female teachers in STEM and the tendency to reinforce gender stereotypes through informal classroom interactions indicate a more systemic, entrenched issue (Chimoto, 2023; Ndlovu & Chikohomero, 2023; Ruche & Ndlela, 2020). This finding updates TGH by suggesting that biases are not solely a result of teacher intention but are also deeply embedded in the structures and practices of educational institutions.

4.4 Resource Availability

In line with TGH, the findings from this study highlight how resource availability shaped gendered subject selection and participation, particularly in the context of unequal access to food, leisure, ICT tools, study materials and study time. The current results reveal a significant disparity between female and male learners, with boys enjoying better access to digital resources, study materials and more leisure opportunities, while girls face structural disadvantages such as limited mobility and restricted access to technology (Batsirai, 2020; Sibanda, 2020). This reinforces gendered expectations and educational inequities, particularly in STEM subjects, where digital proficiency is crucial among other targeted structural and policy improvements (Mavima, 2023;

Mwebaza, 2020). The study also touches on socioeconomic factors, with families often viewing investing in a girl's education as risky and preferring subjects that guarantee immediate returns (Chari, 2023; Gwatura, 2021; Washe, 2021). These patterns of unequal resource distribution resonate with past literature, which suggests that girls are typically discouraged from pursuing resource-intensive and career-driven subjects like sciences due to financial constraints and socio-structural pressures (Mukundi, 2021). However, this study introduces a new dimension to the TGH by suggesting that unequal access to resources may not only reinforce gender stereotypes but actively create structural inequalities at policy and implementation levels that limit the leaners' academic participation.

Table 5 compares the theoretical framework used in this study with the one emerging from the current findings as discussed above.

Table 5: Comparison of TGH and GDF in Addressing Gender Disparities in Education

Dimension	**TGH**	**Gender Dynamics Framework**
Focus	Critique of gendered power structures	Practical interventions to address gender imbalances
Agency	Gender norms are reinforced by institutions	Change is possible through targeted interventions
Role of education	Schools perpetuate gendered hierarchies	Schools can transform into gender-sensitive spaces
Media influence	Media reinforces stereotypes	Media can be leveraged to promote gender equity
Policy implications	Structural changes are difficult	Policy reforms and targeted interventions are key

5.0 Study Conclusions

5.1 Learner-Centred Dynamics

The study finds that gendered subject selection among A-Level learners in Zimbabwe is influenced by cultural narratives, societal expectations and individual agency. Consistent with Lull's (2011) TGH, which argues that media and culture reinforce gendered academic choices, the findings show that male learners lean towards STEM subjects due to perceived prestige and economic prospects. Conversely, female learners tend to prefer Arts and Humanities, viewing subjects like FRS as more manageable and aligned with traditional gender roles. However, the study challenges TGH's deterministic perspective by highlighting learners' active negotiation of subject

selection. Some girls pursue STEM despite societal discouragement, while some boys hesitate to take Arts despite no overt opposition. These findings underscore the need for gender-responsive career guidance and school-based interventions to support learners' autonomy in subject selection.

5.2 Societal Influences

The study's findings reaffirm TGH's assertion that parental, peer and community expectations reinforce gendered subject selection, with girls being steered away from STEM due to cultural beliefs linking their future roles to domestic responsibilities. Similarly, society encourages boys to pursue Sciences, perceived as economically rewarding and aligned with traditional masculinity. However, the study extends TGH by demonstrating that gendered pressures are more nuanced, as learners actively negotiate and, at times, resist societal norms. Sometimes girls challenge institutional expectations by pursuing STEM, despite discouragement, while boys face subtle barriers in non-technical fields, contradicting the notion of a rigid gender divide. These findings call for policy reforms that move beyond reinforcing gender-neutral subject promotion to actively addressing hidden biases. Schools must implement gender-sensitive career guidance and curricular adjustments that empower both genders to pursue their academic interests free from societal constraints.

5.3 Teacher Interactions

The study confirms TGH's assertion that teacher biases, both explicit and implicit, shape learners' subject selection and reinforce gendered educational divisions. Girls often face discouragement in STEM subjects through subtle negative reinforcement and limited revision opportunities, while boys receive greater encouragement in technical fields, aligning with the broader association of masculinity with rationality and scientific success. However, the study extends TGH by revealing that teacher biases are not always deliberate but often reflect broader societal norms rather than conscious discrimination. The systemic nature of these biases, exacerbated by the scarcity of female STEM teachers, underscores the need for policy reforms. Schools must implement gender-responsive teacher training, equitable study support and active recruitment of female STEM teachers. Addressing these entrenched biases

requires institutional change that moves beyond awareness to structural interventions fostering gender-inclusive learning environments.

5.4 Resource Availability

The study reaffirms TGH's argument that resource availability significantly influences gendered subject selection, with male learners benefiting from greater access to ICT tools, study materials and leisure time, while female learners face structural disadvantages such as restricted mobility and limited digital access. These disparities reinforce gendered educational inequities, particularly in STEM, where technological proficiency is essential. Additionally, socioeconomic pressures shape subject choices, as families often prioritise investment in boys' education while steering girls towards subjects perceived as financially low-risk. However, this study goes beyond TGH by revealing that resource disparities do not merely reinforce stereotypes but create systemic inequalities that hinder learners' academic participation. Addressing these gaps requires policy reforms promoting equitable access to digital resources, gender-responsive funding models, and school-based interventions that mitigate structural barriers, ensuring all learners can fully engage in their academic pursuits regardless of gender.

The above conclusions boil down to the following framework emerging from the study. Figure 1 below presents the Gender Dynamics Framework as a modification of Lull's (2011) TGH based on the current findings.

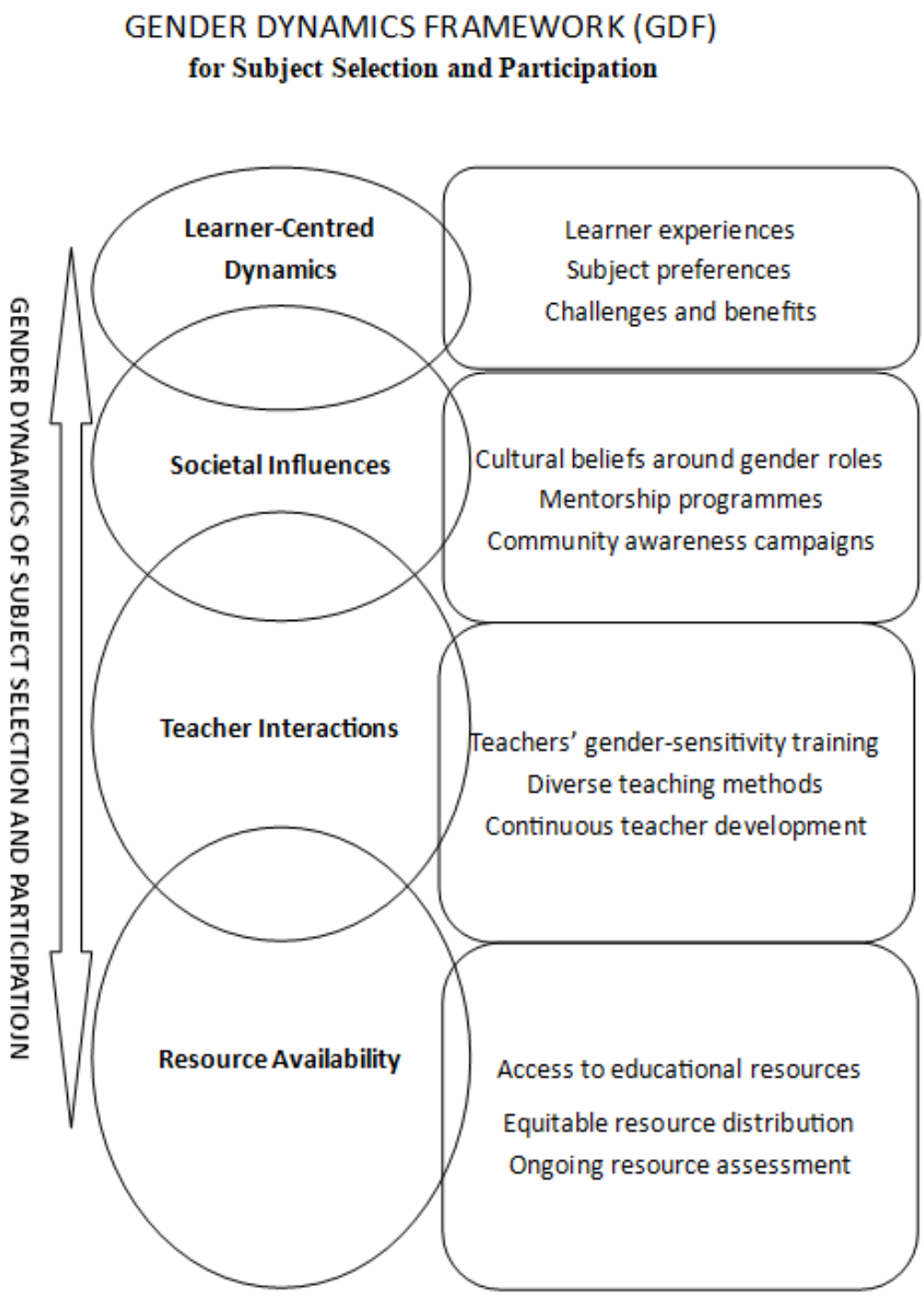

Figure 1: The Gender Dynamics Framework for subject selection and participation (by author)

6.0 Implications for Policy and Practice

6.1 Dynamic curriculum

A gender-sensitive curriculum should accommodate diverse learning needs, allowing for flexible coursework deadlines and inclusive content that challenges traditional gender roles. Schools should integrate more gender-responsive approaches in career guidance sessions.

6.2 Community engagement

Parents and communities should be engaged in dialogues that challenge societal norms shaping subject selection. Schools should collaborate with local leaders and stakeholders to create awareness campaigns promoting diverse academic pathways.

6.3 Teacher development

Schools should implement gender-responsive pedagogies that counteract stereotypes, ensuring that both male and female learners feel supported in their subject choices. Continuous professional development should equip teachers with the skills to encourage equitable participation.

6.4 Resource distribution

Equitable access to learning materials and ICT tools should be prioritised to ensure that gender disparities in subject participation are minimised. Government and non-governmental organisations should invest in school infrastructure that supports gender-inclusive learning.

6.5 Ongoing research

Continuous research is essential to monitor and address emerging gender disparities in subject selection and participation to further update theoretical comprehension of educational gender issues. Longitudinal studies must assess the impact of current interventions in the long run, and identify persistent barriers to gender equality in education. Schools, policymakers and researchers should collaborate to generate data-driven strategies that ensure sustained progress in closing gender gaps.

Additionally, research should explore how evolving societal norms, technological advancements and economic shifts influence gendered academic choices. By maintaining a strong evidence base, education systems can adapt policies and practices to create more inclusive learning environments that empower both female and male learners.

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Statement of competing interests

There are no competing interests of any kind pertaining to this work.

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