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EDUCATIONAL EQUITY AND FREE SECONDARY EDUCATION POLICY IN LUSAKA DISTRICT, ZAMBIA

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Abstract

The 2022 expansion of Zambia's Free Secondary Education (FSE) policy has outpaced institutional capacity, creating a critical 'quality-density' challenge in urban centres. This study investigated policy implementation across three purposively selected secondary schools in Lusaka District. Using a mixed-methods design, findings reveal that while fee abolition spurred over two million nationwide re-enrolments, local class sizes have surged to exceed 100 pupils per room. Despite a 52% national funding increase (ZMW 27.4bn in 2024) and the recruitment of 30,000 teachers, desk-to-pupil ratios remain as high as 1:5 across the surveyed sites. While infrastructural upgrades at Chawama, Libala Stage III, and Chilenje South demonstrate positive steps, this intense 'access-quality' tension necessitates a more robust framework. Consequently, the study recommends a hybrid implementation model that synergises top-down state funding with bottom-up stakeholder participation. It further proposes a 'storied-infrastructure' model to maximise limited urban land through strategic cost-sharing, offering a baseline framework for refining FSE sustainability within high-density urban settings.

Keywords: *Educational equity, Fiscal sustainability, Hybrid policy implementation, Infrastructure deficits, Storied-infrastructure, Urban school massification.*

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1.0 INTRODUCTION

Globally, translating education as a fundamental human right into operational reality remains a persistent challenge, particularly across Least Developed Countries (LDCs) where budgetary constraints and fragile policy frameworks undermine equitable delivery (UNESCO, 2015; Mashala, 2019; Bwembya & Daka, 2024). Despite international mandates like Sustainable Development Goal 4 (SDG 4), which binds member states to secure universal, inclusive, and quality primary and secondary education by 2030 (Regmi, 2015; United Nations, 2015), over 250 million children remain structurally excluded from schooling, with the heaviest deficit concentrated in sub-Saharan Africa (UNESCO, 2015; Mulenga-Hagane et al., 2020). While

various African nations have aggressively mobilised free education policies to expand democratic entry and reduce out-of-school numbers (Mays & Singh, 2020), this rapid massification frequently triggers severe friction between macroeconomic policy success and institutional quality.

Zambia has historically pivoted its developmental and macroeconomic trajectories on educational access, dating back to its post-independence free primary education (FPE) initiatives in 1965 (MoE, 1992; Sikwibele, 2003; Sibanda, 2013). In January 2022, the state dramatically expanded this mandate by abolishing mandatory user fees in secondary schools, resulting in an unprecedented influx of over 2.3 million children into the public school system (NAQEZ, 2022). However, this total fee abolition was enacted in the absence of a formalised statutory framework, meaning that the lack of a legal framework continues to impede effective implementation and equitable delivery (Policy Monitoring and Research Centre [PMRC], 2023).

While an expansive body of local literature has thoroughly evaluated the structural impacts of previous free primary and basic education regimes (Simasiku, 2017; Musambachime, 2017; Jere & Nakamba, 2019; Hapompwe *et al.*, 2020), the contemporary extension of fee abolition to the secondary sub-sector introduces distinct socio-spatial and financial dynamics that remain under-researched. This study addresses this empirical gap by exploring the implementation challenges of FSE within the land-constrained urban environment of Lusaka, offering actionable strategies to optimise policy sustainability and safeguard structural quality.

The purpose of this study is to analyse the impact of Zambia's 2022 FSE policy expansion on educational equity in selected secondary schools in Lusaka District, Zambia, by analysing changes in enrolment, funding, and infrastructure.

The study addresses the following research question:

i. To analyse the impact of Zambia's 2022 free education policy expansion on educational equity in selected secondary schools in Lusaka District, Zambia, by examining changes in enrolment, funding, and infrastructure.

The above objective is achieved by answering the research question below:

i. How has the 2022 expansion of free education in Zambia impacted educational equity in selected secondary schools in Lusaka District, Zambia, considering changes in enrolment, funding, and infrastructure?

2.0 LITERATURE REVIEW

2.1 Global Architecture of Free Education Policies

The global mandate for universal education is anchored in a robust framework of international human rights law. The right to education is explicitly enshrined in Articles 28 to 30 of the United Nations Convention on the Rights of the Child (1989) and codified via Article 13 (2b) of the International Covenant on Economic, Social and Cultural Rights (ICESCR). Given the immense fiscal demands of universal state provision, these instruments advocate a strategic, phased approach: prioritising immediate, compulsory FPE while ensuring that secondary and higher tiers become “progressively free” (Committee on Economic, Social and Cultural Rights, 1999). In the contemporary policy landscape, this progressive realisation is mobilised by Sustainable Development Goal 4 (SDG 4), which binds member states to secure universal, equitable, and quality secondary access by 2030 (UNESCO, 2015).

To evaluate how governments translate these high-level rights into operational realities, policy implementation must be filtered through Tomaszewski’s (2001) 4As Framework. This structural rubric moves beyond mere policy rhetoric to critically interrogate the systemic interdependence between educational availability, accessibility, acceptability, and adaptability.

While well-resourced Nordic models demonstrate successful equilibrium across all four dimensions, developing nations transitioning to universal access frequently encounter a severe "access-quality paradox" (UNESCO, 2015; Khamati & Nyongesa, 2013). In these contexts, policies optimised for accessibility, specifically through rapid, top-down fee abolition, routinely trigger sharp deficits in availability and acceptability as exponential enrolment surges outpace resource allocation and infrastructural capacity.

Zambia's educational trajectory mirrors this structural friction. Domestically, the momentum toward universal provision began as a localised response to the 1990 Jomtien World Conference, manifesting in early policy frameworks such as Focus on Learning (1992) and Educating Our Future (1996) (Kelly, 1991; MoE, 1996). For decades, local scholarship evaluated these dynamics almost exclusively within the confines of FPE (Hapompwe *et al.*, 2020; Silukuni & Mwanza, 2020).

However, Zambia's 2022 policy expansion represents a radical, non-linear shift to total fee abolition at the secondary level. While baseline literature highlights the macro-financial and infrastructural strain of this rollout, it frequently overlooks the distinct logistical, curricular, and socio-economic pressures differentiating secondary education from primary schooling. Consequently, this study utilises the 4As framework to interrogate FSE as a distinct policy apparatus, isolating the unique structural realities governing its long-term sustainability.

2.2 Stakeholder Perception on Implementation of Free Secondary Education Policy

Stakeholder perceptions regarding the FSE policy are highly polarised, reflecting a deep-seated tension between institutional accountability and educational democratisation. Sceptical stakeholders contend that universal state funding inadvertently exacerbates systemic corruption and fiscal misappropriation within the educational bureaucracy (Hapompwe et al., 2020). This distrust is substantiated by a 2018 Zambia National Education Coalition (ZANEC) report documenting the suspension of 80 Ministry of General Education officials for the misappropriation of over $10 million, alongside successive Auditor General's Reports (2015–2018) codifying systemic misapplications totalling ZMW 256,253,712 and ZMW 8,715,532 respectively (ZANEC, 2018). These governance deficits severely compromise school supply procurement and resource distribution at the institutional level (Hapompwe et al., 2020; Musambachime, 2017).

Conversely, proponents view government intervention as a moral and economic imperative to dismantle socioeconomic barriers. Prior to 2022, user fees acted as a primary mechanism of exclusion, directly causing roughly 45% of student dropouts (Bwembya & Daka, 2024; Mwelwa *et al.*, 2023). From this perspective, fee abolition corrects the systemic marginalisation of low-income demographics. To reconcile skyrocketing enrolment with depleted state coffers, another faction advocates returning to formal cost-sharing paradigms. This aligns with the Ministry of Education's foundational policy, Educating Our Future, which explicitly states that government funding alone is insufficient to ensure quality education, making multi-stakeholder partnerships crucial (MoE, 1996).

However, reintroducing cost-sharing faces severe operational and ideological resistance. Government emphasis on "free" education has altered public expectations, causing community misinterpretation of policy boundaries and a reluctance among parents and civic organisations to financially support schools (Simasiku, 2018). Furthermore, success varies by institutional design; localised School Management Committees consistently demonstrate greater efficacy in budgeting, planning, and structural supervision than traditional PTAs (Simasiku, 2018). Ultimately, stakeholder perceptions reveal that FSE is less a logistical rollout and more a debate over who holds financial and administrative custody of secondary education.

2.3 Challenges to the Effective Implementation of Free Education Policy

Historically, sub-Saharan Africa treated secondary education as a policy "afterthought," undermining systemic effectiveness (Lewin, 2011). While Zambia's 2022 policy shift aligns with SDG 4 by positioning education as vital for human development (Becker, 2014), transitioning to universal access has exposed a "decoupling" between policy intent and school-level reality. In unequal societies, fee abolition drives enrolment but triggers systemic frictions in maintaining quality, shifting the equity gap from access to educational standards.

To understand this divergence, free education must be analysed through a hybrid implementation model (Matland, 1995; Sabatier, 1986). This framework recognises that policy success relies on more than top-down directives; it is a dynamic synthesis where bottom-up, street-level bureaucrats, such as school management and teachers, alongside parents, exercise substantial operational discretion to navigate daily material deficits (Lipsky, 1980).

2.3.1 Over-enrolment, Overcrowding, and Storeyed Infrastructure

The immediate consequence of Zambia's 2022 total fee abolition is an acute admission surge and subsequent overcrowding, as the removal of financial barriers facilitates unprecedented access (Bwembya & Daka, 2024). This influx routinely overwhelms existing facilities; however, while historic underinvestment previously threatened primary education sustainability (NAQEZ, 2022), the secondary tier introduces complex infrastructural demands, such as specialised laboratories and vocational workshops.

This infrastructure deficit highlights a severe disconnect between top-down policy formulations and localised spatial realities. While Zambia's educational mandates traditionally rely on horizontal, land-intensive school layouts, acute urban land scarcity severely restricts the physical expansion of traditional campuses. Because physical school spaces are dynamic, historically embedded structures that actively shape policy translation (Helen, 2010), the persistence of horizontal designs introduces a severe spatial bottleneck.

Consequently, street-level implementers must exercise operational discretion to reconcile skyrocketing enrolment with static, horizontally constrained footprints. In this context, transitioning toward vertical, multi-storeyed school designs serves as a strategic spatial mitigation to maximise land-use efficiency (Scott, 2010; Melissa & Ann, 2017). By multiplying classroom spaces upward rather than outward, storeyed infrastructure overcomes geographical constraints to secure vital access opportunities for a rapidly growing pupil population.

2.3.2 Funding and Implementation Friction

This spatial bottleneck is severely compounded by erratic and insufficient public-school funding (Bwembya & Daka, 2024; NAQEZ, 2022). This operational friction mirrors global trends; for instance, empirical studies on Indonesia's educational reforms demonstrate that free schooling depends entirely on central government School Operational Assistance (BOS) grants to cover non-personnel costs (Ahmad & Weyai, 2021). When these macro-level subventions face structural deficits or delayed pipelines, local school-based management is compromised, forcing administrators to secure informal compensatory revenue (Rosser & Joshi, 2013).

Zambian street-level implementers must exercise operational discretion to deploy alternative, localised coping mechanisms, such as voluntary PTA levies, asset leasing, and micro-retail ventures, to navigate over-enrolment and bridge fiscal gaps (Jere & Nakamba, 2019). While these stop-gap measures preserve basic institutional functionality, they undermine the ideological purity of "free" education. Empirical data confirms that subvention deficits translate directly into degraded teaching conditions, acute congestion, and stalled infrastructure (Tembo, 2017). Consequently, without matching macroeconomic funding and

spatial innovations like vertical expansion, bottom-up actors bear the structural friction of an underfunded policy mandate (Simasiku, 2018; Hapompwe *et al.*, 2020).

2.3.3 The Dialectic Counterweight: Benefits of Free Education Policy

Despite these distinct implementation hurdles, the free education policy generates profound socio-economic dividends that underscore why resolving these structural tensions is so critical. Mulenga-Hagane *et al.* (2020) note that universal access empowers marginalised demographics, transforming them into responsible, economically productive citizens. Furthermore, this democratisation of access fulfils the core mandates of SDG 4 and Zambia's Vision 2030 by driving national skills development (Kakupa & Shayo, 2021; United Nations, 2015).

Empirical precedents validate this trajectory: the provision of free education significantly enhances literacy rates and equips students with the practical skills necessary for self-development (Mohammed & Kuyini, 2020; Mashala, 2019). Locally, research in Chipata demonstrated a dramatic reduction in illiteracy rates from 70% to 25% following the initial FPE rollouts, while regional peers like Kenya and Tanzania experienced similar transformative surges in human capital development (Jere & Nakamba, 2019). Therefore, while the hybrid implementation process exposes deep spatial and financial fissures, the macroeconomic returns prove that an educated population remains the ultimate catalyst for sustainable economic growth (Becker, 2014; World Bank, 1998), making the mitigation of these challenges an urgent policy imperative.

2.4 Strategies for the Improvement of the Implementation of the Free Education Policy

While the provision of free education ensures that children learn without direct cost, universal access demands substantial, sustained pressure on the national treasury. Optimising the implementation of FSE requires a dual approach: maximising localised operational efficiency and enforcing macro-level fiscal commitments. Literature outlines several interconnected strategies to stabilise the policy's rollout:

2.4.1 Localised Revenue Generation as Coping Mechanisms

Because top-down funding remains erratic, street-level implementers rely on localised spatial-economic strategies to preserve institutional functionality. Historically, Zambian schools have subsidised operations by leasing infrastructure to community groups, running on-site tuckshops, and collecting voluntary Parent-Teacher Association (PTA) contributions (Syacumpi, 2012; Jere & Nakamba, 2019). Following the 2022 total fee abolition, this reliance on informal community financing persists to offset immediate budgetary deficits. While these initiatives stabilise daily cash flow, they demand rigid regulation (Bwembya & Daka, 2024; NAQEZ, 2022). By implication, without strict accountability and a formalised partnership model, these voluntary mechanisms risk mutating into "hidden fees" that cause institutional drift and compromise equitable secondary access (Silukuni & Mwanza, 2020).

2.4.2 Enhanced, Timely, and Structural Funding

While localised coping mechanisms mitigate day-to-day friction, long-term policy sustainability demands structural macro-fiscal alignment with international benchmarks. Historical precedents demonstrate that educational equity is directly tied to the volume and punctuality of state disbursements (Hapompwe *et al.*, 2020). To safeguard structural quality, national budgetary allocations must meet the Incheon Declaration (2015) targets of 4% to 6% of GDP or 15% to 20% of public expenditure. Historically, Zambia's allocations have fallen short, manifesting as irregular and insufficient school grants. Optimising the policy requires re-engineering the fiscal pipeline to ensure the timely release of funds, thereby removing the structural pressure on bottom-up actors to seek compensatory revenue.

2.4.3 Adequate Teaching Staff

Maintaining optimal teacher-pupil ratios is crucial for quality education. As Tembo (2017) and Mashala (2019) noted, understaffing, often relying on temporary solutions like student teachers, compromises educational quality. Zambia's FPE implementation, as documented by Lungwangwa *et al.* (2003), faced similar challenges, leading to the recruitment of unqualified teachers to meet increased demand.

2.5 Research Gap

While extant literature (Hapompwe *et al.*, 2020; Jere & Nakamba, 2019; Simasiku, 2018) provides a foundational understanding of free education in Zambia, it is predominantly anchored in the FPE era. The 2022 transition to universal FSE introduced a new set of variables: higher operational costs, specialised laboratory requirements, and different socio-economic pressures that are not captured in older primary-school-centric studies. Furthermore, much of the current local discourse, including Hapompwe *et al.* (2020), relies on desk reviews and secondary data. This study addresses this empirical void by utilising primary data to explore the 2022 FSE implementation, moving beyond a description of challenges toward a sustainable framework for secondary-level quality assurance.

3.0 THEORETICAL FRAMEWORK

This study employs an integrated policy implementation framework that synthesises top-down and bottom-up models to evaluate Free Secondary Education (FSE) execution in Lusaka District.

Pressman and Wildavsky's (1973) top-down implementation model accounts for centralised administrative fidelity, resource allocation mechanisms, and structural efficiency driven by government directives.

Conversely, Rogers' (1963) Diffusion of Innovations theory captures bottom-up dynamics, specifically how grassroots actors, including the headteachers, teachers, parent-teacher committees (PTCs), and learners, adopt, adapt, and operationalise the policy in localised school environments.

Synthesising these perspectives through Sabatier and Jenkins-Smith's (1993) implementation synthesis framework bridges the gap between macro-level policy design and micro-level school reality. This integrated lens provides a robust analytical tool to assess how structural top-down governance and bottom-up stakeholder collaboration interact to optimise resource allocation, address localised equity barriers, and determine overall FSE policy efficacy in Lusaka District.

4.0 METHODOLOGY

This study adopted a mixed-methods embedded design within a pragmatist framework to analyse Zambia's 2022 Free Education policy in Lusaka District. Pragmatism enabled the integration of qualitative and quantitative data to assess policy execution.

A purposive sample of 62 participants was selected across key governance tiers: Education Standards Officers (n=2) for district oversight, Headteachers (n=3) for institutional management, Parent-Teacher Committee (PTC) chairpersons (n=3) for community oversight, and Learners (n=54) for end-user perspectives.

Primary data were gathered via semi-structured interviews, focus group discussions (FGDs), and questionnaires, and then triangulated with secondary policy documents. Quantitative questionnaire data were analysed using descriptive statistics in Microsoft Excel.

Qualitative data underwent thematic analysis following Braun and Clarke's (2006) six-phase framework, applying iterative coding and constant comparative verification to validate themes.

Trustworthiness was established through member-checking and data triangulation. Ethical protocols were strictly observed, including institutional clearance, informed consent, parental consent with minor assent for learners, and strict anonymity via alphanumeric pseudonyms.

5.0 RESULTS AND DISCUSSION

5.1 Participant Profile

The study purposively sampled 62 stakeholders across three institutional sites in Lusaka District to evaluate the FSE policy through an integrated top-down/bottom-up implementation framework. Education Standards Officers (n=2) represented the top-down administrative vector, while Headteachers (n=3) served as the institutional interface translating centralised directives into localised management. Conversely, PTCC Chairpersons (n=3) and learners (n=54, 87%) captured the bottom-up socio-economic reality. Data collection reflected these dynamics across diverse environments: peri-urban Schools X and Y highlighted localised resource constraints, whereas high-density urban School Z evidenced infrastructural strain from expanded enrolment.

5.2 Pupil Enrolment Trends

The expansion of the FSE policy in January 2022 triggered a transformative surge in pupil enrolment. National data indicates an influx of over two million additional learners into public schools by 2023, a trend mirrored at the micro-level where participants reported localised enrolment increases exceeding 30%. These findings align with recent scholarship (Bwembya & Daka, 2024; Mwelwa et al., 2023) and reflect the Diffusion of Innovations framework, specifically regarding the rapid "rate of adoption" when systemic barriers, in this case, tuition fees, are removed (Rogers, 2003).

However, this quantitative success has created significant logistical pressures, with class sizes frequently exceeding 100 pupils. An Education Standards Officer highlighted this transition, noting:

> *Schools' records have spiked exponentially since the launch of FSE in January 2022* (ESO-GI 1).

Primary data from learner participants (n=54) unanimously validated the administrative reports of an enrolment surge. As illustrated in Table 1, respondents across all three study sites, representing diverse socioeconomic catchments, reported a 100% perceived improvement in educational access following the 2022 policy shift.

Table 1: *Learner Perception of Access post-FSE Implementation (n=18 per surveyed school).*

Secondary School	Total Pupils	Pupils Accessing Education	Access (%)
School X	18	18	100%
School Y	18	18	100%
School Z	18	18	100%

These findings corroborate literature tracking the post-2022 enrolment explosion (Bwembya & Daka, 2024; Mwelwa *et al.*, 2023), but expose critical demand gaps where classroom densities hit 110–120 pupils. This reflects massification's structural friction: expanding access without a commensurate increase in resources (Tepe *et al.*, 2025), mirroring Kenya's free education rollout, which yielded 1:111 teacher-pupil ratios (Africa Check, 2017). Consequently, unchecked massification shifts policy friction from macro-level access success to micro-level institutional erosion, accelerating asset depreciation and overtaxing infrastructure (Tepe *et al.*, 2025).

Expanding enrolment without matching specialised facilities, like science laboratories, reduces secondary education to purely theoretical instruction. Pedagogically, oversaturated environments force teachers to regress from learner-centred methodologies to rigid, didactic lecturing. Because classroom management dominates instructional time, formative assessment and individualised feedback become logistically unfeasible. By implication, while the policy satisfies the accessibility dimension of the 4As framework, it degrades acceptability by trading pedagogical quality for raw access (Anwar, 2022).

5.3 Quality of Education

The FSE policy is universally perceived by all 54 surveyed learners as equity-promoting, though localised assessments of education quality vary significantly. At School X, 88.9% of learners rated the quality as excellent, while School Y demonstrated a moderate trend with 55.6% excellent and 33.3% good ratings. Conversely, School Z learners expressed a notably negative view, with 44.4% grading it as poor, 22.2% as good, 22.2% as average, and 33.3% as excellent. Despite these discrepancies, 90% of key informants, including Ministry of Education standards officers and headteachers, concurred that this surge in accessibility has not yet caused a decline in national examination results (see **Figure 1**).

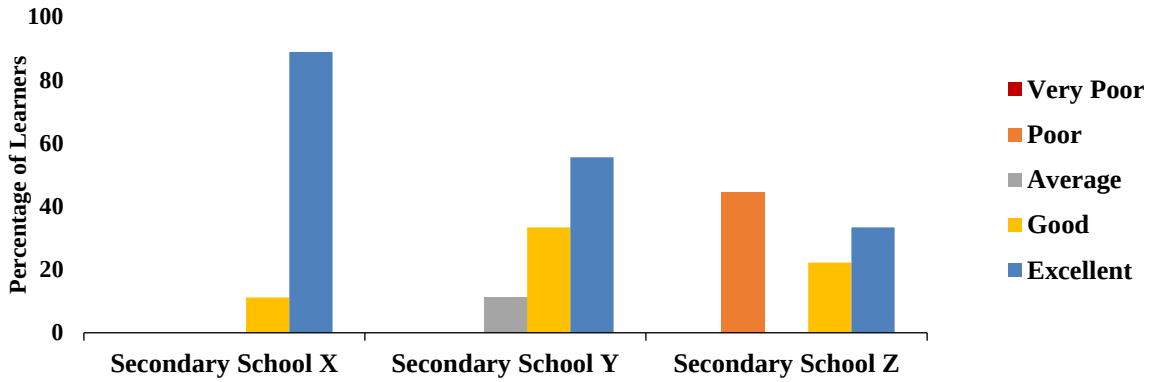


Figure 1: *Learners' Perception of Free Secondary Education on Quality Education per Surveyed School (N= 18)*

This positive perception among stakeholders and the demonstrable increase in participation align with the diffusion of innovations framework, suggesting strong stakeholder buy-in and active leveraging of the free education initiative for perceived improved outcomes, particularly regarding enhanced access. This perspective is supported by empirical data from the Examinations Council of Zambia (ECZ, 2023), which shows the national Grade 12 pass percentage rising slightly from 67.15% in 2021 (pre-FSE) to 69.31% in 2023 (post-FSE) (ECZ, 2023; ZANEC, 2022; Kanungo, 2022). Concurrently, a 30.88% expansion in registered candidates for the 2023 School Certificate examination confirms vastly improved educational access (ECZ, 2023). However, critical long-term concerns regarding capacity remain. As one Senior Education Standards Officer (SESO 1) succinctly put it:

> *Overcrowding may compromise quality in the long term; there is urgent need for sustained monitoring to mitigate potential future challenges to educational quality.*

This warning highlights how severe overcrowding threatens to negatively influence institutional infrastructure and teacher-pupil interactions, as class sizes routinely exceed the recommended standard of 40 to 45 pupils (MOE, 1996; Anwar, 2022; Shula, 2023) (see **Figure 2**).

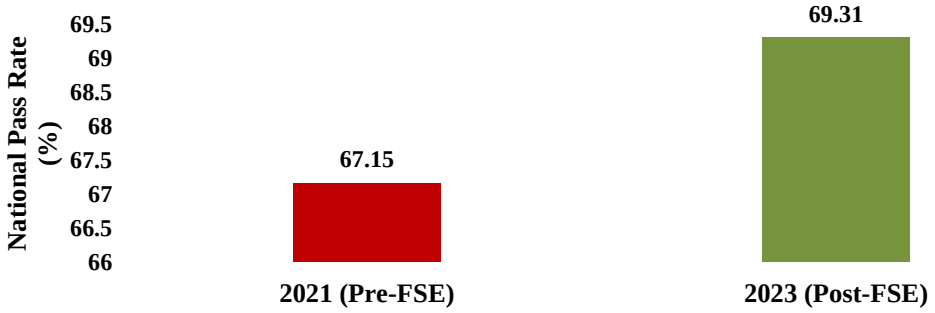


Figure 2: *Grade 12 National Comparison (2021 vs. 2023)*

The above results were adapted from the Examination Council of Zambia (2023) and ZANEC (2022).

5.4 Fund Allocation

Monetary resource allocation is the clearest indicator of educational equity, though implementing free education inherently incurs substantial structural costs (Barth, 2016). While Least Developed Countries often face erratic funding and mixed public perceptions regarding policy sustainability (Mashala, 2018), this study revealed consistent quarterly government funding. Notably, all eight key informants (100%) praised the government's efficiency in distributing funds since the FSE policy launched. As one headteacher highlighted:

> *Insofar as funding is concerned, the FSE policy is 100% implemented. The school has received quarterly funding from January 2022 to date (*Interview - Headteacher 2).

These findings align with the 2023 PMRC Report, which notes a steady upward trajectory in public school funding. Resource distribution rose from ZMW 10.4 billion in 2020 and ZMW 13.8 billion in 2021 to ZMW 18 billion in 2022. It continued upward to ZMW 23.2 billion in 2023 before peaking at ZMW 27.4 billion in 2024 (PMRC, 2023). To support individual student needs under this expanded budget, each child receives a targeted allocation of ZMW 200 monthly, or ZMW 600 per term (see Figure 3). This trend is further supported by Mwelwa et al. (2023), who confirmed that all public schools received their necessary implementation funds by the first quarter of 2022.

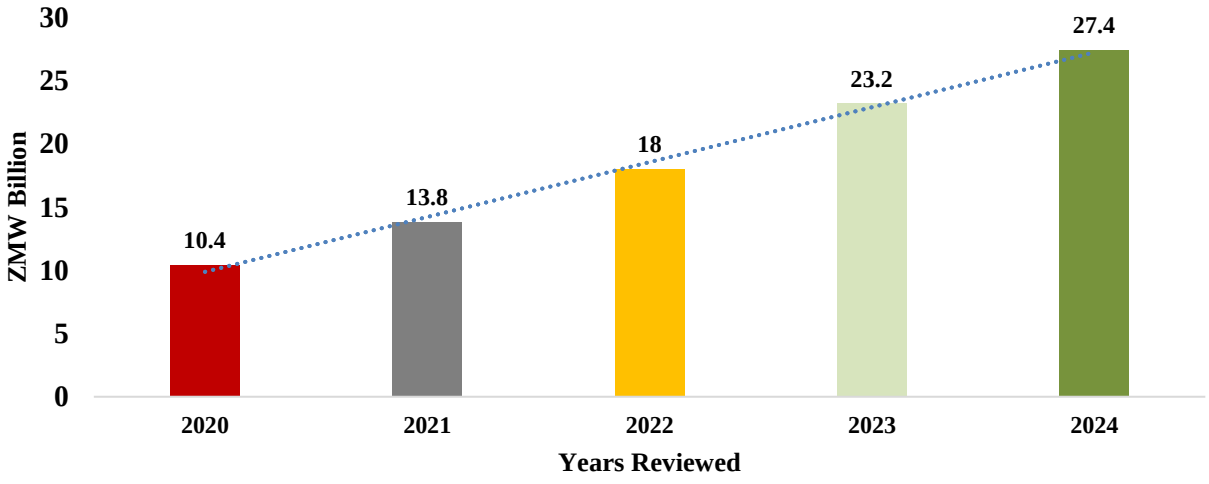


Figure 3: *Government's funding for Schools in the past five years (ZMW Billion*

The information in Figure 3 was *a*dapted from the Policy Monitoring and Research Centre [PMRC] (2023), National Budget Analysis.

Despite efficient funding, anxieties persist regarding long-term sustainability due to past free primary education bottlenecks like insufficient funding and obsolete infrastructure (Hapompwe *et al.*, 2020; Simasiku, 2018). Implementation theory emphasises anticipating these constraints. Because quarterly grants are often delayed or entirely consumed by operations, schools still rely on PTA fees and property rentals, underscoring the necessity of stakeholder collaboration to keep the FSE policy adaptable.

Infrastructure deficits remain a primary challenge in land-constrained urban areas. Lusaka Province faces acute structural strain; District Education Board Secretary [DEBS] records (2019) indicate that 46.4% of its school-age youth reside in Lusaka District, competing for highly limited space. Overcrowding is severe, with pupil-desk ratios continuously exceeding recommended 1:3 or 1:2 thresholds (NAQEZ, 2022). To alleviate this, literature suggests exploring innovative storeyed classrooms and stakeholder cost-sharing (Kelly, 1999; MoE, 1996; UN, 2018). Consequently, the government allocated ZMW 23.1 billion to education in 2023, a 4.9% infrastructure-focused increase, to complete 115 secondary schools and construct 120 new ones (Bwembya & Daka, 2024).

5.5 Infrastructure Provision

The implementation of the FSE policy has intensified existing infrastructure deficits, straining the Availability and Accessibility dimensions of the 4As framework. Over half of the study participants identified physical capacity as the primary bottleneck to educational equity, particularly in Lusaka District, where a disproportionately high youth population (46.4%) competes for restricted classroom space (DEBS, 2019). While the government increased education funding to ZMW 23.1 billion in 2023 (see Figure 3), findings suggest a "decoupling" between top-down macro-level fiscal increases and bottom-up classroom realities.

Within Lusaka District, participants highlighted five ongoing construction projects: Twashuka, Chawama, Kamwala, Libala Stage III, and Chilenje South. These contribute to a broader national trajectory where 348 classrooms were refurbished and 228 constructed. This progress is corroborated by a DEBS standards officer, who noted that by 2024:

> *... the government had embarked on the refurbishment of 115 previously incomplete secondary schools and commenced construction of 120 new schools nationwide (*ESO-GI 1).

Despite these capital works, pupil-to-desk ratios frequently exceed the Ministry's 1:2 or 1:3 benchmarks, compromising the Acceptability dimension of the 4As framework (Bwembya & Daka, 2024). Because horizontal infrastructure expansion is structurally unviable for land-constrained urban areas, long-term adaptability demands a hybrid governance model. By implication, to ensure equitable access to FSE, infrastructure expansion must pivot from single-story construction toward multi-storeyed designs (Scott, 2010). Building vertically allows land-constrained institutions to optimise existing physical footprints, converting localised land deficits into sustainable infrastructure solutions that safeguard the acceptability of the learning environment.

6.0 LIMITATIONS AND FURTHER RESEARCH

The focus on urban Lusaka District limits generalisability to rural contexts. Future research should transition to a national comparative study to assess the long-term impact of FSE on nationwide equity. Additionally, a comprehensive cost-benefit analysis is required to evaluate the policy's fiscal sustainability, alongside research into stakeholder-government synergies to optimise implementation. Ultimately, this study offers a foundational framework for refining

access, funding, and infrastructure development within Zambia's evolving educational landscape.

7.0 CONCLUSION

This study confirms that the 2022 FSE policy has significantly advanced educational equity by dismantling financial barriers to accessibility, driving a nationwide surge of over two million re-enrolled learners. However, this influx has strained the learning environment's capacity and acceptability, resulting in severe staffing shortages and chronic overcrowding, with class sizes often exceeding 100 pupils. While consistent top-down quarterly disbursements and targeted state infrastructure investments have funded 576 classroom projects, long-term sustainability requires transitioning to a participatory, bottom-up governance model. By structurally integrating the perspectives of frontline teachers and parents while deploying adaptable urban solutions like storeyed classrooms, Zambia can ensure that free secondary education successfully serves as a robust engine for a skill-based economy and national GDP growth.

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