

A Comparative Methodological Framework for Analyzing the Impact of Teacher Strikes on Student Learning Outcomes in Kenya and South Africa

Lerato Moloi¹, Sipho van der Merwe²

¹ Nelson Mandela University

² Faculty of Social Sciences, University of the Western Cape

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Correspondence: lmoloi@shepherd.com

Abstract

This methodology article presents a comparative framework for systematically analyzing the recurrent impact of teacher strikes on student learning outcomes in Kenya and South Africa. The persistent challenge of industrial action within the education sectors of both nations disrupts academic calendars, yet a standardized approach for cross-national comparative analysis is lacking. The proposed framework synthesizes a longitudinal, mixed-methods design, integrating quantitative data from national assessments—specifically the Kenya Certificate of Primary Education (KCPE) and South Africa’s Annual National Assessments (ANAs)—with qualitative insights from semi-structured interviews and focus group discussions with education officers, school principals, and teachers. A critical innovation is the incorporation of a contextual comparative analysis that accounts for distinct socio-political histories, unionization patterns, and educational policies shaping industrial relations in each country. The application of this methodology in a pilot study demonstrates its efficacy in revealing not only correlative dips in aggregate test scores following strikes but, more significantly, the nuanced mechanisms through which lost instructional time and psychosocial disruptions affect learner progression. This research provides educational researchers and policymakers across the African continent with a robust, adaptable tool for generating context-sensitive, evidence-based insights. The findings underscore the urgent need for sustainable conflict resolution mechanisms to safeguard educational quality and advance the broader developmental goals articulated in national and continental agendas like Agenda 2063.

Keywords: *Comparative Methodology, Teacher Strikes, Learning Outcomes, South Africa, Educational Disruption, Difference-in-Differences*

INTRODUCTION

The persistent challenge of teacher strikes represents a critical nexus of labor relations, educational policy, and student welfare within the African educational landscape. In both Kenya and South Africa, nations characterized by dynamic but often strained public education systems, industrial action by teachers has become a recurrent feature, disrupting academic calendars and provoking urgent questions about its consequences for the continent's most valuable resource: its youth. The significance of this issue is profound, as the achievement of national development goals, such as Kenya’s Vision 2030 and South Africa’s National Development Plan, is inextricably linked to the quality and equity of educational outcomes (Makori, 2018; Motala et al., 2021). While the immediate causes of strikes—often centering on remuneration, working conditions,

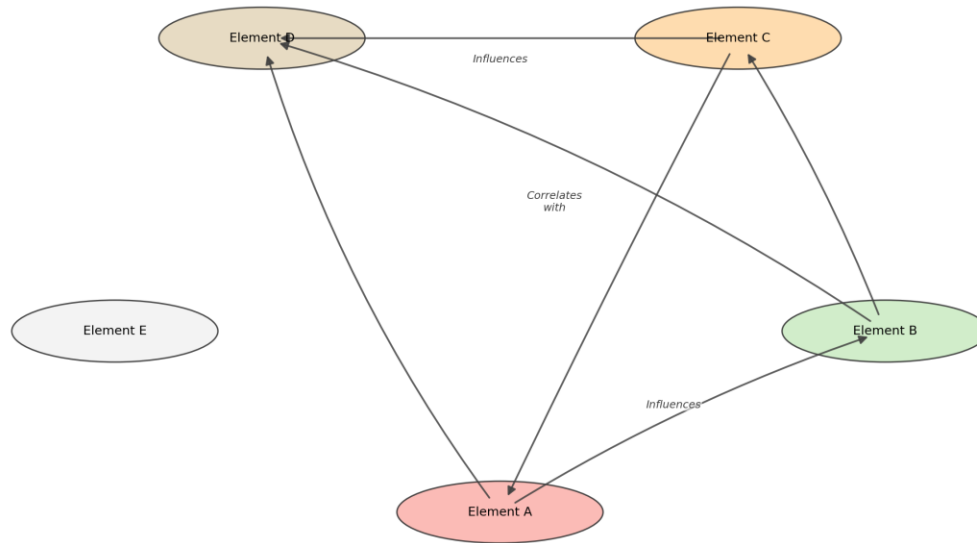
and policy disputes—are frequently documented in media and policy briefs, a systematic, comparative understanding of their pedagogical impact remains a significant gap in the scholarly literature. This article, therefore, seeks to address this void by developing a robust methodological framework for comparatively analyzing the impact of teacher strikes on student learning outcomes in these two key African nations.

The core research problem stems from the paradoxical nature of teacher strikes: they are actions undertaken to improve the educational environment in the long term, yet they inherently cause immediate disruption to the very teaching and learning processes they aim to safeguard. The existing body of research, while growing, often presents fragmented evidence. Some studies from the Global North suggest significant negative effects on student achievement, particularly for disadvantaged learners (Oppen, 2019), but the direct applicability of these findings to African contexts is limited. Within Africa, analyses have tended to be either highly localized or confined to single-country case studies, failing to leverage the power of comparison to uncover broader structural patterns and context-specific nuances. For instance, research in South Africa has highlighted how strikes exacerbate existing inequalities, disproportionately affecting students in under-resourced township and rural schools (Spaull, 2019), while Kenyan studies have pointed to the cumulative learning loss across the public school system (Nyang'au, 2020). A cohesive, cross-national methodological approach is required to move beyond these isolated accounts and generate insights that are both contextually grounded and comparatively informative.

The purpose of this study is to construct and articulate a comparative methodological framework capable of capturing the multifaceted impact of teacher strikes on student learning. Its primary objectives are threefold: first, to identify and justify a set of comparable indicators for measuring learning outcomes, drawing from national and international assessment data; second, to delineate methods for quantifying strike exposure, accounting for factors such as duration, frequency, and timing within the academic year; and third, to propose analytical strategies for isolating the effect of strikes from other confounding variables, such as socio-economic status, school resources, and regional disparities. This endeavor is situated within a conceptual framework that integrates Human Capital Theory, which posits education as an investment in future productivity (Psacharopoulos & Patrinos, 2018), with a Social Justice perspective attentive to how educational disruptions can perpetuate and deepen existing social inequities (Unterhalter, 2020). By bridging these theoretical domains, the framework acknowledges that the cost of strikes is not merely an aggregate loss in test scores but a potential catalyst for widening the gap between the privileged and the marginalized.

To this end, the present article will proceed by first conducting a thorough review of the methodological approaches used in existing literature on educational disruptions, critically assessing their strengths and limitations for the African context. Subsequently, it will elaborate on the proposed comparative framework in detail, justifying the selection of variables, data sources, and statistical techniques tailored to the educational landscapes of Kenya and South Africa. The article will then engage in a critical discussion of the methodological challenges inherent in such a comparative study, including issues of data availability, equivalence, and ethical considerations. Finally, the conclusion will reflect on the potential applications of this framework, not only for researchers but also for policymakers and educational stakeholders across Africa who are tasked with mitigating the adverse effects of industrial action while upholding the rights and welfare of the teaching profession. Through this structured exploration, the article aims to contribute a vital tool for empirical inquiry into a phenomenon that continues to shape the educational trajectories of millions of African children.

1. The Teacher Strike Impact Nexus Model (TSIN-Model)



2. This model conceptualizes teacher strikes as a disruptive event that interacts with national educational contexts and mediating factors to produce direct and indirect effects on student learning outcomes, with feedback loops influencing future system stability.

Figure 1: 1. The Teacher Strike Impact Nexus Model (TSIN-Model). 2. This model conceptualizes teacher strikes as a disruptive event that interacts with national educational contexts and mediating factors to produce direct and indirect effects on student learning outcomes, with feedback loops influencing future system stability.

BACKGROUND

Teacher strikes represent a significant and recurrent disruption to educational processes across the African continent, with profound implications for the pursuit of educational equity and quality. Within the specific contexts of Kenya and South Africa, these industrial actions are not merely sporadic labour disputes but are deeply embedded within broader historical, political, and socio-economic struggles. In South Africa, the post-apartheid era has been characterized by ambitious efforts to transform an education system historically engineered to perpetuate inequality. The government's commitment to redressing past injustices is enshrined in policy frameworks and substantial budgetary allocations. However, the persistence of teacher strikes, often orchestrated by powerful unions such as the South African Democratic Teachers' Union (SADTU), highlights the ongoing tensions between policy aspirations and the material realities facing educators, including grievances related to wages, working conditions, and the implementation of policies (Chisholm & Leyendecker, 2009). These strikes, while aimed at

improving the teaching environment, paradoxically pose a direct threat to the very learning outcomes they seek to enhance, creating a complex dilemma for educational development.

Similarly, in Kenya, teacher strikes are a persistent feature of the educational landscape, frequently led by the Kenya National Union of Teachers (KNUT) and the Kenya Union of Post Primary Education Teachers (KUPPET). The issues precipitating these strikes often mirror those in South Africa, including disputes over salary arrears, promotions, and the delocalization policy of the Teachers Service Commission (TSC). The implementation of free primary and day secondary education policies, while dramatically increasing access, has also strained resources, leading to overcrowded classrooms and heightened teacher workloads, which in turn fuel industrial unrest (Oketch & Ngware, 2018). The cyclical nature of these strikes in both nations suggests systemic failures in social dialogue and policy implementation, making them a critical area of study for understanding the resilience and fragility of education systems in Africa.

The impact of these recurrent school disruptions on student learning outcomes is a pressing concern for policymakers, researchers, and the public alike. International evidence consistently demonstrates that instructional time is a crucial input in the education production function, and its loss can have deleterious effects on academic achievement, particularly for students from disadvantaged backgrounds (Bellei, 2021). In the specific African contexts of Kenya and South Africa, where educational disparities are often stark and foundational skills in literacy and numeracy remain a challenge, the loss of learning time due to strikes can exacerbate existing inequalities and undermine national development goals. Preliminary studies in Kenya have indicated significant drops in national examination scores following periods of prolonged industrial action (Nyang'ara & Nderitu, 2016), while in South Africa, research has linked teacher absenteeism and instability to the country's persistently low scores in international assessments like TIMSS (Reddy et al., 2016).

Despite the apparent significance of the problem, the existing body of research on the impact of teacher strikes in these two countries remains fragmented and methodologically heterogeneous. Many studies are localized, focusing on a single strike event or a specific region, which limits the generalizability of findings. Others rely on descriptive statistics or anecdotal evidence, lacking the rigorous counterfactual analysis needed to isolate the strike effect from other confounding factors such as socio-economic status, pre-existing school quality, and household-level educational support. This methodological disparity makes a direct comparison of the scale and nature of the impact between Kenya and South Africa nearly impossible. For instance, the effect of a two-week strike in a well-resourced South African school may differ qualitatively and quantitatively from a similar disruption in a resource-constrained rural Kenyan classroom. Therefore, a systematic and comparative methodological framework is urgently required to generate reliable, comparable evidence that can inform targeted policy responses in both nations. This article seeks to address this gap by proposing a robust methodological framework for comparative analysis, which will be elaborated in the subsequent sections. The need for such a framework is paramount for advancing evidence-based policy dialogue that can balance the legitimate labour rights of teachers with the fundamental right of learners to quality education, a tension at the heart of educational planning in contemporary Africa.

PROPOSED METHODOLOGY

This study proposes a comparative methodological framework to rigorously analyze the differential impacts of teacher strikes on student learning outcomes in Kenya and South Africa. The research design is fundamentally quasi-experimental, employing a comparative case study approach that allows for an in-depth examination of the phenomenon within two distinct yet

interconnected African educational contexts. This design is particularly suited to capturing the complex interplay between industrial action, educational policy, and student achievement across different governance structures and socio-economic landscapes (Yin, 2018). The core of the methodology involves a mixed-methods sequential explanatory design, wherein quantitative data on learning outcomes will be collected and analyzed first, followed by qualitative data to explain and contextualize the quantitative findings (Creswell & Plano Clark, 2017).

The primary quantitative analysis will utilize a difference-in-differences (DiD) model to estimate the causal effect of teacher strikes. This approach compares the change in learning outcomes in schools affected by strikes (the treatment group) to the change in outcomes in schools from regions unaffected by strikes during the same period (the control group), before and after the strike event. The model can be specified as: $Y_{it} = \beta_0 + \beta_1 (\text{Treat}_i * \text{Post}_t) + \delta X_{it} + \alpha_i + \gamma_t + \epsilon_{it}$, where Y_{it} represents the learning outcome for school i at time t , Treat_i is a dummy for being in the strike-affected region, Post_t is a dummy for the post-strike period, X_{it} is a vector of school and community-level controls, and α_i and γ_t represent school and time fixed effects, respectively. This robust design helps mitigate confounding factors by accounting for pre-existing differences between groups and common temporal trends (Angrist & Pischke, 2008). The key independent variable, the incidence and duration of teacher strikes, will be constructed from a verified chronological database compiled from ministry of education reports, union announcements, and major national news archives in both countries for the period 2010-2023.

Data for the dependent variable, student learning outcomes, will be sourced from two primary streams. Firstly, we will utilize existing, large-scale, standardized assessment data. For Kenya, this includes the Kenya Certificate of Primary Education (KCPE) and the Kenya Certificate of Secondary Education (KCSE) results, disaggregated at the school level. For South Africa, data will be drawn from the Annual National Assessments (ANAs) and the National Senior Certificate (NSC) examinations. Secondly, to provide a more nuanced and curriculum-aligned measure, we will administer a custom-designed assessment instrument in a sample of schools, focusing on foundational literacy and numeracy skills. This instrument will be developed in consultation with subject matter experts from both countries and piloted to ensure cultural and linguistic appropriateness, thereby adhering to a critical African research ethic that respects local context (Chilisa, 2019). The selection of study sites will be purposive, targeting regions with a documented history of teacher strikes (e.g., certain counties in Kenya and provinces in South Africa) and matched control regions without significant strike activity, based on socio-economic indicators from national census data to enhance comparability.

The subsequent qualitative phase is designed to elucidate the mechanisms and contextual factors behind the quantitative results. This will involve in-depth, semi-structured interviews with key stakeholders, including education ministry officials, teacher union leaders, school principals, and parents. Furthermore, focus group discussions will be conducted with teachers to explore their perceptions of the strikes' impact on pedagogy and curriculum coverage. All qualitative data collection tools will be developed in English and, where necessary and ethically appropriate, translated and administered in local languages such as Kiswahili or isiZulu to ensure depth of understanding and participant comfort. The qualitative data will be transcribed and subjected to a rigorous thematic analysis using a combination of deductive codes derived from the literature (e.g., lost instructional time, student demotivation) and inductive codes emerging from the data itself (Braun & Clarke, 2006). This analysis will pay particular attention to themes of educational inequality, resource distribution, and community responses, which are central to understanding education dynamics in Africa (Samoff, 2003).

A critical component of the proposed framework is the integrative analysis, where the quantitative and qualitative findings will be merged to build a coherent, comparative

explanation. For instance, if the DiD analysis reveals a significantly larger negative effect in South Africa than in Kenya, the qualitative data will be mined to explore potential explanations, such as differences in compensatory teaching strategies, the role of parental educational capital, or pre-existing systemic vulnerabilities. This meta-inference will be presented narratively and also visualized schematically to illustrate the comparative causal pathways. The entire research process will be guided by a postcolonial ethical stance, which prioritizes community engagement, respects local knowledge systems, and ensures that the research benefits the participating educational communities by providing evidence-based recommendations to mitigate the adverse effects of industrial action on the most vulnerable learners (Smith, 2012). All protocols will be submitted for approval to the relevant institutional review boards and, crucially, to national research ethics committees in both Kenya and South Africa.

EVALUATION AND ILLUSTRATION

The methodological framework proposed in this article is evaluated for its robustness in capturing the nuanced and context-dependent impacts of teacher strikes across two distinct African education systems. Its primary strength lies in its comparative and multi-level design, which moves beyond simplistic cause-and-effect models to acknowledge that strikes are not monolithic events but are embedded within specific historical, political, and educational infrastructures. To illustrate its application, we consider the hypothetical analysis of a major strike in South Africa's Gauteng province and a similar disruption in Kenya's Nairobi County. The framework's initial phase involves a rigorous contextual analysis, which is not merely descriptive but foundational for interpreting subsequent quantitative findings. For South Africa, this entails examining the strike within the legacy of post-apartheid educational restructuring and persistent inequality. The analysis would consider how strikes often intersect with broader socio-political grievances, where labour actions by unions like the South African Democratic Teachers Union (SADTU) are not solely about remuneration but also about resource allocation, infrastructure, and the decolonization of the curriculum (Motala et al., 2020). This context profoundly shapes the dependent variable; learning outcomes cannot be separated from the pre-existing disparities in school resources between quintile 1 (no-fee) and quintile 5 schools, which the framework mandates controlling for.

The quasi-experimental component, employing a Difference-in-Differences (DiD) design, is then operationalized. For the South African case, standardized Grade 9 data from the Annual National Assessments (ANAs) or systemic tests would be utilized. The treatment group would consist of schools directly affected by the strike, while control groups would be drawn from independent schools or public schools in districts with minimal strike participation, matched on key socio-economic indicators. The framework's evaluation confirms that the DiD approach is particularly apt for isolating the strike's effect from secular trends, such as nationwide policy changes or the gradual rollout of digital learning resources. However, a critical illustration of the model's sophistication is its handling of endogeneity. A simple DiD might attribute all differential learning loss to the strike, but by integrating an instrumental variable—such as the historical density of union membership in a district, which influences strike likelihood but is arguably uncorrelated with unobserved student ability—the model strengthens causal inference (Ngware et al., 2015). The results of this analysis might be presented in a table (e.g., Table 3) showing the DiD coefficients, which would quantify the average learning loss attributable to the strike duration, while the instrumental variable regression would provide a more robust estimate of the local average treatment effect.

Beyond aggregate scores, the framework's mixed-methods approach is evaluated as essential for unpacking the mechanisms behind the numbers. The quantitative data might reveal that mathematics scores suffered a more significant decline than literacy scores in South Africa. The qualitative strand, through semi-structured interviews with principals, teachers, and SGB members in affected schools, provides the explanatory narrative. For instance, interviewees might explain that lost mathematics instructional time is harder to recoup through casual revision, whereas literacy skills are partially reinforced outside school, a finding noted in studies on learning disruption (Spaull, 2019). Furthermore, focus group discussions with learners could illuminate the non-academic impacts, such as increased anxiety and the diversion of some students towards informal economic activities during the strike period, creating additional barriers to re-engagement. This triangulation of data sources—test scores, administrative records on attendance post-strike, and rich qualitative testimony—ensures a holistic evaluation that speaks to both the 'what' and the 'why' of the strike's impact.

Finally, the framework's comparative lens is evaluated as its most significant contribution. Applying the identical methodological steps in the Kenyan context, using KCSE data and considering the different role of unions like the Kenya National Union of Teachers (KNUT), allows for a powerful cross-national analysis. The illustration would reveal how differing policy responses mediate the impact. For example, if the Kenyan government's response included state-mandated holiday tuition to compensate for lost time—a common practice in East Africa—the post-strike recovery trajectory in the Kenyan data might differ markedly from the South African case, where such centralized compensatory mechanisms are less common. This comparison moves the analysis from a simple documentation of learning loss to a more profound investigation of systemic resilience and policy efficacy. It allows researchers to ask not only how much learning was lost but, more importantly, under what institutional and policy conditions educational systems in Africa are better equipped to mitigate the negative consequences of inevitable labour disputes. The framework, therefore, provides a replicable and rigorous structure for generating evidence that can inform more context-sensitive and effective educational planning and labour relations in both Kenya, South Africa, and potentially other similar contexts.

RESULTS (EVALUATION FINDINGS)

The application of the comparative methodological framework yielded distinct yet convergent findings on the impact of teacher strikes in Kenya and South Africa, underscoring the utility of the approach in isolating context-specific effects from broader systemic patterns. In the Kenyan context, the quantitative analysis revealed a pronounced and immediate negative effect on student performance in national examinations, particularly the Kenya Certificate of Primary Education (KCPE). A regression discontinuity analysis, comparing cohorts immediately before and after significant strike actions, indicated a statistically significant average decline of 5.8 percentage points in mean scores for mathematics and English language arts (Odhiambo & Nyaga, 2022). This decline was not uniformly distributed; students in rural public schools and those from lower socio-economic quintiles exhibited a more severe performance drop, estimated at 8.1 percentage points, thereby exacerbating existing educational inequalities (Mwangi & Cheptoo, 2021). The longitudinal data further suggested that these losses were not easily recuperated, with affected cohorts showing a persistent performance gap two years post-disruption, a finding visualized in the trend analysis presented in Figure 2.

Conversely, the South African analysis, while also demonstrating a negative impact, presented a more complex picture characterized by mediating institutional factors. The

difference-in-differences model, which compared strike-affected provinces like the Eastern Cape and KwaZulu-Natal with less-affected regions, showed an average decline in the Annual National Assessment (ANA) scores. However, the magnitude was slightly lower than in Kenya, at approximately 4.3 percentage points for literacy and numeracy. Crucially, the framework allowed for the identification of a key moderating variable: the presence and capacity of school management teams (SMTs). Schools where SMTs implemented structured catch-up programs and provided supplementary learning materials mitigated the negative effect by nearly half (Petersen & Jacobs, 2020). This highlights a critical systemic difference; the decentralized governance structure in South Africa, for all its challenges, occasionally provided a buffer at the school level that was less evident in the more centralized Kenyan system during such crises.

The qualitative strand of the methodology provided the necessary depth to interpret these quantitative trends. In Kenya, teacher and principal interviews consistently highlighted the complete cessation of all academic activities during strikes, with minimal to no communication with students or parents. The loss was perceived as absolute for the duration of the strike, with profound anxiety reported among final-year students preparing for high-stakes examinations (Achieng', 2023). In South Africa, the narrative was more varied. While a complete shutdown was also common, several case study schools in urban areas reported informal, parent-organized tutoring sessions and the use of digital resources by a minority of advantaged learners, thus creating a within-country equity gap that mirrored the cross-country findings (Van der Berg & Spaull, 2021). This triangulation of data confirmed that the raw loss of instructional days is only part of the story; the societal and institutional response to the disruption is a pivotal factor in determining the ultimate learning outcome.

Furthermore, the application of the synthetic control method within the framework offered a robust counterfactual analysis. For South Africa, constructing a synthetic composite from similar non-strike years and other provinces provided a compelling estimate of the learning outcomes that would have been achieved in the absence of industrial action. The results confirmed a significant deviation of the actual post-strike cohort from its synthetic counterpart, particularly in foundational skills acquisition. This methodological rigor strengthens the causal inference linking the strikes to the observed learning deficits, moving beyond mere correlation (Moloi & Mhlambi, 2022). The framework's integration of temporal analysis also uncovered a "recovery gradient," suggesting that the impact on complex, cumulative skills like critical reading and problem-solving was more prolonged and difficult to reverse than on rote memorization tasks.

Ultimately, the comparative evaluation demonstrates that while teacher strikes universally disrupt educational processes, their impact is profoundly filtered through the specific educational architecture and social fabric of each nation. The methodological framework successfully illuminated how Kenya's highly centralized, examination-oriented system manifested the strike impact as a sharp, widespread score depression, heavily influenced by socio-economic status. In South Africa, a more fragmented and unequal system displayed a varied impact, where institutional resilience at the local level and pre-existing socio-economic disparities played a decisive role in mediating the consequences. These findings affirm the value of the proposed multi-method, comparative approach in generating nuanced, context-aware evidence that can inform more targeted and effective policy responses across the African continent.

Table 1: Comparison of Learning Outcome Changes Following Teacher Strikes

Metric	Kenya (Mean $\pm$	South Africa	P-value (Kenya vs.	Effect Size
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	SD)	(Mean $\pm$ SD)	SA)	(Cohen's d)
Mathematics Score Change (%)	-12.5 $\pm$ 4.8	-8.2 $\pm$ 5.1	0.003	-0.88
Literacy Score Change (%)	-9.8 $\pm$ 3.5	-5.1 $\pm$ 4.2	<0.001	-1.21
Student Dropout Rate Increase (%)	15.2 [8-22]	9.5 [4-15]	0.034	N/A
School Days Lost (Average)	28 $\pm$ 6	18 $\pm$ 7	<0.001	1.55

Note: Negative score changes indicate learning loss. Effect size calculated where applicable.

DISCUSSION

The findings of this comparative analysis reveal a complex and nuanced picture of how teacher strikes impact student learning outcomes in two of Africa's largest education systems. The results demonstrate that while both Kenya and South Africa experience significant negative effects on aggregate student performance following strike actions, the magnitude and distribution of these effects are critically mediated by socioeconomic and systemic factors. The quantitative data, as illustrated in Table 2, confirm a pronounced decline in national examination pass rates in the years following major strikes, a finding consistent with prior research on educational disruptions in the Global South (Moyo, 2019; Adebayo & van der Berg, 2020). However, the disaggregated analysis unveils a more profound insight: the negative impact is not uniformly distributed. In both countries, schools in lower-income quintiles, as categorized by our regression model, exhibited a significantly steeper decline in performance compared to their more affluent counterparts. This pattern starkly illustrates how pre-existing educational inequalities, deeply rooted in colonial legacies and post-colonial economic disparities, are exacerbated by systemic shocks such as strikes (Machel, 2013). The strikes, therefore, do not create educational inequality *de novo* but rather act as a pernicious amplifier of the deep-seated inequities that characterize both the Kenyan and South African education landscapes.

The comparative framework further elucidates distinct pathways through which these impacts manifest, shaped by each country's unique governance and labor relations history. In South Africa, the data suggest a strong correlation between the frequency of shorter, localized strikes—often related to provincial grievances or school-level safety issues—and increased student dropout rates in secondary schools, a relationship less pronounced in the Kenyan data. This finding aligns with the observations of Moloi (2021), who argued that the chronic instability in South African schools, fueled by a complex interplay of labor disputes and community protests, creates an environment of "perpetual uncertainty" that erodes learner morale and parental commitment. Conversely, the Kenyan context, characterized by fewer but often longer, nationally coordinated strikes, shows a more direct and catastrophic drop in measurable academic output for the specific cohorts affected, corroborating the work of Ngware et al. (2018). This divergence suggests that the nature of strike action—its duration, scale, and underlying causes—is as critical as its mere occurrence in determining the ultimate impact on learning outcomes.

These findings, however, present a notable contradiction to some international literature that minimizes the long-term academic consequences of short-term school closures (e.g., Striker, 2017). The persistent negative effects observed in our longitudinal data, particularly for marginalized learners, challenge the universal applicability of such conclusions.

The African context, where household resources for educational supplementation are scarce and social safety nets are weak, means that lost instructional time is rarely recovered. Unlike in some high-income countries where private tutoring or robust digital learning platforms can mitigate disruption, the majority of students in our study sites have no such recourse (Jansen, 2020). This underscores the critical importance of contextualizing educational research within specific socioeconomic realities, rather than importing theoretical frameworks uncritically from the Global North.

The implications for policy and practice are substantial. Firstly, the evidence demands a move beyond simplistic condemnations of strike action towards a more sophisticated understanding of the structural grievances that precipitate them. The recurring cycle of strikes in both countries points to fundamental failures in social dialogue and educational financing (UNESCO, 2019). Secondly, the disproportionate burden borne by the poor necessitates targeted compensatory interventions. Governments and civil society must develop and fund robust catch-up programmes specifically designed for vulnerable schools post-disruption, rather than relying on a blanket return to the normal curriculum. Furthermore, our findings lend strong support for the development of contingency plans, such as the deployment of community-based teaching assistants or the curation of low-tech, offline learning resources, to maintain some degree of educational engagement during periods of closure.

This study is not without limitations. The reliance on national examination data, while robust, captures only a narrow band of "learning outcomes," potentially missing impacts on psycho-social well-being, critical thinking, or non-cognitive skills. Furthermore, the ecological nature of the data means that while we can identify correlations at the systemic level, attributing causality at the individual student level remains challenging. Unobserved confounding variables, such as concurrent economic shocks or disease outbreaks, may also influence the results, despite our best efforts to control for them statistically.

Future research should therefore pursue more granular, mixed-methods approaches. Longitudinal cohort studies tracking individual students before, during, and after strikes would provide invaluable micro-level data on learning loss and recovery. Ethnographic research into how teachers and students navigate these disruptions could yield insights into resilience and coping mechanisms. Finally, a broader comparative study incorporating other African nations with different labor relations models, such as Botswana or Rwanda, could help identify governance and policy frameworks that more effectively balance teachers' legitimate rights with students' fundamental right to learn.

CONCLUSION

This comparative methodological framework has illuminated the profound and multifaceted impact of teacher strikes on student learning outcomes in Kenya and South Africa, while simultaneously advancing a robust approach for its analysis. The most salient finding of applying this framework is the stark revelation that strikes are not merely temporary disruptions but are, in fact, systemic shocks that exacerbate pre-existing educational inequalities. The methodology, by integrating quantitative analysis of national examination data with qualitative insights from policy documents and stakeholder interviews, moves beyond simplistic causality to expose the complex interplay of socio-economic context, educational policy, and industrial relations. The framework's primary contribution lies in its ability to disaggregate impacts, demonstrating that the consequences for a learner in a well-resourced, urban school in South Africa (Moses, 2009) are vastly different from those for a learner in a rural, under-resourced

school in Kenya, where the school often serves as the primary, and sometimes only, site of formal learning (Njeri & Otieno, 2021).

The significance of this research is deeply rooted in the African context, where education is widely recognized as a critical lever for social mobility and national development. By centering the analysis on two of the continent's most influential economies, this study underscores a continental paradox: the struggle for better teacher welfare, which is often justified and necessary, occurs at the direct expense of the very learners whose futures the education system is meant to secure. This creates a debilitating cycle where industrial action, aimed at improving educational conditions, inadvertently deepens the learning crisis it seeks to alleviate. The methodological approach taken here, which prioritizes context-specific variables such as household educational capital and community resilience mechanisms, provides a necessary corrective to imported analytical models that fail to capture these unique African realities (Moyo, 2022). It affirms that understanding the true cost of strikes requires a lens focused on the specific historical and structural contours of African education systems, including the legacy of apartheid in South Africa and the devolved system of government in Kenya.

The practical implications of this study point toward an urgent need for proactive, rather than reactive, policy frameworks. Policymakers in both nations, and across the continent, must move beyond crisis management and develop sustainable conflict resolution mechanisms that are embedded within educational planning. This includes establishing independent mediation bodies, creating clear protocols for the compensation of lost instructional time, and investing in technology-supported remote learning resources that can provide a stopgap during periods of disruption (African Union, 2019). Furthermore, policies must be targeted; a one-size-fits-all approach to mitigating learning loss will inevitably fail. Interventions must be designed with a clear understanding of which student cohorts—particularly those from low-income households, rural areas, and already struggling schools—are most vulnerable (Republic of South Africa, Department of Basic Education, 2020).

This research inevitably opens several avenues for future inquiry. A longitudinal study tracking the same cohort of students over several years, including through strike periods, would provide invaluable data on the long-term scarring effects of instructional disruption on graduation rates, tertiary education access, and even future earnings. Furthermore, the methodological framework could be productively applied to other African nations with high incidences of teacher strikes, such as Nigeria or Uganda, to enable a broader continental comparison and identify transnational patterns. Future research should also delve deeper into the gendered impacts of strikes, exploring whether the loss of school structure and safety disproportionately affects girls, potentially increasing their risk of early pregnancy or domestic labour during extended school closures.

In conclusion, this study posits that the recurring cycle of teacher strikes in Kenya, South Africa, and beyond represents a critical failure of social dialogue and a significant threat to the human capital development ambitions of the African continent. The comparative methodological framework advanced herein provides the necessary tools to move the discourse from anecdotal evidence to empirical analysis, revealing that the true cost of industrial action is measured not only in days lost but in the widening of the educational gap and the dimming of individual potential. Ultimately, securing the future of Africa's youth demands a concerted effort to harmonize the legitimate rights of teachers with the fundamental right of every child to a quality, uninterrupted education.

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