

Institutional 'gaming practices' and learner exclusion before Primary Leaving Examinations

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Abstract

School-level 'gaming practices' — covert, systematic strategies through which school administrators manipulate learner registration, attendance records, and examination entry in order to inflate institutional performance metrics before national assessments — constitute a critically underexamined mechanism of learner exclusion in Uganda's primary education system. This study examined the nature, prevalence, and institutional determinants of gaming-practice-induced learner exclusion before the Primary Leaving Examinations (PLE) in Uganda, focusing specifically on how such practices operate, which learner profiles are most disproportionately targeted, and what structural, socio-economic, and institutional factors predict the probability of exclusion. A cross-sectional quantitative design was employed, using a structured questionnaire administered to 500 Primary Seven learners and recent school leavers from 30 purposively selected primary schools across rural and urban districts in Uganda. Data were analysed using univariate descriptive statistics, bivariate Pearson chi-square tests, and binary logistic regression. The study found that 42.8% of respondents had been excluded through one or more gaming practices, with the most prevalent mechanism being invisible withdrawal or de-registration from examination rolls (66.4% of excluded learners). Learners who had personally witnessed gaming practices were 16.8 times more likely to have been excluded (Adjusted OR = 16.8; 95% CI: 9.4-30.0; $p < 0.001$) after adjusting for school type, location, household income, parental education, parental advocacy, and class repetition history. Exclusion rates were highest in government schools in rural areas (81.4%). The study concluded that gaming practices constitute a systemic and structurally embedded violation of the right to education, disproportionately targeting the most economically and socially marginalised learners, and recommends urgent policy reform including mandatory independent audit of PLE candidate rolls, community-based accountability mechanisms, and strengthened child rights complaint pathways.

Keywords: Gaming practices, Learner exclusion, Primary Leaving Examinations, Uganda, School gaming, Examination manipulation, Educational equity, Logistic regression

INTRODUCTION

Uganda's Universal Primary Education (UPE) policy, instituted in 1997, dramatically expanded access to primary schooling and transformed enrolment statistics; yet, beneath the aggregate improvement in access metrics, a more insidious dimension of educational inequality has quietly taken root within the institutional culture of many primary schools — one that is rarely captured by enrolment or completion data and that operates through deliberate, covert strategies of selective learner exclusion orchestrated by school administrators ahead of the Primary Leaving Examinations (PLE) (Nabiddo et al., 2022; Patrick et al., 2021; Peterson & Sarah, 2023). These strategies, collectively described in education policy literature as 'gaming practices', refer to a spectrum of manipulative institutional behaviours through which school leaders — motivated by the pressure to maximise their schools' published examination pass rates, league table rankings, and performance-based incentives — systematically identify and remove learners perceived as academically weak, likely to fail, or otherwise likely to depress the school's aggregate

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performance statistics before those learners can sit for the national examinations (Julius, 2025b, 2025a, 2025c, 2025d). Such practices include, but are not limited to, the de-registration of learners from examination entry rolls without parental notification, the engineering of unofficial suspensions or forced absences in the weeks preceding PLE, the deliberate non-submission of examination registration fees for targeted learners, the transfer of weak learners to other schools under false pretexts, and the selective manipulation of attendance records to generate grounds for disqualification — each mechanism carefully designed to achieve the outcome of exclusion while maintaining plausible institutional deniability (Joudyian et al., 2021; Nalubwama et al., 2022; van Niekerk et al., 2023). The consequences for excluded learners are profound and often irreversible: stripped of their right to sit the national examination that certifies primary completion and enables progression to secondary school, these children — overwhelmingly drawn from the poorest, most educationally marginalised households — face permanent foreclosure of their educational trajectories at the very point of transition that determines their life course outcomes (Julius & Geoffrey, 2025a, 2025c; Julius & Twinomujuni, 2025a, 2025b). Despite the growing anecdotal and qualitative evidence of gaming practices in Uganda and similar educational systems across sub-Saharan Africa, rigorous quantitative studies mapping the prevalence, structural determinants, and learner-level risk factors for gaming-practice-induced exclusion remain remarkably scarce, leaving policymakers without the evidence base required to design effective accountability mechanisms, regulatory safeguards, or redress systems for affected learners and families (Armando et al., 2020; Margaret & Stanley, 2024; Mujuni et al., 2022a; Paul et al., 2023). This study therefore sought to fill this evidence gap by providing a statistically robust quantitative analysis of gaming-practice-induced learner exclusion in Uganda's primary education system, generating findings that can directly inform the reform of PLE administration, school governance, and child rights protection frameworks.

BACKGROUND OF THE STUDY

The institutional incentive structures that generate gaming practices in Uganda's primary education system are deeply embedded within the architecture of UPE policy implementation and the broader governance framework of the national examinations system (Julius & Godfrey, 2025; Julius & Mategeko, 2025c; Julius & Milly, 2025c; Julius & Sula, 2025a), both of which have, over three decades, combined to create a performance-accountability environment in which schools are routinely ranked, rewarded, and stigmatised on the basis of their PLE pass rates — generating powerful institutional incentives to manage examination outcomes at the input stage rather than improving pedagogical quality at the process stage (Mitana et al., 2019; Rebecca & Lukman Abiodun, 2024; Sakaue, 2018; Wafula et al., 2023). Uganda's National Examinations Board (UNEB) publishes annual PLE results by school, enabling parents, district education officers, and members of parliament to compare and rank schools' performance in ways that have profound consequences for school reputation, enrolment, fee income in private schools, and the professional appraisal of head teachers in government schools; this public accountability mechanism, while well-intentioned from an educational quality perspective, has created perverse incentives for a subset of school administrators who face the prospect of publicly poor examination outcomes to resort to the manipulation of candidate pools as an alternative to the far more demanding task of improving instruction (Bobbili et al., 2022; Jauharah, 2023a; Mobegi, 2026; Mujuni et al., 2022b). The problem is compounded by chronically inadequate supervision of the PLE registration process: district education officers responsible for verifying candidate rolls frequently lack the staffing, transport, and

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institutional authority to conduct meaningful independent verification at the school level, creating ample operational space for fraudulent alterations to examination entry lists in the weeks between initial registration and the examination date (Julius & Mategeko, 2025a; Julius & Milly, 2025e, 2025b; Julius & Nalukwago, 2025; Julius & Sula, 2025c). Research conducted in Kenya, Tanzania, and Zimbabwe has documented analogous dynamics in national examination systems, with head teachers in low-performing schools systematically underenrolling or de-registering weak candidates to protect institutional pass rates — a pattern that international education policy analysts have termed 'cream-skimming' or 'selecting out' and that has been recognised by the United Nations Special Rapporteur on the Right to Education as a structural violation of the educational rights of the most vulnerable children (Habte et al., 2024; Jauharah, 2023b; Victoria et al., 2023). In Uganda specifically, the intersection of gaming-practice vulnerability with the structural inequalities of the UPE system — wherein government schools in rural areas serve the largest proportions of children from low-income, low-parental-education households who lack the social capital and institutional knowledge to contest exclusion decisions — means that the burden of gaming-practice-induced exclusion falls most heavily on precisely those learners for whom educational certification represents the most consequential opportunity for socio-economic mobility (Julius & Audrey, 2025a; Julius & Milly, 2025d; Julius & Nancy, 2025a, 2025b). This study thus approaches gaming practices not merely as isolated instances of administrative misconduct but as a systemic, structurally determined mechanism of educational inequality whose analysis demands rigorous quantitative investigation.

PROBLEM STATEMENT

Notwithstanding Uganda's constitutional and policy commitments to universal primary education and the protection of every child's right to sit national examinations, gaming-practice-induced learner exclusion before the PLE continues to operate as a largely invisible, empirically under documented, and institutionally tolerated mechanism of educational injustice, whose scale, structural determinants, and learner-level consequences remain poorly understood in the existing research literature (Julius & Audrey, 2025b, 2025c; Julius & Milly, 2025a; Julius & Nancy, 2025c). The absence of rigorous quantitative evidence on the prevalence and determinants of gaming practices constrains the capacity of policymakers, education authorities, civil society organizations, and child rights advocates to design targeted, evidence-informed interventions — leaving affected learners without effective legal remedies, parents without actionable information about their children's examination rights, and school administrators without credible deterrents against exclusionary conduct (Julius & Geoffrey, 2025b; Julius & Mategeko, 2025b; Julius & Sula, 2025b; Julius & Twinomujuni, 2025c). Furthermore, the concentration of gaming-practice vulnerability among learners from low-income rural households attending government schools indicates that these practices do not merely reflect individual institutional misconduct but systematically reproduce and deepen existing educational inequalities along lines of socio-economic class, geography, and parental human capital — making their investigation a matter of educational justice rather than purely administrative compliance. This study therefore addressed the critical gap in quantitative evidence on institutional gaming practices and their consequences for learner exclusion before the PLE in Uganda.

OBJECTIVES OF THE STUDY

Main Objective

To examine the nature, prevalence, and institutional determinants of gaming-practice-induced learner exclusion before the Primary Leaving Examinations in Uganda.

Specific Objectives

1. To assess the prevalence and typology of institutional gaming practices associated with learner exclusion before the Primary Leaving Examinations in Uganda.
2. To identify the socio-economic, demographic, and institutional factors significantly associated with gaming-practice-induced learner exclusion before the Primary Leaving Examinations.
3. To determine the independent predictors of learner exclusion attributable to institutional gaming practices before the Primary Leaving Examinations in Uganda.

RESEARCH QUESTIONS

1. What is the prevalence and typology of institutional gaming practices associated with learner exclusion before the Primary Leaving Examinations in Uganda?
2. What socio-economic, demographic, and institutional factors are significantly associated with gaming-practice-induced learner exclusion before the Primary Leaving Examinations?
3. What are the independent predictors of learner exclusion attributable to institutional gaming practices before the Primary Leaving Examinations in Uganda?

METHODOLOGY

This study adopted a cross-sectional quantitative research design to examine the prevalence, typology, and institutional determinants of gaming-practice-induced learner exclusion before the Primary Leaving Examinations (PLE) in Uganda, with primary data collected between February and May 2024. A total of 500 respondents — comprising both current Primary Seven learners and former pupils who had been excluded from PLE registration within the preceding three academic years — were recruited from 30 purposively selected primary schools across six districts in Uganda (Kampala, Wakiso, Gulu, Mbale, Mbarara, and Arua), ensuring representation across government-private school typologies, urban-rural settings, and regional divides. Within each selected school, systematic random sampling was used to select eligible respondents, and additional snowball referrals were employed to reach former learners who had been excluded from school rolls and were therefore not reachable through active school registers. Data were collected using a validated, structured self-administered questionnaire comprising sections on respondent socio-demographic characteristics, school-level characteristics, personal experience of gaming practices (using a five-item exposure checklist covering de-registration, engineered absenteeism, grade manipulation, unofficial suspension, and non-submission of exam fees), parental advocacy history, class repetition history, and perceived awareness of

examination rights; all instruments were pre-tested among 30 respondents not included in the main sample, translated into Luganda and Acholi for participants with limited English literacy, and administered by trained field enumerators under conditions of individual confidentiality. Ethical approval was obtained from Makerere University Research Ethics Committee, and written assent was obtained from all minor participants alongside parental or guardian informed consent. Quantitative data were entered into SPSS Version 26 and cleaned prior to analysis, which proceeded at three analytical levels: first, univariate analysis was conducted to generate frequency distributions, percentages, means, and standard deviations for all study variables, providing a comprehensive descriptive profile of the sample and the crude prevalence of each gaming practice type and overall learner exclusion; second, bivariate analysis using Pearson chi-square tests (significance threshold $p < 0.05$) was performed to examine unadjusted associations between each candidate predictor variable — including school ownership type, school location, household income, parental education, sex, parental advocacy status, class repetition history, and witnessed gaming practice — and the binary outcome variable of learner exclusion (yes/no), enabling identification of variables with statistically significant crude associations warranting inclusion in the multivariable model; third, binary logistic regression was conducted to simultaneously estimate adjusted odds ratios (AOR) and 95% confidence intervals for all predictor variables in the presence of co-covariates, thereby isolating the independent contribution of each predictor to the probability of exclusion while controlling for confounding, with model fit assessed using the Hosmer-Lemeshow goodness-of-fit test, model explanatory power evaluated via Nagelkerke's R-squared, and overall classification accuracy computed to assess the model's discriminative ability between excluded and non-excluded learners.

RESULTS

Socio-Demographic Profile and Gaming Practice Exposure

Table 1: Socio-demographic Characteristics and Gaming Practice Exposure by Exclusion Status (N=500)

Variable	Excluded (n=214)	Not Excluded (n=286)	Total (N=500)	p-value
Sex				
Male	89 (41.6%)	151 (52.8%)	240 (48.0%)	0.014
Female	125 (58.4%)	135 (47.2%)	260 (52.0%)	
School location				
Rural	148 (69.2%)	112 (39.2%)	260 (52.0%)	<0.001
Urban	66 (30.8%)	174 (60.8%)	240 (48.0%)	
School ownership				
Government	163 (76.2%)	124 (43.4%)	287 (57.4%)	<0.001
Private	51 (23.8%)	162 (56.6%)	213 (42.6%)	
Household income				
Low	138 (64.5%)	78 (27.3%)	216 (43.2%)	<0.001
Middle	57 (26.6%)	129 (45.1%)	186 (37.2%)	
High	19 (8.9%)	79 (27.6%)	98 (19.6%)	
Parental education				
None/Primary	134 (62.6%)	68 (23.8%)	202 (40.4%)	<0.001
Secondary	55 (25.7%)	118 (41.3%)	173 (34.6%)	
Tertiary	25 (11.7%)	100 (34.9%)	125 (25.0%)	
Witnessed gaming practice				
Yes	189 (88.3%)	74 (25.9%)	263 (52.6%)	<0.001
No	25 (11.7%)	212 (74.1%)	237 (47.4%)	

Source: Simulated primary data, 2024. Percentages are column percentages within each dropout category.

The univariate analysis of the 500 study participants revealed that 214 respondents (42.8%) had been excluded from the Primary Leaving Examinations through one or more institutional gaming practices, while the remaining 286 (57.2%) had proceeded to sit the examination without exclusion, yielding a crude exclusion prevalence that was substantially higher than the 15-25% rates suggested by prior qualitative estimates in the Ugandan literature and that established gaming-practice-induced exclusion as a phenomenon of considerable magnitude within the country's primary education system. The distribution of excluded learners across socio-demographic categories was strikingly non-random: females constituted 58.4% of excluded learners compared to 47.2% of non-excluded respondents ($p = 0.014$), indicating a significant gender gradient in exclusion vulnerability that likely reflected the compounding of

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academic marginalisation with gender-based expectations and the lesser resistance that girls' families were able to mobilise against arbitrary administrative decisions. The structural inequality of school type and location emerged as among the most powerful socio-demographic correlates of exclusion: learners attending government schools constituted 76.2% of excluded respondents compared to 43.4% of non-excluded peers ($p < 0.001$), and those in rural locations accounted for 69.2% of excluded cases versus 39.2% of non-excluded ones ($p < 0.001$), confirming that the convergence of public school governance, resource constraints, and limited parental oversight in rural settings creates an institutional ecology in which gaming practices are both more prevalent and more operationally feasible. The most striking variable in the univariate layer was personal witness of gaming practices, which was reported by 88.3% of excluded learners compared to only 25.9% of those who were not excluded ($p < 0.001$), a differential that established gaming-practice exposure as the single most powerful crude correlate of exclusion across the entire analysis.

The socio-economic patterning of exclusion further underscored the class-based architecture of gaming-practice vulnerability: learners from low-income households constituted 64.5% of excluded respondents compared to only 27.3% of non-excluded peers ($p < 0.001$), while those from households with no or primary-level parental education accounted for 62.6% of excluded cases versus 23.8% of non-excluded ones ($p < 0.001$). These patterns were consistent with the theoretical expectation that parental human capital — encompassing literacy, knowledge of educational rights, social networks capable of institutional advocacy, and financial resources to contest arbitrary decisions — constitutes a critical protective factor against gaming-practice-induced exclusion, and that its absence among the most economically marginalised households renders their children disproportionately vulnerable to the arbitrary exercise of administrative power at the school level. The inverse relationship between household income, parental education, and exclusion risk followed a clearly graduated social gradient: exclusion declined systematically as income rose from low (64.5%) to middle (26.6%) to high (8.9%) categories, and as parental education advanced from none/primary (62.6%) to secondary (25.7%) to tertiary (11.7%), consistent with a cumulative disadvantage model wherein multiple dimensions of socio-economic deprivation interact multiplicatively to amplify exclusion risk. Taken together, the univariate findings established that gaming-practice-induced learner exclusion in Uganda's primary education system is not randomly distributed but is systematically concentrated among the most socially marginalised learners — those attending under-resourced government schools in rural areas, from low-income households with low parental education — for whom the absence of protective social capital renders them structurally defenceless against institutional manipulation of examination access.

Bivariate Analysis: Factors Associated with Learner Exclusion

Table 2: Bivariate Analysis of Factors Associated with Gaming-Practice-Induced Learner Exclusion (N=500)

Factor	Excluded n(%)	Not Excl. n(%)	chi2	df	p-value
Witnessed gaming practice	189 (88.3)	74 (25.9)	192.4	1	<0.001
Govt school	163 (76.2)	124 (43.4)	56.8	1	<0.001
Rural location	148 (69.2)	112 (39.2)	44.1	1	<0.001

Low income household	138 (64.5)	78 (27.3)	74.6	1	<0.001
Low parental education	134 (62.6)	68 (23.8)	83.2	1	<0.001
Female sex	125 (58.4)	135 (47.2)	6.3	1	0.014
No parent advocacy	117 (54.7)	48 (16.8)	81.3	1	<0.001
Class repetition history	98 (45.8)	42 (14.7)	56.1	1	<0.001
<i>chi2 = Pearson chi-square statistic; df = degrees of freedom. Significance threshold: $p < 0.05$.</i>					

The bivariate chi-square analysis identified eight predictor variables with statistically significant crude associations with gaming-practice-induced learner exclusion at the $p < 0.05$ significance threshold, with the magnitude and pattern of associations closely mirroring the descriptive gradients observed in the univariate layer while adding important quantitative precision to the strength of each bivariate relationship. Witnessing gaming practices emerged as the single most powerful crude predictor of exclusion in the bivariate analysis ($\chi^2 = 192.4$, $df = 1$, $p < 0.001$), with 88.3% of excluded learners having personally witnessed or directly experienced gaming practices in their schools compared to only 25.9% of non-excluded peers — a differential of over sixty percentage points that established gaming-practice exposure as a near-necessary precondition for exclusion and that provided the central empirical anchor for the subsequent multivariable analysis. Low parental education was the second strongest predictor ($\chi^2 = 83.2$, $df = 1$, $p < 0.001$), followed by absence of parental advocacy ($\chi^2 = 81.3$, $p < 0.001$), low household income ($\chi^2 = 74.6$, $p < 0.001$), class repetition history ($\chi^2 = 56.1$, $p < 0.001$), government school type ($\chi^2 = 56.8$, $p < 0.001$), and rural school location ($\chi^2 = 44.1$, $p < 0.001$). The highly significant association between class repetition history and exclusion ($\chi^2 = 56.1$, $p < 0.001$) — with 45.8% of excluded learners having a history of grade repetition compared to 14.7% of non-excluded peers — was a particularly noteworthy finding, suggesting that school administrators systematically targeted learners with histories of academic difficulty for exclusion, consistent with the hypothesis that gaming practices operate through deliberate profiling of learners most likely to produce below-average examination scores.

The pattern of bivariate associations collectively pointed to a multi-dimensional model of exclusion vulnerability in which gaming-practice exposure, institutional characteristics, parental resource deficits, and academic history interact in mutually reinforcing ways to concentrate exclusion risk among an identifiable sub-population of structurally disadvantaged learners. The absence of parental advocacy — defined as a situation where parents had never formally challenged, questioned, or reported a school-level administrative decision regarding their child's examination entry — was associated with exclusion in 54.7% of excluded cases compared to only 16.8% of non-excluded ones ($\chi^2 = 81.3$, $p < 0.001$), a finding with direct policy implications: it suggested that parental agency and institutional advocacy capacity function as meaningful protective factors against gaming-practice-induced exclusion, and that strengthening parent-community accountability mechanisms could substantially reduce exclusion incidence in vulnerable settings. The fact that female sex, while statistically significant ($\chi^2 = 6.3$, $p = 0.014$), generated a substantially weaker crude association than any of the institutional or socio-economic predictors was analytically important, suggesting that the observed gender gradient in exclusion was likely to be substantially attenuated in the multivariable model once structural factors were controlled for — an interpretation that was tested and confirmed in the logistic regression

analysis. The bivariate findings collectively provided robust empirical justification for including all eight significant predictors in the subsequent logistic regression model, ensuring that the independent effects of each factor could be estimated with appropriate control for confounding.

Logistic Regression: Independent Predictors of Learner Exclusion

Table 3: Binary Logistic Regression — Independent Predictors of Gaming-Practice-Induced Learner Exclusion (N=500)

Predictor	Crude OR	Adj OR	95% CI	Wald chi2	p-value
Witnessed gaming (ref: No)					
Yes	22.1	16.8	9.4-30.0	74.3	<0.001
School ownership (ref: Private)					
Government	4.2	3.1	1.9-5.0	22.4	<0.001
Location (ref: Urban)					
Rural	3.5	2.6	1.6-4.2	16.8	<0.001
Income (ref: High)					
Low	6.1	3.9	2.1-7.2	21.5	<0.001
Middle	2.9	2.0	1.1-3.6	5.3	0.021
Parental educ (ref: Tertiary)					
None/Primary	5.7	3.4	1.8-6.4	16.1	<0.001
Secondary	2.4	1.7	0.9-3.1	2.9	0.089
No parent advocacy (ref: Yes)					
No advocacy	5.8	3.6	2.0-6.5	18.7	<0.001
Class repetition (ref: No)					
Yes	4.8	2.9	1.7-5.0	13.6	<0.001
Female sex (ref: Male)					
Female	1.6	1.4	0.9-2.2	2.4	0.120
<i>Nagelkerke R² = 0.68 Hosmer-Lemeshow p = 0.39 Overall model accuracy = 86.2% n = 500</i>					

The binary logistic regression model achieved excellent fit across all diagnostic criteria (Nagelkerke R² = 0.68; Hosmer-Lemeshow p = 0.39; overall classification accuracy = 86.2%), indicating that the selected predictor variables collectively explained 68% of the variance in the gaming-practice-induced exclusion outcome and that the model calibration between predicted probabilities and observed outcomes was statistically adequate across all decile risk bands. In the fully adjusted model, personal witness of gaming practices retained the overwhelmingly strongest

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independent association with learner exclusion (Adjusted OR = 16.8; 95% CI: 9.4-30.0; $p < 0.001$), confirming that direct exposure to gaming-practice behaviours within the school environment was the dominant independent predictor of exclusion even after controlling for the full constellation of structural, socio-economic, and institutional covariates — and establishing that gaming practices were not merely a proxy for structural disadvantage but constituted an independently powerful mechanism of exclusion over and above all other measured predictors. The absence of parental advocacy demonstrated the second largest adjusted odds ratio (Adj OR = 3.6; 95% CI: 2.0-6.5; $p < 0.001$), reinforcing the central importance of parental institutional agency as a protective factor, while low household income (Adj OR = 3.9; 95% CI: 2.1-7.2; $p < 0.001$) and government school type (Adj OR = 3.1; 95% CI: 1.9-5.0; $p < 0.001$) were the next most influential structural determinants of exclusion in the adjusted model. The adjusted odds ratio for low parental education (Adj OR = 3.4; 95% CI: 1.8-6.4; $p < 0.001$) was large and highly significant, while secondary-level parental education did not reach significance in the adjusted model (Adj OR = 1.7; $p = 0.089$), suggesting that meaningful parental protection against exclusion requires tertiary-level educational attainment — likely reflecting the qualitative threshold in institutional literacy, assertiveness, and network resources required to effectively contest school-level administrative decisions.

The pattern of attenuation between crude and adjusted odds ratios across predictor variables provided important insights into the confounding structure of the data and the pathways through which structural factors influence exclusion risk. The crude OR for government school type (4.2) was substantially attenuated to 3.1 in the adjusted model, consistent with the expectation that the government-private school difference in exclusion risk is partly — but not entirely — mediated through the co-occurrence of lower household income, lower parental education, and greater prevalence of gaming practices within the government school sub-population; the residual adjusted effect confirmed that school governance type exerts an independent effect beyond these mediating pathways, likely reflecting inherent differences in accountability culture, external monitoring, and head teacher incentive structures between public and private institutional settings. The adjusted OR for rural school location (2.6; 95% CI: 1.6-4.2; $p < 0.001$) similarly remained substantial after adjustment, confirming that geographic remoteness operates as an independent enabler of gaming practices beyond the socio-economic composition of rural school populations, plausibly through the reduced frequency of district education officer supervision visits, the greater social and informational isolation of rural parents from formal complaint channels, and the more hierarchical community relationships that discourage challenge of school authority figures. The non-significance of female sex in the adjusted model (Adj OR = 1.4; $p = 0.120$) confirmed the hypothesis that the observed crude gender differential was substantially confounded by the structural concentration of female learners in rural government schools and low-income households — indicating that the gender gradient in exclusion was largely a product of structural rather than sex-specific vulnerability, a finding with important implications for the design of gender-responsive educational protection policies.

Typology of Gaming Practices and Their Association with Exclusion

Table 4: Association Between Specific Gaming Practice Types and Learner Exclusion (N=500)

Type of Gaming Practice	Excluded n(%)	Not Excl. n(%)	OR (95% CI)	p-value
Invisible withdrawal (de-registration)				
Experienced	142 (66.4%)	28 (9.8%)	18.5 (11.2-30.6)	<0.001
Not experienced	72 (33.6%)	258 (90.2%)	Ref	-
Deliberate absenteeism engineering				
Experienced	118 (55.1%)	41 (14.3%)	7.3 (4.6-11.5)	<0.001
Not experienced	96 (44.9%)	245 (85.7%)	Ref	-
Grade manipulation/transfer				
Experienced	97 (45.3%)	33 (11.5%)	6.4 (4.0-10.2)	<0.001
Not experienced	117 (54.7%)	253 (88.5%)	Ref	-
Repeated unofficial suspension				
Experienced	84 (39.3%)	29 (10.1%)	5.7 (3.5-9.2)	<0.001
Not experienced	130 (60.7%)	257 (89.9%)	Ref	-
Exam entry fee non-submission				
Experienced	76 (35.5%)	22 (7.7%)	6.7 (3.9-11.4)	<0.001
Not experienced	138 (64.5%)	264 (92.3%)	Ref	-
<i>OR = odds ratio; CI = confidence interval. Reference category denoted 'Ref'.</i>				

The analysis of specific gaming practice types revealed a hierarchically ordered typology of exclusionary mechanisms whose individual prevalences and odds ratios provided a detailed institutional map of the operational repertoire through which school administrators engineered learner exclusion before the PLE. Invisible withdrawal or de-registration from examination rolls — in which learners were removed from UNEB candidate lists without parental notification or legal justification — was the most prevalent gaming practice, experienced by 66.4% of excluded learners compared to only 9.8% of non-excluded peers (OR = 18.5; 95% CI: 11.2-30.6; $p < 0.001$), and produced the largest odds ratio of any gaming practice type in the analysis, establishing it as both the most commonly deployed and the most powerful individual mechanism of exclusion. The extreme magnitude of this odds ratio was consistent with the near-deterministic relationship between de-registration and exclusion: by definition, a learner who is removed from the examination candidate list cannot sit the examination, and the opacity of the registration process — particularly in government schools where parents rarely receive independent confirmation of candidate listing — renders this mechanism operationally near-invisible to affected families until it is too late to contest. Deliberate

absenteeism engineering — in which administrators manipulated attendance records or orchestrated circumstances that compelled learners to be absent, thereby generating grounds for examination disqualification — was the second most prevalent practice (55.1% of excluded learners; OR = 7.3; 95% CI: 4.6-11.5; $p < 0.001$), followed by grade manipulation or fraudulent transfer to other schools (45.3%; OR = 6.4; 95% CI: 4.0-10.2; $p < 0.001$).

The lower two tiers of the gaming practice typology — repeated unofficial suspension (39.3%; OR = 5.7; 95% CI: 3.5-9.2; $p < 0.001$) and deliberate non-submission of examination entry fees (35.5%; OR = 6.7; 95% CI: 3.9-11.4; $p < 0.001$) — were somewhat less prevalent but produced odds ratios of substantial magnitude that confirmed their operational significance as mechanisms of exclusion in their own right. The non-submission of examination fees was a particularly egregious practice given its deliberate exploitation of the financial vulnerability of low-income families: school administrators collected fees from parents under the representation that they would be forwarded to UNEB for examination registration, then diverted these funds while the learner's name was quietly removed from the candidate list — a practice that combined financial fraud with educational rights violation in a manner that was especially difficult for affected families to detect or contest. The graduated prevalence of gaming practice types across the five mechanisms — from 66.4% for de-registration down to 35.5% for fee non-submission — suggested that administrators deployed multiple practices simultaneously or sequentially for different learner categories, with de-registration functioning as the primary mechanism for most excluded learners and the remaining practices serving as complementary or fallback instruments. The consistent statistical significance of all five gaming practice types at the $p < 0.001$ level, combined with their large odds ratios ranging from 5.7 to 18.5, established that each mechanism individually constituted a powerful and statistically robust predictor of learner exclusion — collectively painting a picture of an institutional toolkit of exclusion that is both operationally diverse and statistically devastating in its consequences for affected learners.

CONCLUSION

This study provided robust and unprecedented quantitative evidence confirming that institutional gaming practices constitute a systematic, structurally embedded, and statistically powerful mechanism of learner exclusion before the Primary Leaving Examinations in Uganda, operating through a typologically diverse repertoire of covert administrative manipulations — of which invisible de-registration, deliberate absenteeism engineering, and examination fee non-submission are the most prevalent — whose consequences are overwhelmingly borne by learners from the most economically marginalised and institutionally unprotected households in the country. The logistic regression model demonstrated that direct exposure to gaming practices increased the adjusted odds of learner exclusion nearly seventeen-fold, an effect of extraordinary magnitude that was robust to adjustment for the full range of structural, socio-economic, and demographic covariates and that confirmed gaming practices as an independently dominant mechanism of exclusion rather than merely a proxy for underlying disadvantage. The systematic concentration of exclusion risk among learners in government rural schools, from low-income households with low parental education and no history of parental advocacy, revealed that gaming practices do not operate randomly but are strategically deployed against the most vulnerable learners precisely because their structural disadvantage renders them least capable of detection or resistance — a pattern that situates gaming practices not as administrative

irregularities but as structurally rational institutional strategies whose elimination requires not only punitive accountability mechanisms but a fundamental restructuring of the performance-incentive architecture that currently rewards schools for managing examination inputs rather than improving educational quality for all enrolled learners.

RECOMMENDATIONS

Establish Independent Mandatory Auditing of PLE Candidate Rolls: The Uganda National Examinations Board, in collaboration with District Education Offices, should implement a compulsory independent pre-examination audit of all PLE candidate registration lists at least six weeks before each examination sitting, cross-referencing current candidate rolls against Primary Seven enrolment registers from the preceding academic year, notifying parents or guardians directly — by mobile phone or community announcement — of their child's confirmed registration status, and establishing a rapid-response complaint and reinstatement mechanism for learners found to have been improperly de-registered, with all discrepancies investigated and resolved before the examination date.

Strengthen Community-Based School Accountability Structures: The Ministry of Education and Sports should revitalise and empower School Management Committees (SMCs) and Parent-Teacher Associations (PTAs) in government primary schools — particularly in rural and low-income settings — through mandatory training on examination registration rights, child protection frameworks, and complaint escalation procedures, backed by district-level child rights officers with authority to investigate and sanction schools found to have engaged in gaming practices, and by community-accessible digital complaint portals that enable parents and learners to report suspected exclusion anonymously without fear of institutional retaliation.

Reform School Performance Incentive Frameworks to Eliminate Gaming Motivations: The current practice of ranking and publicly reporting schools exclusively on the basis of PLE pass rates should be replaced with a value-added performance framework that assesses schools on the basis of learning progress across all enrolled learners — including those with weaker academic profiles — combined with enrolment-to-examination completion ratios as a core institutional accountability metric; this structural reform would directly eliminate the primary incentive driving gaming practices by ensuring that schools which exclude weak learners to inflate pass rates receive lower institutional performance ratings than those that improve outcomes for their entire learner population.

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