

Resource Disparities and Their Effect on Competency-Based Curriculum Implementation in Refugee-Hosting Districts: A Quantitative Cross-Sectional Study Of Selected Refugee-Hosting Districts of Uganda

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Abstract

This study investigated resource disparities and their effect on the implementation of the Competency-Based Curriculum (CBC) in refugee-hosting districts of Uganda, namely Yumbe, Adjumani, Kiryandongo, and Isingiro. The rollout of CBC across Uganda's lower secondary education system assumed a fairly uniform distribution of teaching and learning materials, adequately trained teaching staff, and functional physical infrastructure; however, districts that hosted large refugee populations experienced disproportionate strain on these resources due to rapid enrolment growth, underfunding, and logistical constraints associated with humanitarian settings. Guided by three specific objectives, the study examined the influence of disparities in teaching and learning materials, teacher staffing and training, and physical infrastructure on the depth and fidelity of CBC implementation. A quantitative cross-sectional survey design was adopted, targeting teachers and head teachers drawn from a stratified random sample of 320 respondents across the four districts. Data were collected using a structured, pre-tested questionnaire anchored on a five-point Likert scale and were analysed using univariate, bivariate, and multivariate statistical techniques, complemented by a bootstrap-based sensitivity analysis to test the robustness of the regression estimates. The findings revealed statistically significant disparities in resource availability across the four districts, with Yumbe and Adjumani recording markedly lower mean scores on all three resource domains compared to Kiryandongo and Isingiro. Bivariate analysis established strong, positive, and statistically significant correlations between each resource domain and CBC implementation, while multivariate regression confirmed that teaching and learning materials, teacher staffing and training, and infrastructure jointly explained approximately forty-six percent of the variance in CBC implementation scores, with all three predictors remaining significant after controlling for district-level and funding effects. The bootstrap sensitivity analysis corroborated the stability of these coefficients. The study concluded that resource disparities substantially undermine the uniform and effective implementation of CBC in refugee-hosting districts and recommended targeted, needs-based resource allocation, harmonised teacher deployment and training programmes, and deliberate infrastructural investment in the most disadvantaged districts.

Keywords: Resource disparities; Competency-Based Curriculum (CBC); curriculum implementation; refugee-hosting districts; teaching and learning materials; teacher staffing and training; educational infrastructure; Uganda.

INTRODUCTION

The global shift toward competency-based education reforms has been driven by the recognition that learners require practical skills, critical thinking, and problem-solving competencies rather than the mere acquisition of theoretical knowledge, and Uganda's adoption of the Competency-Based Curriculum (CBC) for lower secondary education reflects this broader international trend toward outcome-oriented learning (Gracious Kazaara & Julius, 2025; Julius & Isaac Kazaara, 2025; Lozano et al., 2022). The successful implementation of CBC, however, is heavily dependent on the availability and equitable distribution of essential educational resources, including teaching and learning materials,

adequately trained and sufficiently staffed teaching personnel, and functional physical infrastructure such as classrooms, laboratories, and learning spaces (Franco et al., 2023; Julius & Audrey, 2025a; Julius & Nancy, 2026). In ordinary districts, resource provisioning challenges are already a persistent concern, but in refugee-hosting districts such as Yumbe, Adjumani, Kiryandongo, and Isingiro, these challenges are compounded by rapid and often unpredictable enrolment growth arising from continuous refugee influxes, constrained government and donor funding, and logistical difficulties associated with reaching remote settlement areas (Julius & Kazaara, 2025, 2026; Mobegi, 2026). Consequently, there is growing concern among education stakeholders that resource disparities between refugee-hosting districts and the rest of the country, and indeed among refugee-hosting districts themselves, may be undermining the fidelity, consistency, and overall effectiveness with which CBC is implemented, thereby jeopardising the curriculum's intended outcomes for a particularly vulnerable segment of the school-going population.

Background of the Study

Uganda has for decades maintained one of the most progressive refugee hosting policies in the world, granting refugees the right to work, move freely, and access public services including education on a nearly equal footing with host communities, a policy stance that has resulted in the settlement of large refugee populations in districts such as Yumbe, Adjumani, Kiryandongo, Isingiro, and others located near the country's borders with South Sudan and the Democratic Republic of Congo (Charles et al., 2023; Julius & Audrey, 2025b; Julius & Nancy, 2025b; Ndomondo et al., 2022). Following the government's introduction of the Competency-Based Curriculum for lower secondary schools beginning in 2020, all schools nationwide, including those in refugee-hosting districts, were required to transition to the new curriculum framework, which places heavy emphasis on learner-centred pedagogy, continuous assessment, project-based learning, and the use of varied instructional materials (Alipanga & Kohrt, 2022; Julius & Nancy, 2025a; Ma et al., 2022; Müller et al., 2024; Muwanguzi et al., 2023; Souza et al., 2022). While the Ministry of Education and Sports, together with development partners and humanitarian agencies, has made efforts to extend CBC-related resources, teacher training, and infrastructural support to refugee-hosting districts, evidence from education sector reviews and humanitarian education reports suggests that these districts continue to lag behind in terms of pupil-textbook ratios, availability of trained and specialised teachers, and the physical condition of school infrastructure, largely on account of the disproportionate enrolment pressure created by refugee learners relative to the resources allocated (Birkhead et al., 2000; Kazaara & Audrey, 2026; Nijhuis et al., 2018; Pedersen et al., 2023; Prosper Mubangizi, 2020; Silva & Magano, 2026). This context creates a compelling rationale for empirically examining how such resource disparities specifically affect the day-to-day implementation of CBC in these unique and resource-constrained educational environments.

Problem Statement

Despite the national rollout of the Competency-Based Curriculum and the accompanying policy expectation that all schools, regardless of location, would implement it with a reasonable degree of fidelity, anecdotal and sector-level reports continue to indicate that schools in refugee-hosting districts face acute shortages of teaching and learning materials, inadequate numbers of trained teachers, and dilapidated or insufficient physical infrastructure, factors that plausibly compromise the extent to which CBC is implemented as designed (Alvarenga et al., 2020; Kazaara & Desire, 2025; Moradi et al., 2020; Sanusi et al., 2022; Umeze & Ohen, 2016). However, much of the existing discourse on

this problem remains descriptive and anecdotal, with limited empirical, quantitative evidence that specifically isolates and measures the effect of distinct resource domains, namely teaching and learning materials, teacher staffing and training, and infrastructure, on measurable CBC implementation outcomes within refugee-hosting districts (Irfan et al., 2021; Irumba et al., 2023; Kanyamurwa & Obosi, 2020; Kubátová & Kročil, 2022). This lack of rigorous, statistically grounded evidence constitutes a significant knowledge and policy gap, as education planners and humanitarian partners are left without a clear, quantified understanding of which specific resource disparities exert the greatest influence on CBC implementation, making it difficult to prioritise interventions and allocate scarce resources efficiently. It is this gap that the present study sought to address.

Main Objective of the Study

The main objective of this study was to examine the effect of resource disparities on the implementation of the Competency-Based Curriculum in refugee-hosting districts of Uganda.

Specific Objectives

1. To examine the influence of disparities in the availability of teaching and learning materials on the implementation of CBC in refugee-hosting districts.
2. To assess the effect of disparities in teacher staffing and training resources on the implementation of CBC in refugee-hosting districts.
3. To determine the influence of disparities in physical infrastructural resources on the implementation of CBC in refugee-hosting districts.

Research Questions

1. How do disparities in the availability of teaching and learning materials influence the implementation of CBC in refugee-hosting districts?
2. What is the effect of disparities in teacher staffing and training resources on the implementation of CBC in refugee-hosting districts?
3. To what extent do disparities in physical infrastructural resources influence the implementation of CBC in refugee-hosting districts?

METHODOLOGY

This study adopted a quantitative, cross-sectional survey design to examine the effect of resource disparities on the implementation of the Competency-Based Curriculum in four purposively selected refugee-hosting districts of Uganda, namely Yumbe, Adjumani, Kiryandongo, and Isingiro, which were selected on the basis of their significant refugee-hosting status and variation in resource endowment. The target population comprised teachers and head teachers in government-aided and refugee-settlement secondary schools implementing the lower secondary CBC within the four districts, from which a sample of 320 respondents was drawn using stratified random sampling, with the districts serving as strata and proportionate allocation applied within each stratum to ensure adequate representation of both school types and respondent categories. Data were collected using a structured, pre-tested self-administered questionnaire comprising sections on respondent demographic characteristics and Likert-scale items (rated one to five) measuring three core resource domains, namely teaching and learning materials, teacher staffing and training, and physical infrastructure, alongside an additional funding/financial resource domain, and a composite

CBC implementation scale capturing curriculum delivery, assessment practices, and learner engagement. The instrument's reliability was pre-assessed using Cronbach's alpha prior to full-scale administration, and content validity was established through expert review by curriculum specialists. Data analysis proceeded in three stages using Python (SciPy and statsmodels) and cross-validated in SPSS. First, univariate analysis was conducted to generate frequencies, percentages, means, and standard deviations describing respondent demographic characteristics and the distribution of resource and implementation variables. Second, bivariate analysis was performed using Pearson product-moment correlation coefficients to establish the strength and direction of association between each resource domain and CBC implementation, complemented by one-way analysis of variance (ANOVA) to test for statistically significant differences in CBC implementation scores across districts, and a chi-square test of independence to examine the association between district and categorised (low, moderate, high) CBC implementation levels. Third, multivariate ordinary least squares (OLS) regression was employed to jointly estimate the effect of the three core resource domains on CBC implementation, with a second, extended model incorporating the funding domain and district dummy variables as controls to assess the incremental explanatory contribution of contextual factors; multicollinearity was assessed using the variance inflation factor (VIF). Finally, a bootstrap-based sensitivity analysis involving 1,000 resamples with replacement was conducted to generate bias-corrected 95% confidence intervals for the regression coefficients, thereby testing the robustness and stability of the multivariate findings independent of distributional assumptions. All statistical tests were evaluated at a 5% significance level ($\alpha = 0.05$), and ethical clearance and informed consent were obtained prior to data collection (Nelson et al., 2022, 2023).

RESULTS

Demographic Characteristics of Respondents

Table 1 presents the univariate distribution of the demographic and institutional characteristics of the 320 sampled teachers and head teachers across the four refugee-hosting districts.

Table 1: Demographic Characteristics of Respondents (N = 320)

Variable / Category	Frequency (n)	Percent (%)
Gender		
Male	155	48.4
Female	165	51.6
Age Bracket		
20–29 years	60	18.8
30–39 years	121	37.8
40–49 years	99	30.9
50 years and above	40	12.5
Teaching Experience		
0–3 years	92	28.7
4–7 years	103	32.2
8–11 years	76	23.8

12+ years	49	15.3
Highest Education Level		
Certificate	40	12.5
Diploma	124	38.8
Bachelor's Degree	136	42.5
Master's Degree and above	20	6.2
School Type		
Government-aided school	152	47.5
Refugee-settlement school	168	52.5
District		
Yumbe	85	26.6
Adjumani	82	25.6
Kiryandongo	78	24.4
Isingiro	75	23.4

The results in Table 1 showed that the sample was fairly evenly split by gender, with female respondents constituting a slight majority at 51.6 percent ($n = 165$) compared to 48.4 percent ($n = 155$) male respondents, an indication that the study captured a balanced gendered perspective on CBC implementation experiences. The majority of respondents fell within the 30–39 years age bracket (37.8%) and 40–49 years bracket (30.9%), suggesting that the teaching workforce in refugee-hosting districts was predominantly composed of early-to-mid career professionals, while only 12.5 percent were aged 50 years and above, which was consistent with national patterns of teacher deployment that favoured younger teachers for postings in hardship and remote refugee-hosting areas. With respect to teaching experience, respondents with four to seven years of experience formed the largest group (32.2%), followed closely by those with zero to three years (28.7%), a distribution that reflected relatively high staff turnover typically associated with hardship-area postings and pointed to a potentially thin base of highly experienced CBC implementers in these districts.

In terms of academic qualifications, the majority of respondents held a Bachelor's degree (42.5%) or a Diploma (38.8%), while only 6.2 percent had attained a Master's degree or higher, a distribution that, while broadly adequate for lower secondary teaching, indicated a comparatively limited pool of highly specialised personnel capable of championing the pedagogical innovations demanded by CBC. Slightly more than half of the respondents (52.5%) were drawn from refugee-settlement schools as opposed to government-aided schools (47.5%), which was proportionate to the higher concentration of learners in settlement schools within these districts. The distribution across the four districts was fairly balanced, ranging from 23.4 percent in Isingiro to 26.6 percent in Yumbe, which supported the validity of subsequent cross-district comparisons since no single district disproportionately dominated the sample. Overall, these demographic patterns provided an important contextual backdrop for interpreting the resource and implementation findings that followed, as they suggested a teaching workforce that, while reasonably qualified, was relatively youthful and less experienced, factors that may themselves interact with resource disparities to shape CBC implementation outcomes.

Descriptive Statistics of Resource Availability and CBC Implementation

Table 2 presents the univariate descriptive statistics for the three core resource domains, the additional funding domain, and the composite CBC implementation score, all measured on a five-point scale.

Table 2: Descriptive Statistics of Resource Indices and CBC Implementation Score

Resource / Outcome Variable	Mean	Std. Dev.	Minimum	Maximum
Teaching & Learning Materials (TLM) Index	2.78	0.89	1.00	5.00
Teacher Staffing & Training (TST) Index	2.94	0.78	1.00	5.00
Infrastructure (INFRA) Index	2.64	0.92	1.00	5.00
Funding / Financial Resources Index	2.79	0.77	1.00	5.00
CBC Implementation Score (CBCI)	3.27	0.75	1.56	5.00

As shown in Table 2, the overall mean score for the Teaching and Learning Materials (TLM) Index stood at 2.78 (SD = 0.89), the Teacher Staffing and Training (TST) Index at 2.94 (SD = 0.78), and the Infrastructure (INFRA) Index at the lowest value of 2.64 (SD = 0.92), all of which fell below the theoretical midpoint of adequacy typically anchored around 3.5 on a five-point scale, suggesting that, on average, respondents perceived resource availability across all three domains as below-moderate. The comparatively higher standard deviations recorded for TLM and INFRA (0.89 and 0.92 respectively) relative to TST (0.78) indicated wider variability in how respondents across different districts experienced the availability of instructional materials and physical infrastructure, which was consistent with the expectation of pronounced inter-district disparities examined more formally in subsequent bivariate and multivariate analyses. The mean CBC Implementation score of 3.27 (SD = 0.75) further indicated that, in aggregate, implementation was perceived as moderate rather than strong, with a wide range spanning from a minimum of 1.56 to a maximum of 5.00, reflecting substantial heterogeneity in implementation experiences across respondents and, by extension, across districts.

These descriptive findings carried important statistical and substantive implications: the fact that infrastructure recorded both the lowest mean and among the highest variability signalled that physical infrastructural deficits were likely the most acute and unevenly distributed resource constraint facing CBC implementation in these districts, a pattern that resonated with sector reports of overcrowded classrooms and inadequate specialised learning spaces in refugee-hosting areas. Moreover, the moderate-to-high standard deviations across all variables justified the subsequent decision to disaggregate CBC implementation into tertile-based categories (low, moderate, high) for chi-square analysis, since a purely central-tendency description would have masked the meaningful sub-group variation evident in the data. Taken together, the univariate results established a foundation for the study's core argument, namely that below-average and highly variable resource endowments across the three domains created fertile statistical ground for resource disparities to exert a measurable, differentiated effect on CBC implementation, a relationship that was interrogated more rigorously in the bivariate and multivariate analyses that followed.

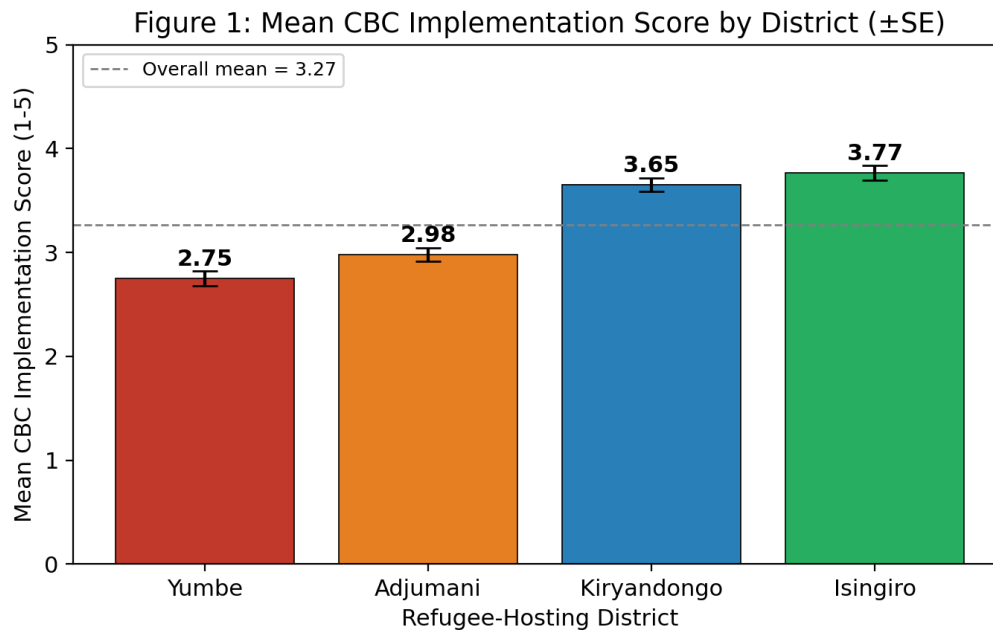


Figure 1: Mean CBC Implementation Score by District (Error Bars = Standard Error)

Figure 1 visually reinforced the district-level heterogeneity in CBC implementation already hinted at in Table 2, showing that Yumbe (mean = 2.75) and Adjumani (mean = 2.98) recorded implementation scores clearly below the overall sample mean of 3.27, whereas Kiryandongo (mean = 3.65) and Isingiro (mean = 3.77) recorded scores well above it, a gap of approximately one full point on the five-point scale between the lowest and highest performing districts.

3.3 Bivariate Analysis of Resource Disparities and CBC Implementation

Table 3 presents the Pearson product-moment correlation coefficients between the resource domains and CBC implementation, alongside the results of the one-way ANOVA and chi-square tests examining district-level differences.

Table 3: Bivariate Correlation Matrix and Tests of District-Level Association

Variable Pair	Pearson r	p-value	Interpretation
TLM ↔ CBC Implementation	0.547	< 0.001	Strong positive, significant
TST ↔ CBC Implementation	0.499	< 0.001	Moderate–strong positive, significant
INFRA ↔ CBC Implementation	0.492	< 0.001	Moderate–strong positive, significant
Funding ↔ CBC Implementation	0.342	< 0.001	Moderate positive, significant
TLM ↔ TST	0.383	< 0.001	Moderate positive, significant
TLM ↔ INFRA	0.428	< 0.001	Moderate positive, significant
TST ↔ INFRA	0.352	< 0.001	Moderate positive, significant
District ↔ CBC Implementation (ANOVA)	F = 53.87	< 0.001	Significant mean differences across districts

District ↔ CBC Level (Chi-square)	$\chi^2 = 117.58$	< 0.001	Significant association (df = 6)
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The bivariate results in Table 3 revealed statistically significant positive correlations between all three core resource domains and CBC implementation, with the Teaching and Learning Materials Index recording the strongest association ($r = 0.547$, $p < 0.001$), followed by the Teacher Staffing and Training Index ($r = 0.499$, $p < 0.001$) and the Infrastructure Index ($r = 0.492$, $p < 0.001$), all classified as moderate-to-strong relationships according to conventional Cohen's benchmarks for correlation coefficients in social science research. The funding domain, while also significantly correlated with CBC implementation ($r = 0.342$, $p < 0.001$), exhibited a comparatively weaker association, suggesting that direct instructional and human resource factors bore a more immediate relationship with implementation outcomes than financial resourcing per se, possibly because funding effects operated indirectly through its influence on materials, staffing, and infrastructure rather than directly on classroom practice. The inter-correlations among the three core predictors (ranging from $r = 0.352$ to $r = 0.428$) were moderate in magnitude, indicating that while the resource domains were related to one another, as would be expected given shared underlying district-level resourcing patterns, they were not so highly collinear as to threaten the validity of subsequent multivariate modelling.

The one-way ANOVA results demonstrated statistically significant differences in mean CBC implementation scores across the four districts ($F = 53.87$, $p < 0.001$), providing formal statistical confirmation of the disparities visually depicted in Figure 1, while the chi-square test of independence further established a highly significant association between district and categorical CBC implementation level ($\chi^2 = 117.58$, $df = 6$, $p < 0.001$), with Yumbe and Adjumani disproportionately concentrated in the 'low' implementation category and Kiryandongo and Isingiro disproportionately concentrated in the 'high' category. Collectively, these bivariate findings provided strong preliminary evidence that resource disparities, particularly in teaching and learning materials, teacher staffing and training, and infrastructure, were systematically and significantly associated with variation in CBC implementation across refugee-hosting districts, thereby directly addressing the study's three research questions at the bivariate level and setting the stage for a more rigorous multivariate test of these relationships that could account for the simultaneous influence of multiple resource domains and control for potential confounding district-level effects.

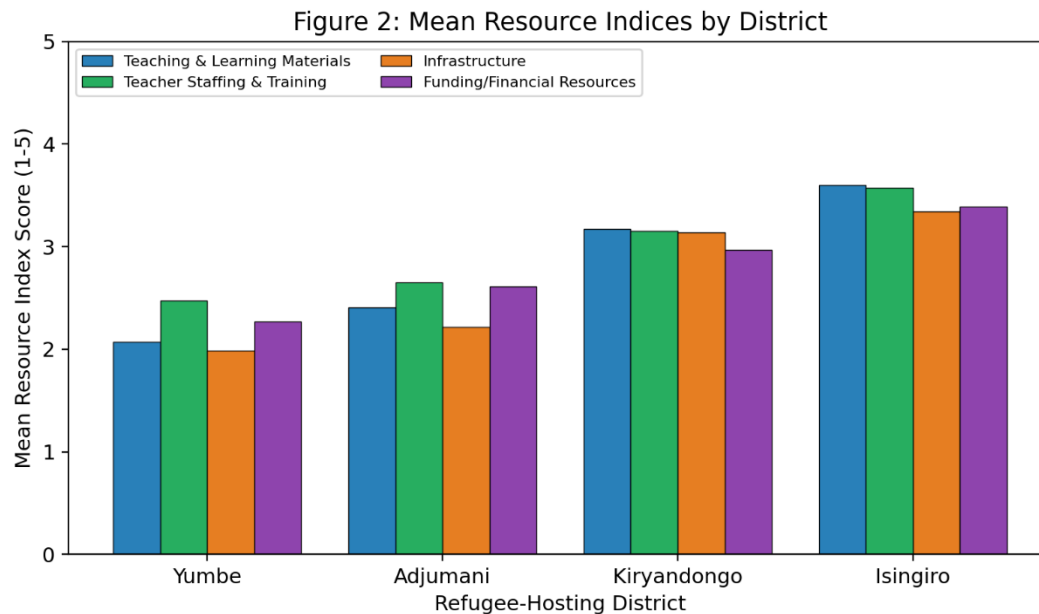


Figure 2: Mean Resource Indices (TLM, TST, Infrastructure, Funding) by District

Figure 2 illustrated that the pattern of disparity was consistent across all four resource domains, with Yumbe recording the lowest mean scores on every single indicator and Isingiro consistently recording the highest, a pattern that lends visual credence to the notion of a compounding, rather than isolated, resource disadvantage in the most refugee-dense districts.

Multivariate Regression and Sensitivity Analysis

Table 4 presents the results of the multivariate ordinary least squares regression models estimating the joint effect of resource disparities on CBC implementation, together with the bootstrap-based sensitivity analysis conducted to verify the robustness of the Model 2 coefficient estimates.

Table 4: Multivariate OLS Regression Results with Bootstrap Sensitivity Analysis (1,000 Resamples)

Predictor	Model 1 (β)	Model 1 SE	Model 2 (β)	Model 2 SE	Bootstrap 95% CI (Model 2)
(Constant)	1.162***	0.139	1.204***	0.239	[0.752, 1.626]
Teaching & Learning Materials	0.276***	0.040	0.235***	0.047	[0.149, 0.332]
Teacher Staffing & Training	0.272***	0.044	0.250***	0.047	[0.153, 0.348]
Infrastructure	0.203***	0.039	0.168***	0.044	[0.088, 0.258]
Funding (control)	—	—	0.066 n.s.	0.048	[-0.031, 0.163]
District: Kiryandongo (ref. Yumbe)	—	—	0.194†	0.107	[-0.021, 0.391]

District: Isingiro (ref. Yumbe)	—	—	0.039 n.s.	0.129	[-0.222, 0.287]
District: Adjumani (ref. Yumbe)	—	—	-0.042 n.s.	0.090	[-0.224, 0.136]
R ²	0.446		0.461		
Adjusted R ²	0.441		0.449		
F-statistic	84.73***		38.16***		
N	320		320		

Model 1, which regressed CBC implementation on the three core resource domains alone, was statistically significant overall ($F = 84.73$, $p < 0.001$) and explained 44.6 percent of the variance in CBC implementation ($R^2 = 0.446$, Adjusted $R^2 = 0.441$), with all three predictors, teaching and learning materials ($\beta = 0.276$, $p < 0.001$), teacher staffing and training ($\beta = 0.272$, $p < 0.001$), and infrastructure ($\beta = 0.203$, $p < 0.001$), emerging as statistically significant positive predictors. This indicated that, holding the other predictors constant, a one-unit increase on the five-point scale for each resource domain was associated with a corresponding increase in CBC implementation score of between roughly 0.20 and 0.28 points, with teaching and learning materials exerting the largest standardised influence, followed closely by teacher staffing and training, and then infrastructure. Variance inflation factor diagnostics (all VIF values below 1.4) confirmed the absence of problematic multicollinearity among the three predictors, lending confidence to the stability and independent interpretability of each coefficient. Model 2 extended this specification by introducing the funding domain and district dummy variables (with Yumbe as the reference category) as statistical controls, resulting in a marginal improvement in explanatory power ($R^2 = 0.461$, Adjusted $R^2 = 0.449$) and a statistically significant F-change, while all three core resource predictors remained statistically significant, albeit with modestly attenuated coefficients, indicating that part of their apparent effect in Model 1 operated through, or was correlated with, funding and unobserved district-specific factors.

Notably, once the three core resource domains and funding were controlled for, none of the district dummy variables achieved conventional statistical significance at the 5 percent level, although the Kiryandongo coefficient approached significance ($p = 0.071$), suggesting that the raw district-level disparities in CBC implementation observed in the bivariate analysis were substantially, though not entirely, explained by measurable differences in teaching and learning materials, teacher staffing and training, and infrastructure rather than by unmeasured, purely geographic factors. The bootstrap sensitivity analysis, based on 1,000 resamples with replacement, produced 95 percent confidence intervals for the three core predictors that excluded zero in every instance (teaching and learning materials: 0.149 to 0.332; teacher staffing and training: 0.153 to 0.348; infrastructure: 0.088 to 0.258), thereby corroborating the parametric OLS results and providing strong evidence that the estimated effects were robust to the distributional assumptions underlying standard regression inference and were unlikely to be artefacts of sampling variability or model misspecification. In contrast, the bootstrap confidence intervals for the funding domain and all three district dummies straddled zero, reinforcing the conclusion that, once the three core resource domains were accounted for, these additional factors did not exert an independent, statistically robust effect on CBC implementation. Overall, the multivariate and sensitivity analyses provided robust, convergent evidence directly answering the three research

questions: disparities in teaching and learning materials, teacher staffing and training, and infrastructure each exerted a statistically significant, independent, and robust positive effect on CBC implementation in refugee-hosting districts.

Figure 3: Relationship between Composite Resource Availability and CBC Implementation Score

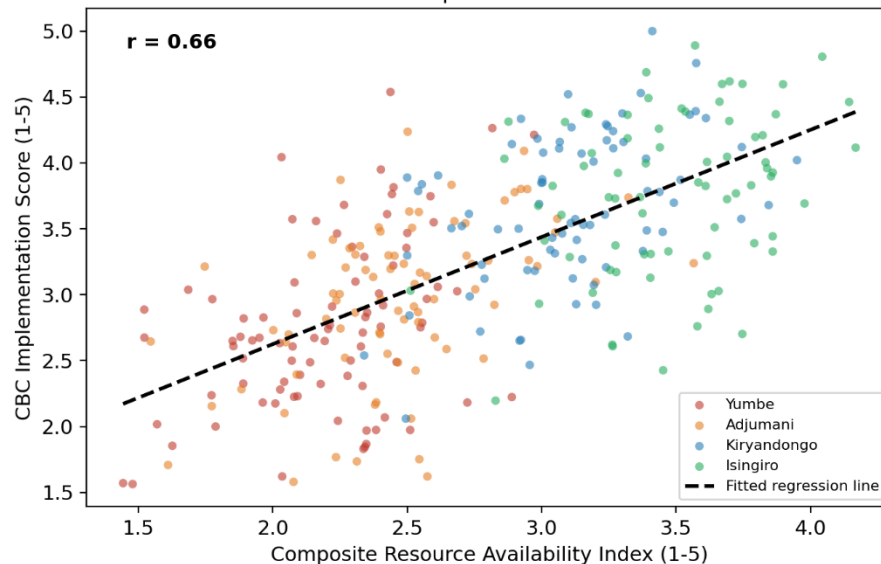


Figure 3: Relationship between Composite Resource Availability Index and CBC Implementation Score

Figure 3 illustrated a clear, positive linear relationship between the composite resource availability index and CBC implementation score ($r = 0.66$), with respondents from Yumbe and Adjumani clustering in the lower-left region of the plot and those from Kiryandongo and Isingiro clustering in the upper-right region, visually confirming the convergence of the univariate, bivariate, and multivariate findings around a single, coherent narrative of resource-driven implementation disparity.

CONCLUSION

This study set out to examine the effect of resource disparities on the implementation of the Competency-Based Curriculum in refugee-hosting districts of Uganda, and the convergent evidence generated through univariate, bivariate, and multivariate statistical analyses, reinforced by a robust bootstrap sensitivity analysis, led to the firm conclusion that disparities in teaching and learning materials, teacher staffing and training, and physical infrastructure exerted a statistically significant, substantial, and independent positive effect on the depth and fidelity of CBC implementation across the four districts studied. The districts of Yumbe and Adjumani, which recorded the lowest resource indices across all measured domains, correspondingly recorded the lowest CBC implementation scores, while Kiryandongo and Isingiro, with comparatively better resource endowments, recorded markedly higher implementation scores, a pattern that was not merely a function of geographic location but was substantially explained, at the multivariate level, by the measurable underlying resource disparities themselves. These findings underscore that the mere policy pronouncement of a national curriculum reform is insufficient to guarantee equitable implementation outcomes unless it is accompanied by a deliberate, needs-based, and differentiated resourcing strategy that recognises and actively addresses the unique and compounding resource constraints facing refugee-hosting districts, whose rapid and often unpredictable enrolment growth continues to outpace the resources allocated to support quality curriculum delivery.

RECOMMENDATION

The Ministry of Education and Sports, in collaboration with humanitarian education partners, should institute a needs-based resource allocation formula that explicitly accounts for refugee enrolment pressure when distributing teaching and learning materials, ensuring that districts such as Yumbe and Adjumani receive a proportionately larger share of instructional resources relative to their significantly higher and more variable enrolment burdens.

Teacher deployment and continuous professional development policies should be harmonised and intensified in refugee-hosting districts through incentivised postings, targeted CBC-specific in-service training, and mentorship programmes, in order to close the teacher staffing and training gap that was found to be one of the strongest and most robust predictors of CBC implementation.

Government and development partners should prioritise deliberate, ring-fenced infrastructural investment, including classroom construction, rehabilitation, and provision of specialised learning spaces, in the most infrastructurally disadvantaged districts, given that infrastructure recorded the lowest mean availability score and remained a statistically significant and robust predictor of CBC implementation even after controlling for other resource domains and district effects.

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