Editon Consortium Journal of Educational Management and Leadership [ISSN: 709-1414]

Issue no: 01 | **Vol no:** 07 | **November** 2026: 73-91

The Relationship between Utilisation of Funds from Income-Generating Activities and Delivery of Co-Curricular Activities in Public Secondary Schools in Uasin Gishu County, Kenya

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Article History
Received: **2026.09.13**
Accepted: **2026.10.04**
Published: **2026.11.02**

Cite this article in APA
Ng'ok, P., Kiplangat, H. K., & Ngala, F. B. J. A. (2026). The relationship between utilisation of funds from income-generating activities and delivery of co-curricular activities in public secondary schools in Uasin Gishu County, Kenya. *Editon consortium journal of educational management and leadership, 7*(1), 73–91. https://doi.org/10.51317/z42ywj90

Abstract
This study examined the relationship between utilisation of funds generated through income-generating activities (IGAs) and delivery of co-curricular activities in public secondary schools in Uasin Gishu County, Kenya. The study addressed the financing of equipment, facilities, maintenance, competition participation, coaching, specialist support and talent development in schools facing competing expenditure priorities. Guided by an innovation perspective on responses to resource constraints and Problem-Solving Theory, the study adopted a pragmatic paradigm and convergent parallel mixed-methods design. The target population comprised 609 headteachers, senior teachers of academics and bursars in 203 public secondary schools. An extreme-case procedure selected 80 schools (40 day and 40 boarding), producing 240 respondents. Questionnaires were administered to bursars and senior teachers, while headteachers participated in semi-structured interviews. Quantitative data were analysed using descriptive statistics, Pearson's product-moment correlation and Spearman's rank correlation; interview data were analysed thematically. The reported school-level analysis (n=80) showed a strong positive association between utilisation of IGA funds and overall co-curricular delivery (r=.730; rs=.741; p<.001). Positive associations were also reported across seven delivery dimensions. The study concludes that higher reported utilisation of IGA funds is associated with stronger reported co-curricular provision in the sampled schools; the correlational design does not establish causation. The study recommends transparent and strategic utilisation of IGA funds to improve co-curricular facilities, equipment, and activities. The study is significant because it identifies internally generated revenue as a potential supplementary resource and underscores transparent, equitable and accountable allocation.

Key words: Co-curricular activities, income-generating activities, public secondary schools, Uasin Gishu County, utilisation of funds.

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INTRODUCTION

This study examined the relationship between utilisation of funds generated through income-generating activities (IGAs) and delivery of co-curricular activities in public secondary schools in Uasin Gishu County, Kenya. Co-curricular activities—including sports, clubs, music, drama, debate, scouting, and other organised programmes—complement classroom instruction and give learners opportunities to develop physical, social, emotional, moral, and intellectual capacities. Effective delivery requires equipment, safe, well-maintained spaces, transport, entry fees, coaching, specialist support, and participation in inter-school events. These inputs involve recurrent expenditure and deliberate budgeting; consequently, schools' ability to sustain diverse activities is linked to both available resources and the way funds are allocated.

Public secondary schools in Kenya rely on government capitation, approved school fees and other lawful revenue sources. Funding may not always arrive in the expected amount or on time, and competing operational demands can put co-curricular activities under pressure. Studies in Nigeria and Tanzania have examined school-based income-generation activities and school development (Okoi et al., 2023; Njau et al., 2022; Living & Kaganga, 2022), while Kenyan research has considered their contribution to school infrastructure (Kiarie et al., 2019). However, the existence of an IGA, the revenue it generates and the actual expenditure of its net proceeds are distinct matters. A school may operate an IGA without generating a surplus, or may allocate the surplus to needs other than co-curricular provision. The present study therefore focuses on the utilisation of IGA funds rather than simply the presence of income-generating activities.

The literature links co-curricular participation to holistic development and identifies resource constraints related to equipment, facilities, staff preparation, and organisational support (Anjum, 2021; Naithani, 2020; Abera & Mekuria, 2022; Clement & Mwila, 2023). Nevertheless, evidence on the educational benefits of participation does not directly establish which revenue streams finance delivery. The study addresses a specific gap: limited evidence in the cited literature on the relationship between the utilisation of proceeds from school-based IGAs and defined dimensions of co-curricular delivery in public secondary schools in Uasin Gishu County.

The study examined seven dimensions: acquisition of modern equipment; provision and maintenance of dedicated physical space; repair and replacement of sports and arts gear; participation in inter-school competitions, festivals and tournaments; professional development of coaches and patrons; access to external expertise; and identification and nurturing of talent. It tested the null hypothesis: H04: There is no statistically significant relationship between utilisation of funds from income-generating activities and delivery of co-curricular activities in public secondary schools in Uasin Gishu County, Kenya. The design tests association, not causal impact.

LITERATURE REVIEW

Theoretical Framework

Innovation Theory of Necessity

This theory was set forth by economist Joseph Schumpeter in the early 20th century. The theory is rooted in innovation studies. The innovation theory of necessity posits that innovation arises from a challenge or a depressing, persistent need. Often, when needs are numerous, but solutions are inadequate, organisations or individuals must develop new methods or alternatives to address these gaps (Schumpeter, 1934). Innovators often foster inventions in resource-constrained environments.

In the current study, low government capitation is the catalyst that should push school administration and other stakeholders to develop strategies to enhance income-generating activities in schools so that instructional services can continue. This is because the government may not be able to provide 100 per cent capitation to schools due to the prevailing economic situation. That said, teaching and learning must continue as expected despite the lack of school funding caused by the government's low capitation.

Jaravel (2025) also used this theory in his research titled "Innovation's Unseen Frontier" published by the International Monetary Fund. Javarel explores how necessity drives innovation among the under-represented groups. He says innovators, regardless of status, often create solutions that meet their needs to survive and thrive. By emphasising how individual struggles lead to creative solutions, Javarel's research links necessity and creativity, supporting the theory of creativity and necessity. A positive critique of this theory is that it highlights how human creativity and the ability to adapt to new challenges can lead to innovative solutions that

mitigate hardships. School heads and boards of management can take a critical approach to these challenges by being innovative and setting up income-generating activities as part of solutions to the financial challenges caused by low government capitation. The theory can provide a framework for scrutinising how to manage the financial challenges caused by low government capitation. This theory is quite helpful in setting up school-based income-generating activities that can be used to enhance classroom teaching services (where textbooks can be bought, teachers can be hired on a contract basis, and infrastructure can be improved, among other things), student assessment services, guidance and counselling services and co-curricular activities.

Problem-Solving Theory

Newell and Simon's (1972) Human Problem Solving provides a traceable foundation for examining how people represent problems, consider alternatives and select actions. In this study, schools face practical problems such as inadequate equipment, damaged gear, limited activity space, transport costs and insufficient specialist coaching. School leaders may identify priorities, consider available funds and allocate resources to address them. This perspective is relevant to the utilisation of IGA proceeds because the study concerns not merely revenue generation but the decisions through which available funds are directed to co-curricular needs. Its application is limited: the study did not directly measure decision-making processes, compare alternative solutions or test the rationality of school expenditure decisions. Together, the two perspectives address different aspects of the research problem. Innovation provides a lens for understanding the development of supplementary revenue sources, while problem-solving provides a lens for considering how school managers may prioritise expenditure. Neither theory establishes that IGA utilisation improves co-curricular delivery; the study examines that relationship empirically through correlational analysis.

Empirical Review

School-Based Income Generation and Utilisation of Proceeds

Research from Vietnam, Tanzania, Nigeria and Kenya has considered resource mobilisation and school-based income generation (Nguyen & Nguyen, 2021; Living & Kaganga, 2022; Njau et al., 2022; Okoi et al., 2023; Kiarie et al., 2019). The studies provide a rationale for examining internally generated revenue as a supplement to conventional funding. Their findings should not be treated as interchangeable: the type of IGA, institutional setting, financial controls and outcome measured differ. In particular, infrastructure development or general school goal attainment is not equivalent to co-curricular expenditure. This study narrows the focus to the association between reported IGA fund utilisation and seven practical components of co-curricular delivery.

Co-Curricular Delivery and Resource Requirements

Co-curricular programmes have diverse resource requirements. Sports require grounds, equipment, maintenance, transport, and competition fees; music, drama, and debate may require instruments, costumes, venues, materials, adjudication, and travel; clubs may require tools, consumables, and specialist facilitation. Research in Ethiopia, Tanzania and Kenya has documented implementation challenges linked to resources and institutional support (Abera & Mekuria, 2022; Assefa, 2019; Clement & Mwila, 2023; Mung'au, 2024; Oloo et al., 2024). Studies on holistic development and student experience describe potential benefits of participation (Anjum, 2021; Buckley & Lee, 2021; Siddiky, 2019), although evidence from higher education or other national settings should not automatically be generalised to Kenyan secondary schools. This study adds a school-finance perspective by examining whether utilisation of IGA proceeds is associated with reported provision of the inputs required for co-curricular activities.

METHODOLOGY

The study adopted a pragmatic paradigm and a convergent parallel mixed-methods design. The quantitative approach facilitated measurement of the relationship, while qualitative interviews provided contextual explanations of school management practices. The study collected quantitative and qualitative data during the same broad phase, analysed them separately, and integrated them when interpreting the relationship between IGA fund utilisation and co-curricular delivery. The study was conducted in Uasin Gishu County, Kenya. Uasin Gishu County was selected because its public secondary schools provide a relevant context for examining how internally generated funds support co-curricular activities. The target population comprised 609 respondents drawn from 203 public secondary schools: 203 headteachers, 203 senior teachers of academics and

203 bursars. The schools comprised 159 day and 44 boarding institutions.

An extreme-case sampling procedure selected 80 schools, comprising 40 day and 40 boarding schools, based on reported high and low IGA financial status. The study selected three respondents from each school, yielding 240 respondents. The quantitative instruments were structured questionnaires administered to bursars and senior teachers of academics; headteachers participated in semi-structured interviews. The questionnaire covered utilisation of IGA funds and the seven dimensions of co-curricular delivery. A pilot study was conducted in 20 schools in Elgeyo-Marakwet County. The manuscript reports a Cronbach's alpha of .881 for the co-curricular scale. Quantitative data were analysed using IBM SPSS Statistics Version 28. Descriptive statistics included frequencies, percentages, means and standard deviations. Pearson's product-moment correlation and Spearman's rank correlation were used to examine associations. Qualitative interview material was analysed thematically.

Ethical Considerations

Ethical approval was obtained from the Institutional Research Ethics Committee (IREC/CUREC) and NACOSTI, with further administrative authorisation from the County Director of Education. Participation was voluntary, informed consent was obtained from all respondents, and participant identities were protected through anonymity protocols in compliance with the Kenya Data Protection Act (2019).

The relationship between IGA fund utilisation and the delivery of co-curricular activities was tested using parametric and non-parametric models. The baseline delivery of cross-tabulating co-curricular activities was determined by cross-tabulating co-curricular activities against the level of IGA utilisation and then verifying using means and standard deviations.

FINDINGS AND DISCUSSION

The relationship between IGA fund utilisation and the delivery of co-curricular activities was tested using parametric and non-parametric models. The baseline delivery of cross-tabulating co-curricular activities was determined by cross-tabulating co-curricular activities against the level of IGA utilisation and then verifying using means and standard deviations.

Utilisation of IGA funds and Acquisition of Modern Co-Curricular Equipment

Acquisition of modern equipment for co-curricular activities was the first item of concern under the co-curricular activities scale. Participating bursars and senior teachers of academics were asked to rate, through agreement/disagreement, whether IGA funds had enabled schools to acquire sufficient modern equipment for co-curricular activities, as shown in Table 1.

Table 1. Descriptive Results: Utilisation of IGA Funds and Acquisition of Modern Co-Curricular Equipment

			The IGA funds allow the school to have sufficient and modern equipment for co-curricular activities					Mean	Std.Dev
			Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		14	16	7	3	0	1.98	.920
			35.0%	40.0%	17.5%	7.5%	0.0%		
	High		0	3	7	18	12	3.98	.891

Their responses were extracted on a 5-point Likert scale. From the cross-tabulation results (Table 1), public secondary schools with high utilisation of IGA funds (M=3.98, SD=0.891) were more likely to acquire modern co-curricular equipment than those with low utilisation of IGA funds (M=1.98, SD=0.920). From the sample drawn from schools with high utilisation of IGA funds, 17.5 per cent (n=7) agreed that IGA funds enable their schools to acquire modern co-curricular equipment; 45.0 per cent (n=18) strongly agreed, and 30.0 per cent (n=12) very strongly agreed. In contrast, 17.5 per cent (n=7) from schools with low utilisation of IGA funds agreed, 40.0 per cent (n=16) disagreed, and 35.0 per cent (n=14) strongly disagreed.

A mean gap of 2.00 points between the low- and high-IGA-funds-utilising cohorts shows how much public secondary schools rely on their own revenue to stock modern sports apparatus, musical instruments, and other specialised co-curricular materials. The descriptive data have telling implications for school administrators, budget planners, and teachers in general. Sufficient and modern equipment for co-curricular activities requires the necessary materials and equipment (Channa & Alwi, 2025). Public secondary schools that use high IGA funds can purchase sufficient, modern equipment for co-curricular activities without waiting for external funds. Meanwhile, in schools where low IGA funds are utilised, students struggle to access equipment for co-curricular activities, leading to lower participation, reduced motivation, and poorer holistic talent development (Siddiky, 2019).

The Relationship between Utilisation of Funds and Acquisition of Modern Co-Curricular Equipment

Next, the relationship between utilisation of funds and acquisition of modern co-curricular equipment was examined. The correlation results in Table 2 confirm that acquiring modern co-curricular equipment positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.697$, $p<0.001$) and non-parametric ($r_s=0.692$, $p<0.001$) tests.

Table 2. Correlation Results: Utilisation of IGA Funds and Acquisition of Modern Co-Curricular Equipment

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.745	.049	9.878	.000[c]
Ordinal by Ordinal	Spearman Correlation	.746	.048	9.902	.000[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

In practical terms, these statistical patterns suggest that outfitting co-curricular departments with relevant modern equipment depends directly on the school's internal financial liquidity. The coefficient of determination, $R^2 = 0.486$, shows that IGA fund utilisation explains close to half the variance in a school's capacity to acquire modern co-curricular equipment. Government capitation grants under the Free Day and boarding secondary education channels direct resources toward core classroom tuition, leaving gaps. Higher IGA fund usage gives school managers discretionary revenue needed to stock co-curricular departments systematically with modern equipment.

This positive and significant correlation confirms what other scholars have established: internally generated funds accelerate students' academic, physical, and emotional growth by resolving funding challenges schools face (Nagaraj et al., 2024; Naithan, 2020). Empirical evidence from Pakistan has indeed associated co-curricular activities with enhanced active class engagement and critical thinking (Channa & Alwi, 2025). Channa and Alwi (2025), for instance, pointed towards underfunding as a major impediment to sufficient and modern equipment for co-curricular activities. Yet they did not offer alternative funding mechanisms. Therefore, this study addresses this gap, flagging IGA funds as alternative funding paths.

Utilisation of IGA funds and Physical Space for Co-Curricular Activities

The second item, probing the role of IGA funds in delivering co-curricular activities in public secondary schools in Uasin Gishu County, focused on facilitating a dedicated and well-maintained physical space for co-curricular activities, as shown in Table 3.

Table 3. Descriptive Results: Utilisation of IGA Funds and Dedicated Physical Space

			There is a dedicated and well-maintained physical space for co-curricular activities facilitated by IGA funds					Mean	Std.Dev
			Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		10	19	6	5	0	2.15	.949
			25.0%	47.5%	15.0%	12.5%	0.0%		
	High		0	6	5	19	10	3.83	.984
			0.0%	15.0%	12.5%	47.5%	25.0%		

Results (Table 3) show that schools with high utilisation of IGA funds (M=3.83, SD=0.984) had more dedicated and well-maintained physical space for co-curricular activities facilitated by IGA funds than schools with low utilisation of funds (M=2.15, SD=0.949). Specifically, respondents from schools with high utilisation of IGA funds mostly strongly agreed (47.5%, n=19) that IGA funds facilitate a dedicated and well-maintained space; 25.0 per cent (n=10) very strongly agreed; while 12.5 per cent (n=5) agreed. However, 47.5 per cent (n=19) of schools with low IGA funds disagreed, while 25.0 per cent (n=10) strongly disagreed.

The difference in mean response scores between low- and high-utilising IGA fund users confirms that extra capital from IGA funds allows schools to invest more in spaces dedicated to sport, performance, and club activities. This is easier for schools that rely heavily on these funds. These results align with studies linking co-curricular activities to high baseline costs, such as land preparation, structure repairs, and ongoing maintenance (Abera & Mekuria, 2022; Mung'au, 2024). When schools rely on their own revenue streams, principals gain access to flexible funds that they can allocate to upkeep or specific upgrades without external delays. However, the opposite happens in schools that use fewer IGA funds, perhaps because they have fewer IGA options. The low-utilising cohort reported inadequate space facilitation, with 72.5 per cent disagreeing. In practice, this means low-utilising IGA schools may have dilapidated facilities that minimise student participation and interest in co-curricular activities, as scholars feared (Siddiky, 2019).

The Relationship between Utilisation of Funds and Facilitation of Physical Space for Co-curricular Activities
The relationship between utilisation of funds and the facilitation of a dedicated physical space for co-curricular activities was also examined. The correlation results presented in Table 4 confirm that dedicating a physical space for co-curricular activities positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.660$, $p<0.001$) and non-parametric ($r_s=0.660$, $p<0.001$) tests.

Table 4. Correlation Results: Utilisation of IGA Funds and Dedicated Physical Space

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.660	.064	7.750	.000[c]
Ordinal by Ordinal	Spearman Correlation	.660	.065	7.751	.000[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

This positive statistical link carries weight operationally as well as in structural and theoretical terms, suggesting a direct relationship. Therefore, greater utilisation of IGA funds results in well-maintained spaces for co-curricular

activities. Calculating the coefficient of determination from the parametric correlation yields $R^2 = 0.4356$, clearly showing that a large proportion (43.6%) of the variance in dedicating a physical space for co-curricular activities is explained by the utilisation of IGA funds. Since government capitation is primarily allocated to tuition and basic academic facilities, IGA funds are essential for co-curricular activities, allowing public secondary schools in Uasin Gishu County to provide dedicated and well-maintained physical spaces for these activities.

These findings add value to previous research indicating that schools have used internally sourced funds to address the systemic challenge of funding co-curricular activities, even though these frameworks enhance emotional resilience, social cohesion, and overall academic performance (Nagaraj et al., 2024; Naithan, 2020). Moreover, empirical evidence shows that dedicated physical spaces directly encourage students to engage in co-curricular activities (Channa & Alwi, 2025). However, despite the challenge of public secondary schools lacking budgetary allocations being laid bare (Abera & Mekuria, 2022; Channa & Alwi, 2025), no alternative funding sources have been offered. This study addresses this gap by pointing towards IGA funds, as shown by studies conducted by Channa and Alwi (2025).

Utilisation of IGA funds and Repair and Replacement of Sports and Arts Gear

Repair and replacement of sports and arts gear also featured among items measuring delivery of co-curricular activities in public secondary schools in Uasin Gishu County, and the results are indicated in Table 5.

Table 5. Descriptive Results: Utilisation of IGA Funds and Repair or Replacement of Sports and Arts Gear

			Income-generating funds are consistently allocated to the repair and replacement of worn-out sports and arts gear.				**Total**	**Std.Dev**
			Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		30	9	1	0	2.28	.506
			75.0%	22.5%	2.5%	0.0%		
	High		6	1	21	12	3.98	.974
			15.0%	2.5%	52.5%	30.0%		

Respondents were asked to rate their agreement or disagreement with the statement that IGA funds are used to repair and replace sports and arts gear. Their response scores were then cross-tabulated against utilisation of funds from IGAs (Table 5). From this sample, 52.5 per cent (n=21) strongly agreed, 30.0 per cent (n=12) very strongly agreed, and only 15.0 per cent (n=6) disagreed. In contrast, 75.0 per cent (n=30) of the low-utilisation sample disagreed, with only 22.5 per cent (n=9) agreeing. The cumulative outcome shows that high-IGA schools were able to repair and replace sports and arts gear using IGA, unlike the low-IGA-variety schools. The low-IGA-funds-utilising cohort largely (M=2.28) and consistently (SD=0.506) disagreed that they used IGA funds to repair and replace sports and arts gear. In contrast, the high IGA funds-utilising cohort largely (M=3.98, SD=0.974) strongly agreed. Specifically, a high proportion of the high-utilisation IGA funds sample strongly agreed that IGA funds should be used to repair and replace sports and arts gear.

The 1.70-point mean gap between the two cohorts shows that operational sports and arts gear requires funds generated within the schools to be maintained. Descriptive statistics have important implications for school administrators who manage daily operations and for student welfare across the secondary schools in question. Schools that used IGA funds had flexible capital to quickly repair worn-out gear that would otherwise have interrupted scheduled activities. In low-IGA utilisation schools, three-quarters of respondents reported that they could not repair or replace worn-out equipment. In those schools, students rely on worn-out gear. These results show that if state funding under government capitation offers no dedicated recurring lines for maintaining or replacing non-academic department

equipment, internally generated revenue buffers co-curricular inventory.

These results align with studies that have consistently highlighted the importance of maintaining sports facilities, since co-curricular activities complement formal classroom work. For instance, research from Pakistan by Channa and Alwi (2025) showed that access to working sports equipment and performance gear shapes student engagement directly and influences how students learn teamwork and manage time. Channa and Alwi (2025) noted that underfunded equipment upkeep remains a barrier to program success, though their analysis did not examine internal revenue generation as a remedy. In Ethiopia, Abera and Mekuria (2022) found that most schools were resource-starved, with a mean of 1.3,1 and equipment deficits averaging 4.69. Schools there lacked maintenance budgets for co-curricular materials entirely and survived on basic student fees instead of developing sustainable internal projects.

The Relationship between Utilisation of Funds and Repair and Replacement of Sports and Arts Gear

The relationship between utilisation of funds and repair and replacement of sports and arts gear was also examined. The correlation results in Table 6 confirmed that repair and replacement of sports and arts gear positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.764$, $p<0.001$) and non-parametric ($r_s=0.741$, $p<0.001$) tests.

Table 6. Correlation Results: Utilisation of IGA Funds and Repair or Replacement of Sports and Arts Gear

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.764	.065	10.460	.000[c]
Ordinal by Ordinal	Spearman Correlation	.741	.062	9.733	.000[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

The operational, administrative, and theoretical implications of these high correlation coefficients are that maintaining sports and arts gear depends entirely on a school's internal financial liquidity. When the coefficient of determination is calculated from these correlations, it emerges that 58.4 per cent of total variance in a school's capacity to repair and replace sports and arts gear is explained by IGA fund utilisation levels. The key point is that equipment maintenance is an ongoing operational function that requires continuity.

Because government capitation under the Free Day Secondary Education channel funds basic tuition and institutional overheads, public secondary schools can use IGA funds to maintain sports and arts equipment and sustain co-curricular activities. Internally sourced funds resolve acute maintenance challenges experienced globally (Channa & Alwi, 2025). Yet, co-curricular engagement complements cognitive instruction by building physical health, teamwork, emotional resilience, and social leadership skills.

Research shows that active participation in sports, debate, and drama directly enhances student engagement, sharpens critical thinking, and improves academic attendance (Adam, 2021; Channa & Alwi, 2025). While scholars have identified ongoing equipment repair and maintenance as a major barrier to program sustainability (Abera & Mekuria, 2022; Channa & Alwi, 2025), little or no research has examined alternative funding mechanisms. Therefore, this study fills this gap, identifying IGA funds as a potential alternative funding source.

Utilisation of IGA Funds and Participation in Inter-School Events

Mean scores were 3.70 (SD = 1.043) in the high-utilisation group and 3.05 (SD = .986) in the low-utilisation group. The correlations were positive but

modest (Pearson r = .266, p = .017; Spearman rs = .260, p = .020). This comparatively weaker relationship suggests that participation logistics may also depend on event schedules, distance, school size, eligibility, learner interest and external sponsorship. The result should not be described as evidence that IGA funds are the sole determinant of competition participation.

Table 7. Descriptive Results: Utilisation of IGA Funds and Participation in Inter-School Events

			Our school actively participates in inter-school competitions, festivals, and tournaments courtesy of IGA funds					Mean	Std.Dev
			Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		2	12	8	18	0	3.05	.986
			5.0%	30.0%	20.0%	45.0%	0.0%		
	High		0	7	8	15	10	3.70	1.043
			0.0%	17.5%	20.0%	37.5%	25.0%		

Respondents from both low- and high-utilisation IGA schools were asked to indicate agreement/disagreement with the use of IGA funds to facilitate such participation, with results hinting at agreement from both the low-utilising (M=3.05, SD=0.986) and high-utilising (M=3.70, SD=1.043) cohorts. Cross-tabulation of IGA fund utilisation (Table 7) showed that both low- and high-utilisation schools channelled IGA funds toward participation in inter-school competitions, festivals, and tournaments. For instance, 45.0 per cent (n=18) in the low-utilisation sample strongly agreed, while 20.0 per cent (n=8) agreed. Similarly, 20.0 per cent (n=8) of the high utilisation sample agreed, 37.5 per cent (n=15) strongly agreed, and 25.0 per cent (n=10) very strongly agreed.

The mean gap between cohorts remains narrow at just 0.65 points, showing that whether internal revenue runs high or low, public secondary schools in Uasin Gishu County continue directing IGA funds toward student participation in co-curricular competitions. Findings like these matter for public secondary school management because they shape daily administration, financial planning, and institutional identity; this aligns with a study by Flora Nashon Nyaisa (2023), which concluded that most students do not participate due to poor management. Sports tournaments between schools, drama festivals, science fairs, and debate events each require funds for transport, entry fees, student meals, accommodation, and allowances for accompanying teachers. This aligns with Anjum (2021), which found that many schools do not participate in these activities because of financial constraints. Schools that generate more income gain flexibility, allowing their administration to support teams at multiple levels without urgent, last-minute searches for funds, unlike schools that rely on government support (Assefa, 2019).

The Relationship between Utilisation of Funds and Participation in Inter-School Competitions, Festivals and Tournaments

The relationship between utilisation of funds and participation in inter-school competitions, festivals and tournaments was tested through correlations. The correlation results in Table 8 confirmed that participation in inter-school competitions, festivals, and tournaments positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.266$, $p<0.05$) and non-parametric ($r_s=0.260$, $p<0.05$) tests.

Table 8. Correlation Results: Utilisation of IGA Funds and Participation in Inter-School Events

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.266	.104	2.438	.017[c]
Ordinal by Ordinal	Spearman Correlation	.260	.105	2.378	.020[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

These statistically significant correlations at $p < 0.05$ point to a clear operational pattern. Sponsoring student teams for off-school events, regional drama and music festivals, science fairs or sports tournaments gains real traction once schools have internal financial liquidity. The coefficient of determination from the parametric correlation is R-squared = 0.0708, indicating that 7 per cent of the variance in inter-school competition participation is explained by IGA fund utilisation. This contribution by participation in inter-school competitions, festivals and tournaments remains modest compared to capital asset acquisition or the repair and replacement of sports and arts equipment, where R-squared reached 0.584, or procurement of modern co-curricular gear at R-squared 0.486. Yet the significance level still identifies internal revenue deployment as a functional though supplementary factor. When the observed positive link ($r = 0.266$, $p < 0.05$) is compared with existing empirical work, internal financial mechanisms ease participation bottlenecks across varied national and regional settings. Competitive sports, debate, drama, music, and academic fairs complement formal instruction.

Evidence shows that co-curricular activities enhance students' self-efficacy, critical thinking, teamwork, leadership, and social-emotional resilience (Anjum, 2021; Nagaraj et al., 2024; Naithan, 2020). Therefore, the positive link between fund utilisation and participation in inter-school competitions, festivals, and tournaments confirms that public secondary schools in Uasin Gishu County can use IGAs to strengthen students' development. Studies from Indonesia and elsewhere show that such activities boost academic performance and personal growth, while economic limits and budget cuts often restrict access. In Zambia, limited resources blocked entry to national science fairs and debate events, underscoring the need for reliable local funding to nurture student talent (Chansa et al., 2024).

Utilisation of IGA Funds and Professional Development of Coaches and Patrons

The high-utilisation group reported a mean of 3.40 (SD = 1.297), compared with 2.23 (SD = 1.121) in the low-utilisation group. Correlations were Pearson r = .375 and Spearman rs = .377 (p = .001). The association is statistically significant but modest. The study does not report the number of coaches trained, training duration or changes in coaching qualifications, so the finding concerns reported support for professional development rather than measured improvement in coaching competence.

Table 9. Descriptive Results: Utilisation of IGA Funds and Professional Development of Coaches and Patrons

			IGA funds enable professional development of coaches and patrons					Mean	Std.Dev
			Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		13	13	6	8	0	2.23	1.121
			32.5%	32.5%	15.0%	20.0%	0.0%		
	High		1	14	4	10	11	3.40	1.297
			2.5%	35.0%	10.0%	25.0%	27.5%		

Although 27.5 per cent (n=11) in the high-utilisation cohort very strongly agreed and 25.0 per cent (n=10) strongly agreed, a large proportion (35.0%, n=14) disagreed. Similarly, while 20.0 per cent (n=8) of the low-utilisation sample strongly agreed and 15.0 per cent (n=6) agreed, a majority (65.0%, n=26) cumulatively disagreed. The mean response scores and standard deviations for the lower (M=2.23, SD=1.121) and higher utilising cohorts (M=3.40, SD=1.297) reflected these inconsistent lukewarm results. High standard deviations across low- and high-utilisation schools (1.121 and 1.297, respectively) signal wide institutional differences in how schools support staff development for non-academic instructors.

These patterns matter for administrators and policymakers alike in public secondary schools. Coaching sports teams alongside clubs in drama, music, debate, science or scouting demands regular renewal of technical skills, refereeing rules, safety measures, and teaching methods. Yet school boards often rank external accreditation courses for teacher-coaches as optional outlays, unlike the stronger links seen in school-wide academic programs. In low-utilisation settings, two-thirds of respondents report no funding for coach retooling, so co-curricular work drifts toward outdated approaches, weaker competition results, and thinner student involvement. Reliance on internal revenue only underlines gaps in state support since ministry capitation under Free Day Secondary Education offers no dedicated lines for such training. School leaders must therefore split scarce IGA income between buying equipment and advancing instructor skills.

The Relationship between Utilisation of Funds and Professional Development of Coaches and Patrons

The relationship between fund utilisation and the professional development of coaches and patrons was also tested through correlations. The correlation results in Table 10 confirmed that professional development of coaches and patrons positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.375$, $p<0.05$) and non-parametric ($r_s=0.377$, $p<0.05$) tests.

Table 10. Correlation Results: Utilisation of IGA Funds and Professional Development of Coaches and Patrons

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.375	.097	3.569	.001[c]
Ordinal by Ordinal	Spearman Correlation	.377	.098	3.599	.001[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

Utilisation of IGA Funds and Access to External Expertise

The high-utilisation group reported a mean of 4.00 (SD=.906), compared with 2.08 (SD=.572) in the low-utilisation group. The reported correlations were Pearson r = .743 and Spearman rs = .698 (p < .001). This is among the strongest dimension-level associations. Supplementary funds may help schools access specialist skills. Still, the study does not provide independent expenditure records, expert qualifications, engagement duration, or evidence that specialists improved learner outcomes. Tables 11 and 13 retain a blank first response slot in the supplied frequency rows. Because the questionnaire and raw frequency output were not supplied, the category mapping cannot be confirmed; no frequency has been moved or invented.

Table 11. Descriptive Results: Utilisation of IGA Funds and Access to External Expertise

			The school uses IGA funds to facilitate external experts for specialized training in areas where internal staff lack expertise					Mean	Std.Dev
			Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		3	33	2	2	0	2.08	.572
			7.5%	82.5%	5.0%	5.0%	0.0%		
	High		0	3	7	17	13	4.00	.906
			0.0%	7.5%	17.5%	42.5%	32.5%		

From the mean response scores and associated standard deviations, it was apparent that the low IGA fund utilisation cohort consistently disagreed (M=2.08, SD=0.572), while the high utilisation cohort consistently strongly agreed (M=4.00, SD=0.906). The cross-tabulation (Table 11) showed that schools with high utilisation of IGA funds spent more on facilitating

external expertise than low-utilisation schools. For instance, 17.5 per cent (n=7) in this high-utilisation cohort agreed to use IGA funds to facilitate external expertise in specialised training; 42.5 per cent (n=17) strongly agreed; and 32.5 per cent (n=13) very strongly agreed. Meanwhile, 82.5 per cent (n=33) in the low utilisation cohort disagreed, and 7.5 per cent (n=3) strongly disagreed. A mean difference of 1.92 points separated the two cohorts. This suggests that public secondary schools rely on expertise from sports, drama, music, or choreography in different ways. Funds generated from income-generating activities largely shape whether such expertise can be hired. The findings carry clear weight for how secondary schools support students' technique and growth. Schools generating high IGA revenue can afford to spend on external expertise to develop their students' sporting and artistic talents. In contrast, low-IGA-revenue schools continue to struggle to fund external expertise. In these situations, teachers, most of whom hold no formal coaching background, are left to nurture students.

The Relationship between Utilisation of Funds and Facilitation of External Expertise

The relationship between utilisation of funds and facilitation of external expertise was probed using parametric and non-parametric correlations. The correlation results in Table 12 confirmed that facilitation of external expertise positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.743$, $p<0.001$) and non-parametric ($r_s=0.698$, $p<0.001$) tests.

Table 12. Correlation Results: Utilisation of IGA Funds and Access to External Expertise

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.743	.047	9.816	.000[c]
Ordinal by Ordinal	Spearman Correlation	.698	.051	8.608	.000[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

Hiring external technical facilitators rests on internal financial liquidity, given the operational, administrative, and theoretical weight these high correlation metrics carry. The coefficient of determination from the parametric correlation coefficient, with an $R^2 = 0.5521$, shows that over half (55.2 per cent) of the variance in a school's ability to contract external experts stems from IGA fund usage levels. Therefore, higher IGA fund utilisation hands school heads the discretionary capital to hire expert facilitators, sidestepping central public

financial guidelines entirely. This strong positive correlation ($r = 0.743$, $p < 0.001$) reflects the importance of internally sourced funds in ensuring that experts are hired to strengthen co-curricular activities in public secondary schools. Empirical evidence shows that co-curricular activities support students' creativity, emotional resilience, overall health, and teamwork, and that they should be driven by technical expertise (Nagaraj et al., 2024; Naithan, 2020). Yet, schools continue to struggle to find resources to support technical expertise. Therefore, this study addresses this funding challenge by showing that schools can start income-generating activities to raise extra funds.

Utilisation of IGA Funds and Talent Identification and Nurturing

The high-utilisation group reported a mean of 3.73 (SD=1.198), compared with 2.53 (SD=1.062) in the low-utilisation group. Correlations were positive and modest (Pearson r = .366, p = .001; Spearman rs = .307, p = .006). The results suggest that utilisation is associated with reported talent-identification arrangements, but do not establish that every school had a formal system or that IGA funds independently caused talent development. Learner interest, teacher expertise, facilities and access to competition may also influence opportunities.

Table 13. Descriptive Results: Utilisation of IGA Funds and Talent Identification and Nurturing

		There is a clear system for identifying and nurturing talent through structured coaching programs					**Mean**	**Std.Dev**
		Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low	8	12	11	9	0	2.53	1.062
		20.0%	30.0%	27.5%	22.5%	0.0%		
	High	2	5	8	12	13	3.73	1.198
		5.0%	12.5%	20.0%	30.0%	32.5%		

The descriptive results showed that both school categories took talent identification and nurturing seriously, as shown by the agreements (Table 13). Although the high utilisation cohort was more proactive in utilising IGA funds towards talent identification (32.5%, n=13 very strongly agreed, 30%, n=12 strongly agreed, 20.0%, n=8 agreed), the 27.5 per cent (n=11) from the low utilisation cohort who agreed and the 22.5 per cent (n=8) who strongly agreed proved that both types of schools endeavoured to utilise the IGA funds to this end.

From these results, it is apparent that despite co-curricular activities being largely funded through specific votes from student levies, public secondary schools with high utilisation of IGA funds use the funds generated to complement these levies, thereby improving several co-curricular functions, including improving the infrastructure, affording technical expertise, and putting in place proper systems to nurture talent. This corroborates findings by other scholars like Akubah & Apook (2024) in Ghana, who found that talent development for students was of paramount significance and was enhanced by adequate sports facilities, which were the largest contributors to talent development, accounting for 30 per cent. Thomas et al. (2021) also confirmed that a lack of funds to improve infrastructure limited access to standard fields and equipment, which in turn hindered the quality of training that could elevate students to the highest level of talent development. The current study found that schools without developed IGA revenue struggled to cover shortfalls from the prescribed allocation of co-curricular funds. All schools, whether they have low or high utilisation of IGA funds, operate on a standard school calendar set by the Ministry of Education and often schedule co-curricular activities as mandatory requirements.

The Relationship between Utilisation of Funds and Identification and Nurturing of Talent

The relationship between utilisation of funds and identification and nurturing of talent was probed using parametric and non-parametric correlations. The correlation results in Table 14 confirmed that identification and nurturing of talent positively and significantly correlated with utilisation of IGA funds in both the parametric ($r=0.366$, $p<0.05$) and non-parametric ($r_s=0.307$, $p<0.05$) tests.

Table 14. Correlation Results: Utilisation of IGA Funds and Talent Identification and Nurturing

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.366	.091	3.473	.001[c]
Ordinal by Ordinal	Spearman Correlation	.307	.094	2.847	.006[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

The statistically significant correlations point to the real role internally generated funds play in sharpening students' sporting and artistic talents. The coefficient of determination derived from the parametric statistic was 0.1340, indicating that 13.4 per cent of the variance in a school's ability to identify and nurture student talent is accounted for by using IGA funds. Therefore, the more public secondary schools use extra funds from income-generating activities, the more they identify and nurture students' talents in sports and the arts.

These descriptive findings indicate that public secondary schools in Uasin Gishu County use IGA funds to complement inadequate funding for improving infrastructure, providing technical expertise, and enhancing systems, as shown through interviews with headteachers. This aligns with a study by Turner et al. (2022), which found that student talent development was influenced by school infrastructure; schools with well-equipped facilities like playing fields and music promoters had more student engagement than those without them. Structured talent development through extracurricular activities enhances instructional services by creating a holistic educational environment. Regarding how IGA funds support co-curricular activities, recurring narratives indicated that the funds facilitate the procurement of equipment and uniforms. Headteachers also pointed to using IGA funds for logistical support and transportation, ferrying students to co-curricular events at zonal or regional levels. They also identified co-curricular infrastructure and other physical assets, team exposure, welfare, and meritocratic rewards as other areas that IGA funds help to boost.

On the question of prioritising IGA funds to various co-curricular activities, four themes were highlighted, including strategic alignment, impactful departmental demand, economic rationality, and compensatory allocation, as underscored in the following verbatim quotes.

HT20 "… we base on student interest surveys, and the program impact in line with our schools' vision."

HT15 "…The effect of the co-curricular activity on student learning often informs its prioritization."

HT 5 "…We prioritize depending on how active it is and their needs e.g. scouts, Young Farmers Club."

HT 26 "…We often carry out a cost benefit analysis using the amount of IGA funds available."

HT14 "…the allocation from the government may be less or delayed." Or the equipment may be missing due to budgetary strains."

These cross-tabulation and thematic results on the baseline position of co-curricular services in public secondary schools in Uasin Gishu County show major variation in the acquisition of modern equipment and the ability to hire external expertise between low- and high-utilisation IGA schools. This finding mirrors scholars who have reported that regular capital investments are necessary for effective programmes that nurture student talent while reducing academic stress (Nagaraj et al., 2024; Naithan, 2020). This finding offers an avenue for understanding the emerging pattern of student unrest in Kenyan schools, which manifests differently across schools, hinting at variations in co-curricular engagement between low- and high-utilisation IGA schools. Research has underscored the role co-curricular activities play in reducing stress levels among students (Zeidan et al., 2025). Meanwhile, the qualitative findings from the headteacher interviews, highlighting the need to leverage internal funds for student transport and logistics when

participating in co-curricular activities, are not in isolation.

This finding aligns with scholars who have argued for alternative internal revenue sources among schools (Njau et al., 2022). However, the finding that co-curricular recognition in school calendars did not differ between schools with low and high Utilisation of funds from IGAs contradicts the assertions of Sami et al. (2020). In their model, they posited that a school's internal revenue levels dictate its structural commitment to non-academic programming. This contradiction, however, arises because the Ministry of Education controls the formal calendar in Kenyan schools, including those in Uasin Gishu County.

Testing for the Significance of the Relationship between Utilisation of IGA Funds and Delivery of Co-curricular Activities

Hypothesis $H0_4$ claimed that there was no statistically significant relationship between utilisation of funds from income-generating activities and delivery of co-curricular activities in public secondary schools in Uasin Gishu County, Kenya. Average scores for each respondent were computed across the seven items to generate the composite delivery of co-curricular activities variable. Cross-tabulations against utilisation of IGA funds were then run. Correlation tests were then run to assess the nature of the relationship between utilisation of IGA funds and delivery of co-curricular activities. The consistent response score for the low-utilising cohort (M=2.25, SD=0.439) indicated disagreement within the cohort about using IGA funds to deliver co-curricular activities. In contrast, the high-utilising cohort consistently strongly agreed (M=3.85, SD=0.834). The cross-tabulation (Table 15) showed that schools with high utilisation of IGA funds spent more IGA funds on co-curricular activities than low-utilisation schools. 42.5 per cent (n=17) of the high utilisation cohort agreed to using IGA funds to deliver co-curricular activities, 30.0 per cent (n=12) strongly agreed, and 27.5 per cent (n=11) very strongly agreed. In contrast, 25.0 per cent (n=10) of the low utilisation cohort agreed, while 75.0 per cent (n=30) disagreed.

Table 15. Overall Delivery of Co-Curricular Activities

			Delivery of co-curricular activities				Mean	Std.Dev.
			Disagree	Agree	Strongly Agree	Very Strongly Agree		
Utilisation of funds from IGAs	low		30	10	0	0	2.25	.439
			75.0%	25.0%	0.0%	0.0%		
	High		0	17	12	11	3.85	.834
			0.0%	42.5%	30.0%	27.5%		

The correlation test results (Table 16) indicated a strong positive correlation between utilisation of IGA funds and delivery of co-curricular activities ($r=0.730$, $p<0.001$; $r_s=0.741$, $p<0.001$). Thus, Hypothesis H_04 is rejected..

Table 16. Correlation between IGA Fund Utilisation and Overall Co-Curricular Delivery

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.730	.052	9.434	.000[c]
Ordinal by Ordinal	Spearman Correlation	.741	.041	9.738	.000[c]
N of Valid Cases		80			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

DISCUSSION

The overall positive association (r=.730; rs=.741) indicates that schools reporting higher utilisation of IGA funds also tended to report stronger co-curricular delivery. This finding extends research on the availability of school-based IGAs and the general benefits of co-curricular participation by focusing on how IGA proceeds are used to meet specific delivery requirements. However, the seven dimensions do not show identical relationships. The strongest reported associations concern equipment, repairs, physical space and external expertise; the associations for inter-school participation, coach development and talent nurturing are more modest. This variation cautions against treating co-curricular delivery as a single uniform expenditure category.

The results are consistent with studies identifying financial and material constraints as barriers to school activities (Abera & Mekuria, 2022; Assefa, 2019;

Clement & Mwila, 2023; Mung'au, 2024; Oloo et al., 2024). They also complement literature linking participation to broader learner development (Anjum, 2021; Naithani, 2020). However, the present study did not measure learner achievement, wellbeing or talent outcomes, and should not claim that the observed financial associations demonstrate those benefits. Similarly, the study did not separately quantify government capitation, school fees, donations or parent contributions; the relative contribution of each funding source remains unknown.

The interview accounts suggest that school leaders considered learner interests, programme impact, departmental needs, available IGA resources and perceived shortfalls or delays in public allocations. These themes provide plausible context but should not be generalised beyond the interviewed headteachers. The study's main contribution is therefore an association-based account of how reported IGA fund utilisation relates to reported co-curricular inputs in the sampled schools, subject to the unresolved sampling, aggregation and measurement issues identified below.

CONCLUSION AND RECOMMENDATIONS

Conclusion: The study found a strong positive association between utilisation of funds from income-generating activities and reported delivery of co-curricular activities in the sampled public secondary schools in Uasin Gishu County. Schools in the high-utilisation group generally reported stronger provision across the seven dimensions. The findings support the view that internally generated revenue may supplement other lawful school funding sources for equipment, facilities, maintenance, competitions, coach development, specialist support and talent nurturing. They do not establish causation, quantify the independent contribution of IGA proceeds or justify reducing public funding responsibilities.

Recommendations: The study recommends that school boards of management and school leaders maintain transparent records that distinguish gross IGA receipts, operating costs, net proceeds, approved allocations, and actual expenditure. Annual budgets should identify co-curricular priorities and document procurement, maintenance and payments to service providers. Education authorities should issue clear guidance on lawful establishment, approval, governance, accounting and reporting of school-based IGAs, including risk management and safeguards against conflicts of interest.

Ultimately, a transparent framework for engaging temporary specialist coaches and facilitators should specify qualifications, safeguarding requirements, fair selection, written terms, reasonable remuneration and financial accountability. Schools with limited IGA capacity should not be left with systematically poorer co-curricular opportunities; shared specialist services, inter-school partnerships, community support and equitable public allocations should be considered. Future research should use a documented measure that distinguishes gross revenue, operating costs, net proceeds, allocated budgets, and actual expenditure; explain high/low cut-offs; justify sampling and weighting; analyse school-level data transparently; and consider longitudinal or multivariable designs.

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