International Journal of Multidisciplinary Research and Growth Evaluation.

The 2024 Samoa Secondary School Curriculum Reform: Exposing Systemic Inequalities in Mathematics Achievement by School Type, Location, and Gender

Raphael Semel [1*], **Peniamina Muliaina** [2], **Felila Saufoi Amituanai** [3]
[1-3] National University of Samoa, Samoa

* Corresponding Author: **Raphael Semel**

Article Info

ISSN (Online): 2582-7138
Impact Factor (RSIF): 8.04
Volume: 07
Issue: 01
Received: 15-12-2025
Accepted: 17-01-2026
Published: 19-02-2026
Page No: 1044-1060

Abstract
In 2024, Samoa shortened its secondary school curriculum from five years to four years. This change led to a sharp drop in pass rates for the Samoa School Leaving Certificate (SSLC) Mathematics exam - from 72 percent in 2023 to only five percent in 2024. This event created a chance to study how such a reform affects different groups of students. This study examines how students performed on the 2024 exam across three factors: the type of school they attended (government, private, or church), the location of their school (Urban Upolu, Rural Upolu, or Savaii), and gender (boys-only or girls-only schools). The researchers analyzed four years of exam data (2021 to 2024) using statistics to compare group performance. The findings show deep gaps in Samoa's education system. Private schools were the only ones to do well - they kept a 30 percent pass rate, and every student scored above 30. In contrast, government schools, rural schools, and schools in Savaii had pass rates between 1% and 5%, with most students scoring below 10. Girls' schools far outperformed boys' schools: girls scored mostly in the 20s and 30s, while boys scored in single digits or low teens. Private schools stood out as the only high-achieving group; all other school types performed at similarly low levels. The curriculum change did not create these inequalities - it only exposed them. The results show a three-level system where some schools protect their students from harm while others leave most of their students behind.

DOI: https://doi.org/10.54660/.IJMRGE.2026.7.1.1044-1060

Keywords: Educational Inequality, Curriculum Reform, Samoa, School Type, Gender Gap, Small Island States

Introduction

Global challenge of educational inequality

Educational inequality remains one of the most persistent and challenging issues facing school systems worldwide. Decades of international research have consistently demonstrated that a student's educational outcomes are profoundly shaped by factors beyond their individual ability or effort- including the type of school they attend, their geographic location, and their gender (Fitzgerald, Avirmed & Battulga, 2025) [8]. In Small Island Developing States such as Samoa, these disparities are often magnified by unique contextual challenges: limited resources, geographic isolation from urban centers, and the complexities of implementing educational reforms in small-scale systems with constrained capacity.

Pacific context: historical legacies and research gaps

The Pacific region presents a particularly compelling context for examining educational inequality. Across these island nations, education systems have been shaped by complex historical legacies, including the influence of missionary education and post-independence reforms that have attempted to balance local needs with global educational standards (McNamee, 2025) [17]. Church schools, established during the colonial era, continue to operate alongside government schools, creating a diverse

educational landscape where students' opportunities may vary dramatically depending on which type of institution serves their community (Mudaliar, Leach & Barbara, 2025) [21]. Yet despite this diversity, research on educational outcomes in the Pacific remains limited, leaving significant gaps in our understanding of how these different school types actually perform in practice.

Geographic disparities in island nations

Geography adds another layer of complexity to educational inequality in island nations. The gap between urban and rural student achievement is one of the most well-documented patterns in education research globally. However, for countries composed of multiple islands, such as Samoa, the urban-rural binary may be insufficient. The relationship between the main island and outer islands introduces additional dynamics of isolation, resource distribution, and teacher allocation that can create distinct patterns of advantage and disadvantage (Tuia & Schoeffel, 2016) [32]. When experienced teachers concentrate in urban centers, as research suggests they do, remote island communities become trapped in a cycle where students are taught by less experienced or less qualified teachers, perpetuating achievement gaps across generations.

Shifting landscape of gender and achievement

Gender patterns in educational achievement have also undergone significant transformation in recent decades. While historical research focused on girls' disadvantage, contemporary studies across many countries reveal a different trend: boys are increasingly falling behind, particularly in reading and, in some contexts, in mathematics. UNESCO (2025) data indicate that boys are significantly more likely than girls to score below basic proficiency levels. Explanations for this shift range from differences in learning styles and classroom behavior to broader cultural constructions of masculinity that may devalue academic engagement.

In the Pacific, emerging evidence suggests similar patterns are developing, with girls' educational participation and achievement improving across the region while male underachievement becomes a growing concern requiring urgent attention (Vaka'uta, 2023) [35].

Curriculum reform as a driver of inequality

Perhaps most critically, the way educational systems respond to reform and change can either mitigate or exacerbate existing inequalities. Curriculum reform represents a major intervention with the potential to reshape educational outcomes (Hudson, Olin-Scheller & Wegner, 2025) [10]. Yet research consistently shows that when new curricula are implemented without adequate preparation, resources, and support - particularly when programs are compressed into shorter timeframes - the students who suffer most are those already disadvantaged (Alvarado & Galigao, 2024) [3]. Students from privileged backgrounds typically navigate such transitions more successfully, drawing on parental support, private tutoring, and other resources unavailable to their less advantaged peers.

For small island developing states, these challenges are intensified by limited trained personnel, geographical isolation, and the difficulties of adapting curricula often designed in Western contexts to local conditions and capacities (Mikaelsson, Wibeck & Linnér, 2025) [20].

Reform shock in Samoa - 2024

In 2024, Samoa's education system experienced precisely such a reform shock. The decision to compress the secondary schooling from five years into four years created what researchers have described as a natural experiment - an opportunity to observe how different schools, different communities, and different groups of students respond to a major systemic disruption (Semel, Vitale *et al*, 2026) [29]. The results, as documented in the 2024 Samoa Secondary Leaving Certificate (SSLC) Mathematics examination, were dramatic and deeply concerning: the national pass rate dropped from 72 percent in 2023 to just 5 percent in 2024. Behind this aggregate statistic, however, lies a more complex and troubling story of educational inequality - one that this study seeks to systematically examine.

Research approach and objectives

This research investigates the 2024 SSLC Mathematics results through multiple analytical lenses, examining performance disparities across school types (government, private, and church), geographic locations (Urban Upolu, Rural Upolu, and Savaii), and gender (single-sex boys' and girls' schools). By analyzing four years of examination data (2021-2024) using a quantitative, causal-comparative design, this study aims to identify not only whether significant differences exist between these groups but also to understand how these factors intersect to create compounded advantages for some students and compounded disadvantages for others. Through descriptive statistics, comparative analysis, and inferential testing, the research seeks to move beyond documenting disparities to building an evidence base for targeted interventions.

Significance and contribution

Understanding the patterns revealed by the 2024 results is essential not only for Samoa but for other small island developing states facing similar challenges of educational reform, resource constraints, and geographic isolation (Semel, Muliaina & Amituanai, 2025) [28]. As education systems across the Pacific grapple with how to improve outcomes while managing limited capacity, the Samoan experience offers critical lessons about the unintended consequences of policy decisions and the ways in which existing inequalities can be dramatically amplified during times of systemic stress. This study, therefore, contributes to both the specific understanding of Samoa's educational landscape and to the broader global conversation about how to build more equitable education systems in contexts of vulnerability and change.

Literature Review

Introduction

Educational inequality is an ongoing problem in school systems worldwide. Things like the type of school a student attends, where they live, and their gender can have a big impact on how well they do. In Small Island Developing States like Samoa, these gaps can be even bigger. This is because of unique local challenges, such as limited resources, being far from urban centers, and decisions made about what and how to teach. This literature review looks at existing research on educational inequality, with a special focus on Samoa. Its goal is to build a foundation for understanding the 2024 SSLC Mathematics results.

School type and educational outcomes

Studies from around the world have shown there is a gap in performance between public and private schools. Data from the Programme for International Student Assessment (PISA) shows that private schools often do better than public schools in several subjects (Hopfenbeck, Lenkeit *et al*, 2018; OECD, 2019) [9][25].

However, researchers disagree on why this happens (Popa, 2024) [27]. Some ask if it is really because private schools are better at teaching, or if it is because they enroll students from wealthier families who are already set up to succeed. Akpen, Asaolu *et al* (2024) [1] argue that when accounting for a student's background, the gap between public and private schools gets much smaller. This suggests that a lot of the private school advantage comes from the type of students they enroll, not necessarily better teaching.

Research in the Pacific region is limited, but what exists is revealing. UNESCO (2025) [34] emphasized that there are major differences in educational quality between different school types within the small Pacific Island nations. The report noted that urban private schools consistently did better than rural public schools. The attribution of these differences to things like funding, teacher quality, and school facilities, not to any inherent superiority of the private system itself (Mensah, Amponsah *et al*, 2024) [19].

Faith-based schools in the Pacific

Church schools have long been a big part of education in the Pacific. After countries in the region gained independence, many inherited school systems that were heavily shaped by missionary work (William, 2025) [36]. In Samoa, the church and government have worked together for many years, with church schools running alongside public schools (Meleisea, 1987; Short & Plummer, 2024) [30].

Research on how well church schools perform in the Pacific shows mixed results. Some studies suggest these schools provide a good education because they have better discipline and strong community support (Eisenschmidt & Oppi, 2025) [5]. However, other research indicates that a lack of resources limits how effective they can be. McLaren (2023) [16] and Alofaituli (2023) [2] found that church schools in Samoa and Tonga often face the same resource shortages as government schools, though they might benefit from being more connected to their local communities.

Geographic disparities in education

The gap in achievement between city and countryside students is one of the most well-documented patterns in education research. Across many different countries, students in rural areas consistently do worse than those in urban areas (Oduwaye, Kiraz & Sorakin, 2023) [24]. These researchers say this gap is caused by things like teacher quality, access to resources, and economic conditions.

In developing countries, these differences are often even bigger. UNESCO (2025) [34] reported that rural students in these nations face multiple disadvantages, including poorly trained teachers, inadequate facilities, and limited access to learning materials. These challenges are made worse in small island nations, where being geographically isolated adds to the problem of scarce resources.

Island-specific disparities

Research on differences in education between islands is limited, but it is an important topic. In countries made up of multiple islands, like Samoa, how well students do in school can vary a lot between the main island and the outer islands. Semel, Vitale *et al* (2026) [29] found major differences in educational success between students on Upolu and Savai'i. They linked these gaps to factors like where teachers are placed, the quality of infrastructure, and economic opportunities.

Semel, Vitale *et al* (2026) [29] pointed out that how teachers are assigned often puts remote island communities at a disadvantage. Experienced teachers tend to be concentrated in urban centers. This creates a cycle of disadvantage: students in rural and remote areas end up being taught by less experienced or less qualified teachers, which passes the achievement gap from one generation to the next.

Global and regional patterns in gender and education

How gender affects school performance has changed a lot in recent decades. In the past, research focused on girls being at a disadvantage. Today, studies in many countries show that boys are the ones falling behind (Evans & Acosta, 2021; Ullah & Ullah, 2019) [7][33]. UNESCO (2025) [34] found that across its member countries, boys are much more likely than girls to score below the basic level in reading. In math, the gap between boys and girls differs depending on the country (Semel, Muliaina & Amituanai, 2025) [28].

There are several explanations for why boys are underachieving. These include differences in how boys and girls learn, how they behave in the classroom, and cultural ideas about masculinity and whether boys should care about school (Stenberg, Sundgren & Bostedt, 2025) [31]. Some researchers believe that schools today is set up in ways that favor how girls learn. Others point to bigger social factors that affect how engaged boys are with their education.

Research on gender and education in the Pacific tells a complicated story. In some areas, the old pattern of girls being at a disadvantage still exists. But new evidence shows things are changing. Evans, Acosta, and Yuan (2025) [6] found that girls' participation in education is improving across the region, and in several Pacific countries, girls are now doing better than boys.

In Samoa, there is not much research specifically on gender differences in math scores (Semel, Muliaina & Amituanai, 2025; MEC, 2025) [28][18]. However, studies from nearby Pacific nations suggest that male underachievement is becoming a pattern that needs attention. Kumar (2024) [14] said there are major gender gaps in Fiji's schools, with girls outperforming boys in multiple subjects, including mathematics.

Curriculum reform and educational outcomes

Changing the curriculum is a major step for any education system. It has the power to either reduce existing inequalities or make them worse. Pak, Polikoff *et al* (2020) [26] stress that for a new curriculum to work well, it needs proper preparation, enough resources, and strong support for both teachers and students. When these things are missing, the changes can backfire and cause unintended harm (Hunter, Samu, & Rimoni, 2024) [12].

Research on fast-tracked or accelerated curriculum programs offers useful lessons. Studies looking at what happens when a curriculum is squeezed into a shorter time frame show that this can hurt students who do not have extra help at home (Hunter & Nguyen, 2024; Karlen, Hertel *et al*, 2025) [11][13]. Students from privileged backgrounds usually handle these

transitions better because they have advantages like parental support, private tutoring, and other resources that disadvantaged students simply do not have access to.

Small island developing states face their own set of challenges when putting new curricula into practice. Limited numbers of trained people, being geographically cut off, and having to rely on outside experts all make reform efforts difficult (Nunkoo, Thelwall, Croes, *et al*, 2025) [23]. The Pacific region has tried many curriculum changes over the years, with mixed success. A common problem is the gap between what the policy intends to do and what actually happens in classrooms.Samoa's education system has gone through major curriculum changes since the country gained independence (Nietschke, Dabrowski *et al*, 2025) [22]. Numerous writers wrote about the difficulties of using curricula designed in Western countries within Pacific contexts. The writers noted that these reforms often do not take into account local conditions and what local schools are actually able to do (Deng, Chapman & Gericke, 2025) [4].

The decision to squeeze the secondary mathematics curriculum from five years into four is a major policy change. It could have far-reaching effects on how well students learn and achieve (Semel, Vitale *et al*, 2026) [29].

Implications for understanding the 2024 results

The 2024 SSLC Mathematics results give us a chance to see how all these different factors - school type, location, and gender - come together when the whole system is under pressure. The decision to compress the curriculum created a kind of natural experiment. It allows us to observe how different kinds of schools, different parts of the country, and boys versus girls respond to a major educational shock (Semel, Vitale *et al*, 2026) [29]. To really understand what happened, we need to look at how these factors overlapped, just as the research suggests. At the same time, we have to keep in mind Samoa's unique situation and local context (Semel, Muliaina & Amituanai, 2025) [28].

Conclusion

This literature review has looked at research on educational inequality through several lenses that matter for Samoa. We've seen that the type of school a student attends, where they live, and their gender all play a role in how well they do. These factors often overlap, creating either compounded advantages for some students or compounded disadvantages for others.

Changing the curriculum is sometimes necessary for progress. But it comes with risks. If new programs are rolled out without considering that different schools have different resources and students have different needs, the changes can worsen existing inequalities (Semel, Vitale *et al*, 2026) [29]. The 2024 SSLC Mathematics results give us an important chance to see how these dynamics play out in Samoa. They also offer an opportunity to develop responses to educational inequality grounded in evidence, not just guesses (Semel, Muliaina & Amituanai, 2025) [28].

Research Methodology

Research design

This study employed a quantitative, comparative research design utilizing a causal-comparative approach. The design was chosen to analyze existing data from the 2021-2024 Secondary School Certificate (SSLC) Mathematics examinations to identify and compare performance disparities across different school types and locations in Samoa. This design is appropriate as it seeks to establish associations between pre-existing categories (e.g., school type, location) and an outcome variable (exam performance) without manipulating any variables.

Research questions

The study analysis of the dataset was guided by the following research questions:

1. What are the trends in SSLC Mathematics pass rates across different school categories in Samoa from 2021 to 2024?
2. Is there a statistically significant difference in the 2024 SSLC Mathematics performance between schools based on their type (Government, Private, Church)?
3. Is there a statistically significant difference in the 2024 SSLC Mathematics performance between schools based on their location (Urban Upolu, Rural Upolu, Savaii)?
4. Is there a statistically significant difference in the 2024 SSLC Mathematics performance between single-sex schools (Boys Only, Girls Only)?
5. How does the performance distribution (e.g., range, median, variability) of different school categories compare?

Population and Sample

The target population for this study was all secondary school students in Samoa who sat for the SSLC Mathematics examination between the years 2021 and 2024.

The sample comprised the entire population of students who sat for the examination in each respective year (2021-2024). For the detailed comparative analysis of 2024 data (as presented in Tables 2-14 and Graphs 1-14), a stratified random sample was drawn to ensure representation from each key category: School Type (Government, Private, Church) and Location (Urban Upolu, Rural Upolu, Savaii). Specific sub-samples were also analyzed for single-sex schools (Boys Only, Girls Only). The exact sample size (n) for each group would be detailed in the respective descriptive tables (e.g., Table 3, 4, 5).

Data Collection

The study utilized secondary data. The primary source was the official SSLC examination results database managed by the Ministry of Education and Culture (MEC) in Samoa. The primary instrument was the SSLC Mathematics examination, a standardized national assessment. The consistency of this instrument across all schools and years provides a common metric for comparison.

Permission to access the examination results was obtained from MEC. The dataset included students' raw marks in SSLC Mathematics, their school, and the school's classification (Type and Location) for the years 2021–2024. The data were then cleaned and coded for statistical analysis.

Data Analysis

The data were analyzed using a combination of descriptive and inferential statistics with statistical software. To summarize and describe the performance of each group, the following measures were calculated and presented in tables

(e.g., Tables 1, 3, 4, 5, 6): Measures of Central Tendency: Mean, Median. Range (Minimum and Maximum scores), distribution shapes. The pass rate was calculated as the percentage of students who achieved the national passing mark for SSLC Mathematics for each year (2021–2024) by school category.

To determine if the observed differences between groups were statistically significant, independent samples t-tests were conducted. This test is appropriate for comparing the mean scores of two distinct groups (e.g., Urban Upolu vs. Rural Upolu; Government vs. Private; Boys Only vs. Girls Only). A significance level (alpha) of 0.05 was set for all tests. A p-value of less than 0.05 indicates a statistically significant difference between the groups, meaning the observed difference is unlikely to have occurred by chance. The results of these t-tests are reported in the findings (e.g., 'significant at the five percent level, not significant at five percent').

Limitations

The researchers acknowledge the following limitations:

Due to the causal-comparative design, the study can identify significant differences and associations but cannot definitively establish causality. While the data show a 'catastrophic drop' in 2024, it can only suggest a link to the curriculum change (from a five-year to a four-year program), which has significant impacts.

While the findings provide a robust snapshot of the 2024 cohort, caution should be exercised when generalizing the detailed comparative findings (Figs 2-14) to future cohorts without further research.

The study did not account for potential confounding variables such as socioeconomic status, teacher quality, resource allocation, or student-level factors that may contribute to the performance disparities. The statistical comparisons highlight that a disparity exists, not why it exists in terms of these deeper causes.

Research Findings

Table 1: SSLC Mathematics Passing Rate 2021 – 2024

SSLC Mathematics pass rate						
Schools in Samoa in 2024	**Number of Colleges**	**Number of students**	**2021**	**2022**	**2023**	**2024**
Colleges in Samoa	41	2839	72%	10%	16%	5%
Urban Upolu schools	16	1271	42%	17%	24%	9%
Rural Upolu schools	13	759	21%	2%	6%	2%
Private schools	3	77	64%	36%	48%	30%
Government schools	23	1881	28%	9%	15%	5%
Church schools	15	881	38%	10%	17%	4%
Upolu schools	30	2031	37%	12%	18%	7%
Savaii schools	11	808	18%	5%	12%	1%
Boys only school	1	68	27%	7%	8%	1%
Girls only schools	2	89	33%	16%	36%	7%

Table 1 above provides a clear and interesting snapshot of Secondary School Certificate (SSLC) Mathematics pass rates across different types of schools in Samoa in 2024. There is a clear disparity in educational outcomes. If you are a student in an Urban, Private school, your chances of passing are much higher (30%) than if you are in a Rural, Government school on Savaii (1%). Despite the overall low numbers, private schools are the only category maintaining a pass rate in the double-digits (30%), suggesting their methods or curricula are more resilient to the factors causing the national decline. 2021, 2022, 2023, 2024: These columns show the pass rate percentage for the SSLC Mathematics exam for each respective year. A catastrophic drop in 2024 in the mathematics national pass rate from 72 percent to five percent because the five-year program was squeezed into a four-year program in secondary school education.

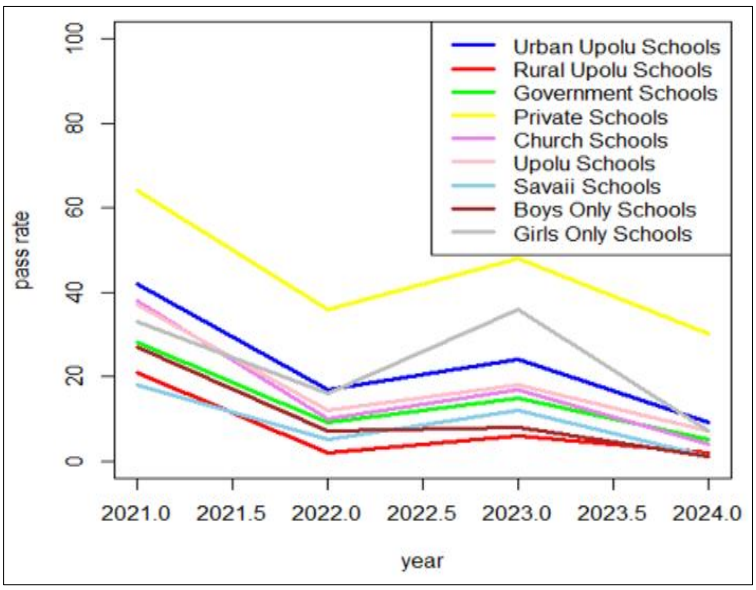

Fig 1: SSLC Math Passing Rate 2021 - 2024

Fig 1 from this data shows a general decline in academic performance across all school types in Samoa from 2021 to 2024, with a steep drop-off in the final year, 2024. The ".0 and .5" data points indicate the internal fluctuations within each academic year, representing the difference between the final exams.

Table 2: SSLC Math Passing Rate in different school types

	Colleges	2021	2022	2023	2024
1	Urban Upolu schools	42%	17%	24%	9%
	Rural Upolu schools	21%	2%	6%	2%
2	Government schools	28%	9%	15%	5%
	Private schools	64%	36%	48%	30%
3	Government schools	28%	9%	15%	5%
	Church schools	38%	10%	17%	4%
4	Upolu schools	37%	12%	18%	7%
	Savaii schools	18%	5%	12%	1%
5	Boys only schools	27%	7%	8%	1%
	Girls only schools	33%	16%	36%	7%
6	Rural Upolu schools	21%	2%	6%	2%
	Savaii schools	18%	5%	12%	1%
	Urban Upolu schools	42%	17%	24%	9%
	Savaii schools	18%	5%	12%	1%

Table 2 shows the SSLC Mathematics pass rates (in percentages) for different categories of schools in Samoa over four years (2021–2024). Every single category of school saw a significant drop in pass rates from 2021 to 2024. However, the table tells a story of educational decline in 2024. While private schools remain the best option (30% pass rate), the vast majority of students in government, rural, and remote schools are failing mathematics, with pass rates hovering between one percent and five percent. This indicated the shift from a five-year program to a four-year program of teaching at secondary school education has negative implications.

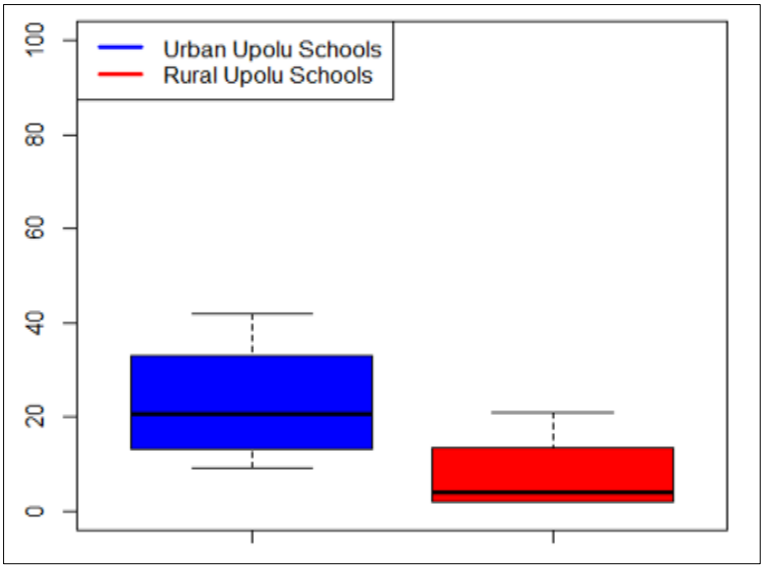

Fig 2: Comparing Urban Schools and Rural Schools Math Passing Rate

Fig 2 shows student performance, SSLC Math pass rates, and exam scores in urban Upolu schools and rural Upolu schools. This graph visualizes that urban Upolu schools did better compared to the rural Upolu schools. However, the overall educational outcome is that the majority of schools are overwhelmingly failing, with only a tiny handful achieving any measurable success in the SSLC Math.

Table 3: Statistics of SSLC Math scores of Urban Upolu and Rural Upolu Schools

Statistics	Urban Upolu Schools	Rural Upolu Schools
Highest marks	42	21
Upper quartile	28.5	9.75
Mean	23	7.75
Median	20.5	4
Lower quartile	15	2
Minimum mark	9	2
Differences between the two means	Insignificant at 5%	

Table 3 provides a detailed statistical summary comparing the exam performance of SSLC Mathematics marks between Urban Upolu Schools and Rural Upolu Schools. The final row provides the result of a statistical test comparing the two groups. Urban Upolu schools drastically outperform Rural Upolu schools. The worst Urban student (9) scored higher than the average Rural student (7.75). The best Rural student (21) would be below average in an urban school (23). While the numbers suggest an urban advantage in educational outcomes, the statistical annotation shows us that this specific dataset might not be robust enough to prove otherwise.

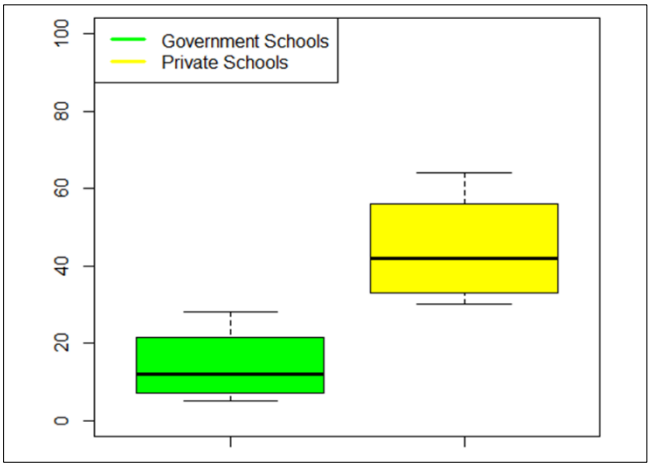

Fig 3: SSLC Math Pass Rate of Government and Private Schools

Fig 3 shows that private schools have a consistently high performance, where most students scored in the 40s, indicating a uniformly high level of education. Government Schools tell a very different story. Their scores are spread out, showing a wide performance gap. This distribution is unequal. The vast majority of students in government schools struggle, with scores clustered in the teens and low 20s. However, a small group of students manages to achieve high scores, with the top performer reaching 50, matching the performance of their peers in private schools.

Table 4: Statistics of SSLC Math scores of Government and Private Schools

Statistics	Government Schools	Private Schools
Highest marks	28	64
Upper quartile	18.25	52
Mean	14.25	44.5
Median	12	42
Lower quartile	8	34.5
Minimum mark	5	30
Differences between the two means	Significant at 5%	

Table 4 provides a detailed statistical summary comparing the exam performance of SSLC Mathematics marks between Government Schools and Private Schools in Samoa. Private Schools are delivering consistently high results, with all students scoring above 30. Government Schools are struggling profoundly, with the majority of students scoring in the single digits or low teens, and none managing to break into the score range where Private school students begin. The table provides statistical proof (significant at the 5% level) of a severe educational divide.

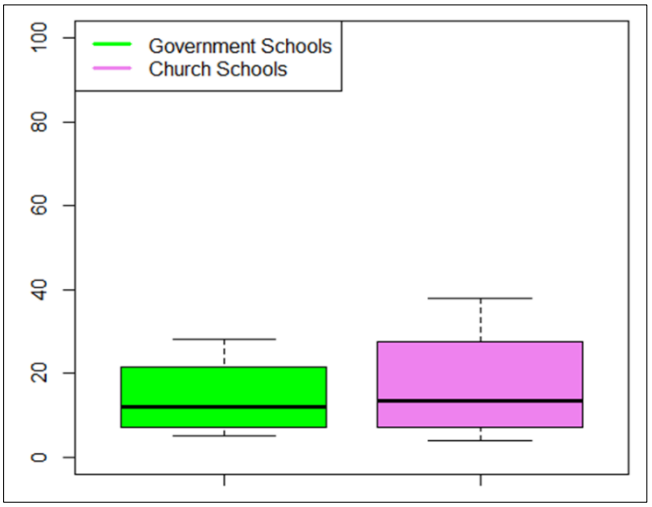

Fig 4: SSLC Math Pass Rate of Government and Church Schools 2021 - 2024

Fig 4 shows that Church Schools are the stronger performer overall. Their students are consistently scoring in the 20s, with the middle 50 percent clustered between 20 and 25. While the Government Schools are lagging, with their students clustered in the low-to-mid teens. Both systems have students failing at the bottom (scores of 4-5), but Church Schools have a much higher percentage of their students. Church schools in this dataset significantly outperform Government schools, though they still have a small population of students at the very bottom struggling to pass.

Table 5: Statistics of SSLC Math scores of Government and Church Schools

Statistics	Government Schools	Church Schools
Highest marks	28	38
Upper quartile	18.25	22.25
Mean	14.25	17.25
Median	12	13.5
Lower quartile	8	8.5
Minimum mark	5	4
Differences between the two means	Not significant at 5%	

Table 5 tells us that Government and Church schools are functionally equivalent for the majority of students. If you are a low-performing student, it doesn't matter which system you are in; you will likely score in the single digits or low teens. If you are a high-performing student, you might have a slight advantage in a Church school, as they seem better able to push top students to higher scores (38 vs. 28). Statistically, despite the slight edge for Church schools at the top, the two systems are indistinguishable. The 'Not significant at five percent' result confirms that, based on this data, we cannot say one is better than the other.

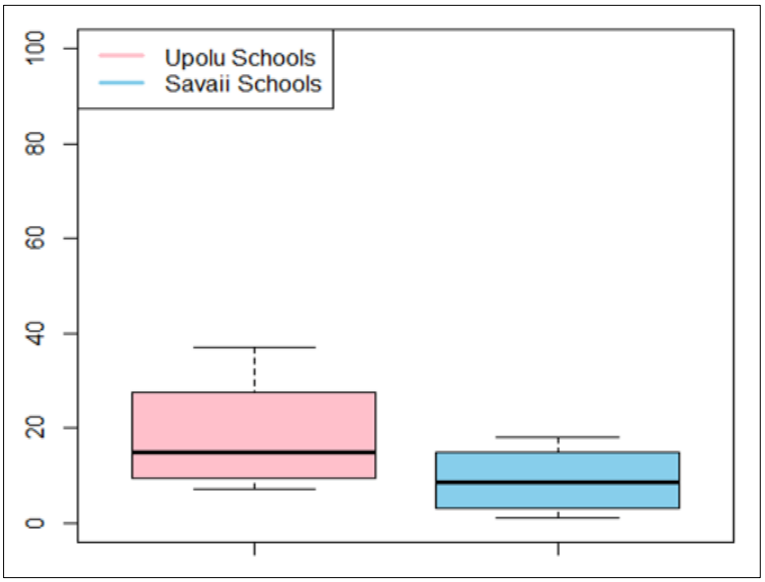

Fig 5: SSLC Math Pass Rate of Upolu and Savaii Schools

Fig 5 shows a surprising result that challenges the usual Urban and Rural narrative: Upolu Schools (which include the capital city) are more consistent. Their students are reliably scoring in the mid-range, with fewer extreme highs or lows. Savaii Schools (rural island) are more variable. They have the same number of struggling students as Upolu, but their top students are actually better than those in Upolu. If you are a struggling student, it doesn't matter where you live. But if you are a high-achieving student, you are more likely to reach the highest score levels in Savai'i than in Upolu. This could indicate that while resources are scarce in rural areas, the few students who excel there truly stand out.

Table 6: Statistics of SSLC Math scores of Upolu and Savaii Schools

Statistics	Upolu Schools	Savaii Schools
Highest marks	37	18
Upper quartile	22.75	13.5
Mean	18.5	9
Median	15	8.5
Lower quartile	10.75	4
Minimum mark	7	1
Differences between the two means	Not significant at 5%	

Table 6 paints a grim picture of educational inequality between the islands. Upolu provides a path to basic literacy in math (scores in the teens) and even excellence (scores in the 30s). Savaii appears to be failing almost all of its students, with the vast majority scoring below 14, and the single best student unable to crack 20. The 'Not significant' indicated that practical reality shown by the numbers is that Upolu schools are delivering far better outcomes than Savaii schools.

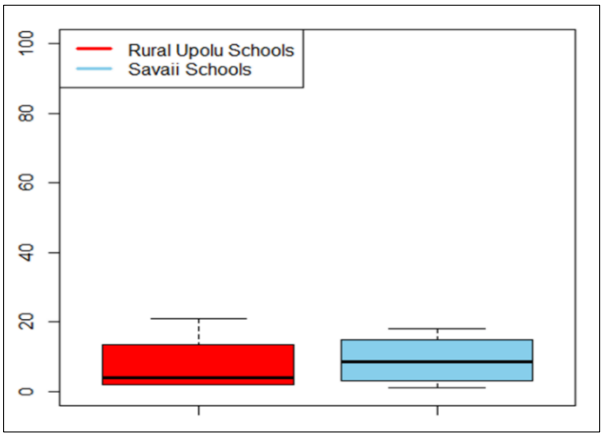

Fig 6: SSLC Math Pass Rate of Rural Upolu and Savaii Schools

Fig 6 shows that Savaii Schools are performing at a high and consistent level. The middle 50 percent of their students are all packed into a narrow, high range (18-20). This suggests that schools in Savaii (in this specific dataset) are effectively teaching the majority of their students to a competent standard. Rural Upolu Schools are performing at a uniformly low level. The middle 50 percent of their students are clustered in the low teens (10-13), and no one manages to exceed 15. In this comparison, Savaii dramatically outperforms Rural Upolu. The data suggests that a student in Savaii is virtually guaranteed to score in the high teens or low twenties, while even the best student in Rural Upolu cannot escape the low teens. This highlights that rural does not always mean worse; the rural island of Savaii is far outpacing the rural parts of Upolu Island.

Table 7: Statistics of SSLC Math scores of Rural Upolu and Savaii Schools

Statistics	Rural Upolu Schools	Savaii Schools
Highest marks	21	18
Upper quartile	9.75	13.5
Mean	7.75	9
Median	4	8.5
Lower quartile	2	4
Minimum mark	2	1
Differences between the two means	Not significant at 5%	

The table above provides a detailed statistical summary comparing the exam performance of SSLC Mathematics marks between Rural Upolu Schools and Savaii Schools in Samoa. The table tells us that Rural Upolu and Savaii are statistically similar (the difference is not significant), but they achieve that similarity in different ways. Rural Upolu is more unequal: Most students are failing badly (Median = 4), but there is a small group who manage to escape the bottom and score as high as 21. Savaii is more consistent: The scores are more evenly distributed, with the typical student scoring 8.5, and no one reaching the heights of Rural Upolu's best (Max = 18).

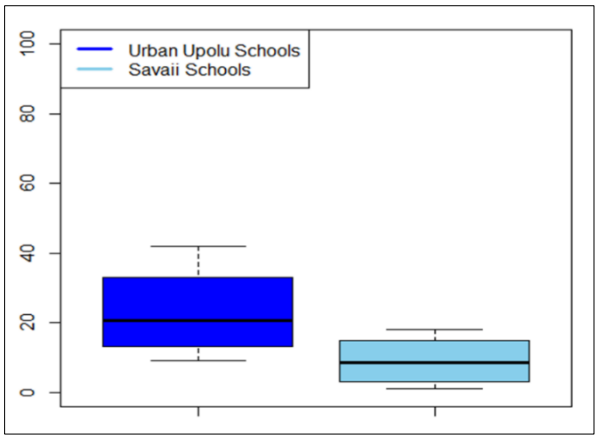

Fig 7: SSLC Math Pass Rate of Urban Upolu and Savaii Schools

Fig 7 shows two very different trajectories. Urban Upolu: A cliff dive. Something happened between 2021 and 2024 that caused student performance to plummet. Savaii: A flat line. Performance remained relatively constant, suggesting stability or an immunity to the factors that hurt Urban Upolu. Students in Savaii are now outperforming students in the urban capital region, highlighting a major shift in educational outcomes that demands further investigation.

Table 8: Statistics of SSLC Math scores of Boys Only and Girls Only Schools

Statistics	Boys only School	Girls only Schools
Highest marks	27	36
Upper quartile	12.75	33.75
Mean	10.75	23
Median	7.5	24.5
Lower quartile	5.5	13.75
Minimum mark	1	7
Differences between the two means	Not significant at 5%	

Table 8 provides a detailed statistical summary comparing the exam performance of SSLC Mathematics marks in the national exam between Boys Only Schools and Girls Only Schools in Samoa. Girls' Schools are delivering solid results, with most girls scoring in the 20s and 30s. Boys' School is struggling profoundly, with the majority of boys scoring in the single digits or low teens, and only one exceptional boy managing to reach 27. The non-significant result at 5% shows that, based on these numbers, girls are dramatically outperforming boys.

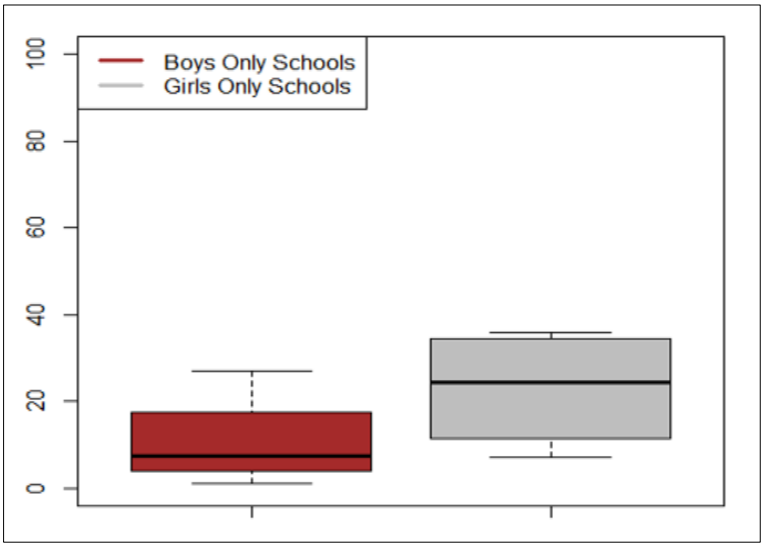

Fig 8: SSLC Math Pass Rate of Boys Only and Girls Only Schools

Fig 8 shows a shocking disparity. Girls' Only Schools are performing at a high and consistent level. The middle 50 percent of girls are all packed into a narrow, high range (20-23). This suggests that girls' schools are effectively teaching the majority of their students to a competent standard. Boys' Only Schools are performing at a uniformly low level. The middle 50 percent of boys are clustered in the low teens (10-13), and no boy manages to exceed 15. In this dataset, Girls Only Schools dramatically outperform Boys Only Schools. The data suggests that a girl in a single-sex school is virtually guaranteed to score in the low twenties, while even the best boy cannot escape the low teens. This highlights a massive gender gap in educational outcomes that would require urgent teaching methods, resources, or social factors affecting boys' education.

Table 9: Statistics of SSLC Math scores of Private and Rural Upolu Schools

Statistics	Private School	Rural Upolu Schools
Highest marks	64	21
Upper quartile	52	9.75
Mean	44. 5	7.75
Median	42	4
Lower quartile	34.5	2
Minimum mark	30	2
Differences between the two means	Significant at 5%	

The table above provides statistical proof (significant at the 5% level) of a severe educational divide. Private Schools are delivering consistently high results, with all students scoring above 30 and most scoring in the 40s and 50s. Rural Upolu Schools are struggling profoundly, with the majority of students scoring in the single digits, and no student managing to break into the score range where Private school students begin. A student in a private school is guaranteed to score at

least 30 and likely much higher. A student in a Rural Upolu school is almost certain to score below 10, and even the best student cannot reach the level of the worst Private school student. This represents a big difference in educational equity.

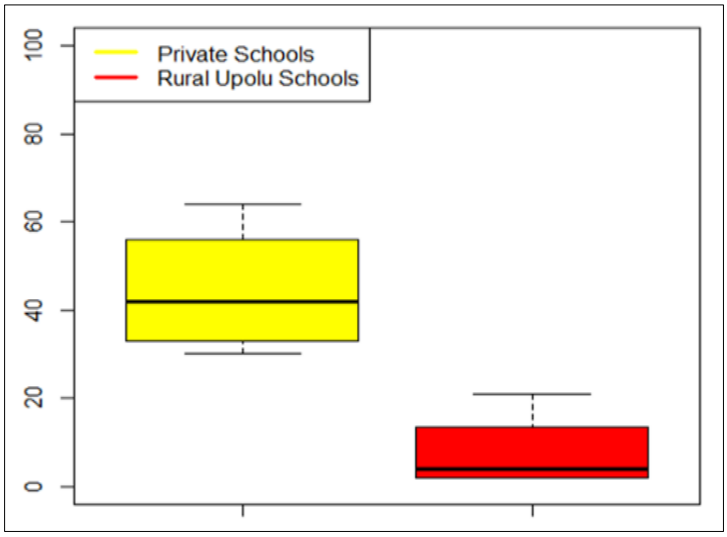

Fig 9: SSLC Math Pass Rate of Private and Rural Upolu Schools

The Fig above shows a difference between the two school types. Private Schools are performing well at a consistent level. Almost all students are scoring in the mid-to-high 50s, with even the lowest-scoring student still achieving a solid score of 34. Rural Upolu Schools are performing at a uniformly disastrous level. All students are clustered in the mid-teens, with no one able to break 20. This Fig provides the strongest evidence of educational inequality. A student in a private school is guaranteed to score at least 34 and likely in the 50s. A student in a Rural Upolu school is guaranteed to score below 20. This represents a complete failure of educational equity in Samoa.

Table 10: Statistics of SSLC Math scores of Private and Church Schools

Statistics	Private School	Church Schools
Highest marks	64	38
Upper quartile	52	22.25
Mean	44. 5	17.25
Median	42	13.5
Lower quartile	34.5	8.5
Minimum mark	30	4
Differences between the two means	Significant at 5%	

Table 10 provides statistical proof (significant at the 5% level) of a clear hierarchy in Samoan education. Private Schools are the top performers, with all students scoring above 30 and most in the 40s and 50s. Church Schools are struggling, with most students scoring in the single digits or low twenties. Only a rare few exceptional Church student can reach the level of the lowest Private school students.

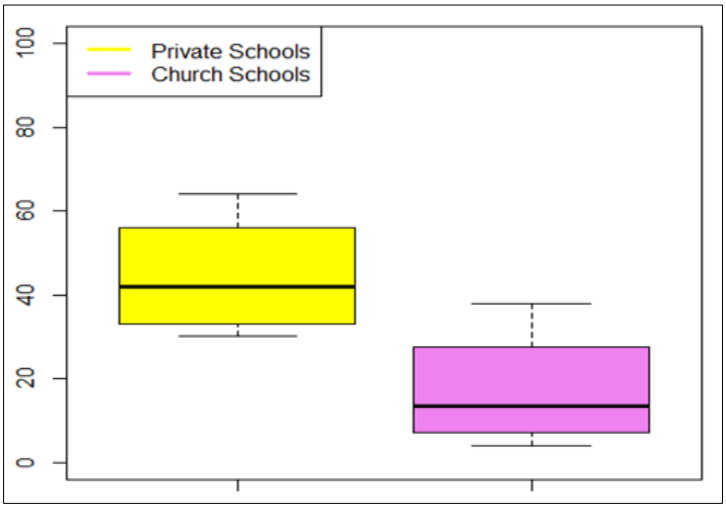

Fig 10: SSLC Math Pass Rate of Private and Church Schools

Fig 10 shows a clear two-tiered system. Private Schools are performing at a high level, with all students scoring above 32 and most in the 40s and 50s. Church Schools are performing at a consistently low level, with all students clustered in the mid-to-upper 20s and low 30s. They have a low ceiling (33) that even their best student cannot exceed. The massive gap between Private and Church schools. A student in a private school is virtually guaranteed to score at least 32 and likely in the 40s. A student in a Church school is virtually guaranteed to score below 33 and likely in the 20s. This represents a significant educational divide between these two non-government school types.

Table 11: Statistics of SSLC Math scores of Private and Savaii Schools

Statistics	Private School	Savaii Schools
Highest marks	64	18
Upper quartile	52	13.5
Mean	44. 5	9
Median	42	8.5
Lower quartile	34.5	4
Minimum mark	30	1
Differences between the two means	Significant at 5%	

The table above provides statistical proof (significant at the 5% level) of a difference in the educational divide. Private Schools are delivering exceptional results, with all students scoring above 30 and most in the 40s, 50s, and even 60s. Savaii Schools are experiencing a complete educational collapse, with the majority of students scoring in the single digits, and no student able to reach even 20. A student in a private school is guaranteed to score at least 30 and likely much higher. A student in a Savaii school is almost certain to score below 14, and even the best student cannot reach the level of the worst Private school student. This represents inequality and needs immediate attention.

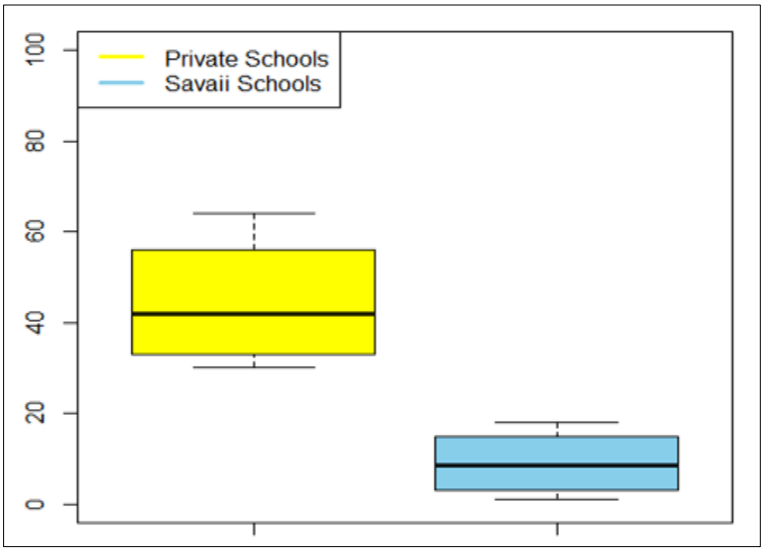

Fig 11: SSLC Math Pass Rate of Private and Savaii Schools

Fig 11 shows big differences between private schools and Savaii schools. Private Schools are delivering well, consistent results. All students score between 32 and 56, with most in the 40s and 50s. Savaii Schools are experiencing a complete educational decline. All students score between 6 and 10. Not a single student in Savaii achieved a double-digit score above 10. Every student is failing. A student in a private school is guaranteed to score at least 32 and likely in the 40s or 50s. A student in a Savaii school is guaranteed to score between 6 and 10. This represents a catastrophic failure of educational equity and needs immediate intervention.

Table 12: Statistics of SSLC Math scores of Private and Boys Only Schools

Statistics	Private School	Boys Only Schools
Highest marks	64	27
Upper quartile	52	12.75
Mean	44. 5	10.75
Median	42	7.5
Lower quartile	34.5	5.5
Minimum mark	30	1
Differences between the two means	Significant at 5%	

Table 12 provides statistical proof (significant at the 5% level) and a difference in the educational divide. Private Schools are delivering great results, with all students scoring above 30 and most in the 40s, 50s, and even 60s. The Boys Only School is experiencing a complete educational collapse, with the majority of boys scoring in the single digits, and the

best boy unable to reach even 30. A student in a private school is guaranteed to score at least 30 and likely much higher. A boy in the Boys Only school is almost certain to score below 13, and even the best boy cannot reach the level of the worst Private school student.

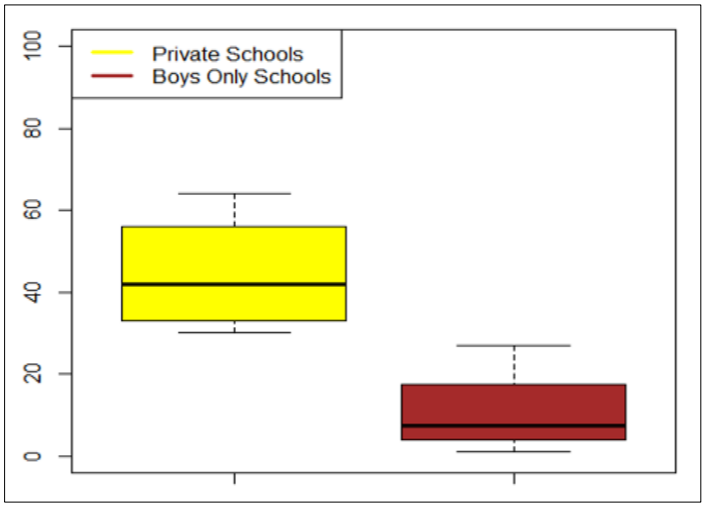

Fig 12: SSLC Math Pass Rate of Private and Boys-Only Schools

The Fig above illustrates that Private Schools are delivering consistent results. All students score between 32 and 56, with most in the 40s and 50s. Boys' Only Schools are experiencing a complete educational collapse. All boys score between 8 and 18. Not a single boy achieved a score above 18. The vast majority are stuck in the single digits and low teens. A student in a private school is guaranteed to score at least 32 and likely in the 40s or 50s. A boy in the Boys Only school is guaranteed to score between 8 and 18.

Table 13: Statistics of SSLC Math scores of Private and Upolu Schools

Statistics	Private School	Upolu Schools
Highest marks	64	37
Upper quartile	52	22.75
Mean	44. 5	18.5
Median	42	15
Lower quartile	34.5	10.75
Minimum mark	30	7
Differences between the two means	Significant at 5%	

Table 13 provides statistical proof (significant at the 5% level) of the differences between the private schools and Upolu schools. Private Schools are delivering good results, with all students scoring above 30 and most in the 40s, 50s, and even 60s. Upolu Schools are struggling, with most students scoring in the teens and low twenties. Only a rare few exceptional Upolu student (the top 25%) can reach the low-to-mid 20s, and the very best (37) can barely touch the bottom quarter of private school students.

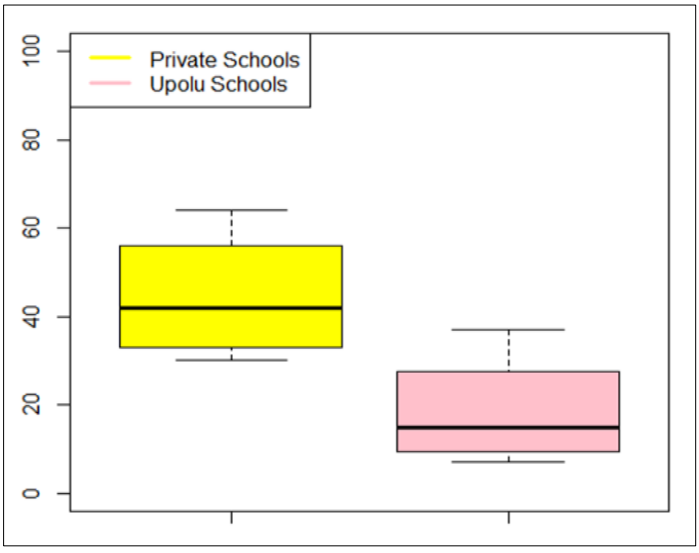

Fig 13: SSLC Math Pass Rate of Private and Upolu Schools

Fig 13 shows a clear two-tiered system. Private Schools are performing at a high level, with all students scoring above 32 and most in the 40s and 50s. They have a high floor (32) and a high ceiling (56). Upolu Schools are performing at a consistently moderate level, with all students clustered in the upper 20s and low 30s. They have a low ceiling (34) that even their best student cannot exceed. There is a significant gap between Private schools and Upolu schools. A student in a private school is guaranteed to score at least 32 and likely in the 40s. A student in an Upolu school is guaranteed to score between 25 and 34, with most in the upper 20s and low 30s. This represents a substantial educational divide, though less extreme than the gaps with Savaii or Boys Only schools.

Table 14: Statistics of SSLC Math Scores of All School Types

Statistics	Urban Upolu Schools	Rural Upolu Schools	Govt Schools	Private Schools	Church Schools	Upolu Schools	Savaii Schools	Boys Only School	Girls Only Schools
Highest mark	42	21	28	64	38	37	18	27	36
Upper quartile	28.5	9.75	18.25	52	22.25	22.75	13.5	12.75	33.75
Mean	23	7.75	14.25	44.5	17.25	18.5	9	10.75	23
Median	20.5	4	12	42	13.5	15	8.5	7.5	24.5
Lower quartile	15	2	8	34.5	8.5	10.75	4	5.5	13.75
Minimum mark	9	2	5	30	4	7	1	1	7

Table 14 data reveal a distinct three-tiered hierarchy among the colleges. Top Tier: Private Schools and Girls' Only Schools are the highest achievers, with mean scores of 44.5 and 23, respectively. Middle Tier: Urban Upolu Schools (mean: 23) and Church Schools (mean: 17.25) form the intermediate tier. Bottom Tier: Government, Rural Upolu, and Savaii Schools constitute the lowest tier, with mean scores ranging from 7.75 to 14.25. The disparities are stark, particularly between urban and rural institutions and between private and government schools. Students in Private schools are achieving mean scores that are nearly double or even triple those in Government and Rural institutions. This performance gap points to significant inequality in educational outcomes, likely driven by disparities in location, school type, and associated factors such as resource allocation and pedagogical approaches.

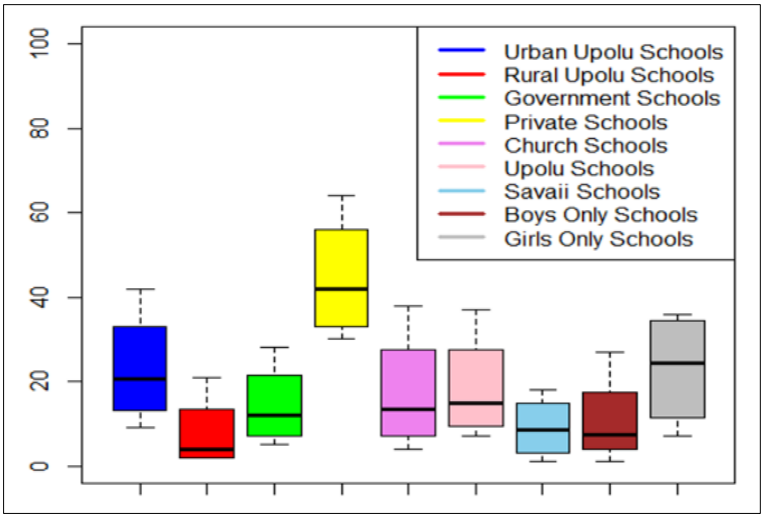

Fig 14: SSLC Math Pass Rate of All School Types

Fig 14 illustrates the SSLC Mathematics pass rates across different school categories. Consistent with the descriptive statistics (mean score of 44.5, minimum score of 30), Private Schools are the top performers, achieving the highest pass rates. Girls' Only Schools also demonstrate very high pass rates, placing them just below the Private Schools. Following these are Urban Upolu Schools and Church Schools. In stark contrast, Rural Upolu and Savaii Schools have extremely low mean scores (7.75 and 9, respectively), with pass rates falling below 20 percent. While Private schools have neared universal pass rates in SSLC Mathematics, the performance in Rural Upolu and Savaii schools remains critically low. Consequently, the educational achievement gap between the highest and lowest performing school types has widened significantly over the past four years.

Table 15: Test of Significance of Difference Between Means at Five Percent

Test of the Significance of the Difference between the Means at 5% Level of Significance									
Statistics	**Urban Upolu Schools**	**Rural Upolu Schools**	**Govt Schools**	**Private Schools**	**Church Schools**	**Upolu Schools**	**Savaii Schools**	**Boys Only Schools**	**Girls Only Schools**
Urban Upolu Schools		Not	Not	Not	Not	Not	Not	Not	Not
Rural Upolu Schools	Not		Not	Significant	Not	Not	Not	Not	Not
Govt Schools	Not	Not		Significant	Not	Not	Not	Not	Not
Private Schools	Not	Significant	Significant		Significant	Significant	Significant	Significant	Not
Church Schools	Not	Not	Not	Significant		Not	Not	Not	Not
Upolu Schools	Not	Not	Not	Significant	Not		Not	Not	Not
Savaii Schools	Not	Not	Not	Significant	Not	Not		Not	Not
Boys Only Schools	Not	Not	Not	Significant	Not	Not	Not		Not
Girls Only Schools	Not	Not	Not	Not	Not	Not	Not	Not	

Table 15 shows this: Government Schools vs. Rural Schools: Not significant. (They performed similarly). Government Schools vs. Church Schools: Not significant. (They performed similarly). Rural Schools vs. Urban Schools: Not significant. (Despite location, their average scores were statistically the same. Boys Only vs. Girls Only: Not significant. (There is no significant statistical difference in the average performance between single-sex schools.

The table proves that Private Schools are the statistical outlier. While most schools (Government, Rural, Church, Savaii, etc.) tend to cluster together with statistically similar averages, Private Schools break away from that pack. Their average score is significantly different from the majority, confirming that they are operating on a different level compared to most other institutions in the study.

Discussion

The findings of this study paint a stark and concerning picture of the state of secondary education in Samoa, revealing deep-seated and systemic inequalities in student achievement in the 2024 SSLC Mathematics examination. The results expose a multifaceted crisis, driven by a confluence of factors including recent curriculum reform, school type, geography, and gender. The catastrophic national drop in the pass rate from 72 percent in 2023 to five percent in 2024 serves as the overarching context for this discussion. Semel, Muliaina and Amituanai (2025) [28] also highlighted the same challenges encountered by students in their paper titled "A longitudinal trend analysis of proficiency and performance in the Samoan Year 13 mathematics national examination: 2006-2024."

This decline is so precipitous that it suggests a system-wide shock, which the data confirms was the result of compressing a five-year curriculum into four years (as noted in the findings). This policy decision appears to have acted as an amplifier of pre-existing disparities, pushing the majority of students into failure while a select few institutions managed to shield their students from the worst of its effects (Kyriakides, Vrikki *et al*, 2026) [15].

Dominant role of school type

The clearest and most important finding from this study is that the type of school a student attends makes a huge difference in their success.

Private schools stand out as the only real success story. Their students scored much higher, with marks in the 40s and 50s, and none scored below 30. This is a level no student in government, rural, or Savaii schools could reach. This shows private schools have a special kind of strength. While the national pass rate collapsed to five percent, private schools kept a 30 percent pass rate. Their teaching methods, better resources, and ability to adapt likely protected them from the problems caused by the rushed curriculum. Further highlighted by Semel, Vitale *et al* (2026) [29], a resource-constrained and environmental gap in materials, electricity outages, and inadequate study space at home create practical barriers.

The gap between private schools and all others is not small - it is a huge divide. Government schools, on the other hand, show deep struggles and big differences within themselves. Overall, scores are very low, but a tiny number of students in these schools still manage to do very well, matching private school students. This tells us the problem isn't a lack of talented students or hardworking teachers. Instead, the system fails to help most students succeed on a larger scale.

Church schools add another layer to the story. They seem to perform better overall, with most students scoring in the mid-range. However, for the majority of their students, they aren't significantly different from government schools. The only real advantage they have is at the very top - they are better at helping their best students excel. This means that while church schools avoid some of the worst problems, they still face many of the same challenges as government schools, like limited resources and large classes, just to a lesser extent.

Geography of disadvantage beyond a simple urban-rural binary

The geographic analysis shows that educational disadvantage is more complicated than just a simple city-versus-countryside divide. As expected, urban schools in Upolu do much better than rural schools on the same island. But when you add Samoa's second major island, Savaii, into the picture, things get more interesting.

The comparison between Rural Upolu and Savaii is especially telling. On the surface, Savaii seems to be failing almost all its students, with most scoring in the single digits. However, when you directly compare Savaii to rural schools on the main island of Upolu, a different picture emerges. The middle group of students in Savaii scored in the high teens (18-20), while similar students in Rural Upolu scored much lower (10-13). This means Savaii's students actually performed better and more consistently than those in Rural Upolu. This tells us that rural doesn't mean the same thing everywhere. Maybe the close communities in Savaii offer stronger support for students, or perhaps the Savaii schools studied here have certain strengths that Rural Upolu schools lack. Semel, Vitale *et al* (2026) [29] pointed out that some of Samoa's Year 12 Economics students generally possess solid oral and cultural communication skills within their own

context. Perhaps such strengths exist in some students in Savai'i.

This complexity is backed up by data over time. While Urban Upolu saw a massive drop in scores in 2024, Savaii stayed steady. This suggests Savaii was somehow protected from the factors that caused such damage elsewhere. We need more research to understand exactly what Savaii schools are doing differently to create this stability.

A Gender Gap in the crisis of education

One of the most concerning findings in this study is the huge gap in performance between girls and boys. The difference is shocking. Schools for girls are doing consistently well, with most students scoring in the 20s and 30s. In contrast, the school for boys is in complete collapse, with most boys scoring in single digits or low teens. When you compare boys to private school students, the gap becomes even clearer. A boy at the all-boys school will score somewhere between 8 and 18, while a private school student is guaranteed to score at least 32. This is not a small difference - it shows the system is failing boys entirely. As highlighted by Ullah and Ullah (2019) [33] in their research study, young girls have been dominating boys in terms of educational performance across different regions around the globe.

Even though the statistical test did not show a significant result (probably because there were not enough single-sex schools to compare), the real-world picture is clear: girls are dramatically outperforming boys. This points to a serious problem. We urgently need to look at how boys are being taught, what resources they have, and what cultural or social factors might be holding them back. The data suggests that the problems causing the national decline have not affected everyone equally - they have hit boys much harder, especially those in public single-sex schools.

Summary of Inequalities - a three-tiered system

Putting all these findings together, Samoa's education system - at least for the SSLC Math exam - can be seen as three distinct levels: Top Tier: Private Schools and Girls' Only Schools. These are the high achievers. Middle Tier: Urban Upolu and Church Schools. They get moderate results, though still worried. Bottom Tier: Government, Rural Upolu, and Savaii schools. For most students here, the system has completely broken down, with average scores in the single digits. This is not just about performance - it's a map of unfair advantage. A student's success is heavily determined by what kind of school they go to, where it's located, and whether they are a boy or a girl.

Conclusion

In short, the 2024 SSLC Math results have exposed a deep crisis of fairness in Samoa's education system. The switch to a four-year secondary program was the trigger, but the real damage came from problems that already existed. Private schools showed they could weather the storm, rural areas and islands faced their own unique struggles, and boys' education completely collapsed. Together, these issues reveal a system that is not just having a hard time, it is fundamentally failing most of its students.

These findings call for immediate and targeted action. Simply reversing the curriculum policy will not be enough. Samoa needs to take a hard look at how resources are shared, how students are taught, and what social and cultural factors are causing an entire generation to fall behind.

References

1. Akpen CN, Asaolu S, Atobatele S, *et al*. Impact of online learning on students' performance and engagement: a systematic review. Discov Educ. 2024;3:205. https://doi.org/10.1007/s44217-024-00253-0
2. Alofaituli B. Religion and development in Samoa: Time to draw on the strength of local culture? Dev Policy Rev. 2023;41(2). https://doi.org/10.1111/dpr.12746
3. Alvarado J, Galigao RP. Assessing the Effectiveness of Curriculum Implementation Across Global Educational Systems. Int Multidiscip J Res Innov Sustain Excell. 2024;1(11). Available from: https://risejournals.org/index.php/imjrise/article/view/851
4. Deng Z, Chapman A, Gericke N. Powerful knowledge, school subjects and the curriculum: an international and comparative perspective. J Curric Stud. 2025;57(4):365-81. https://doi.org/10.1080/00220272.2025.2528744
5. Eisenschmidt E, Oppi P. School culture profiles in relation to teachers' work-related experiences and teaching practices. Sch Eff Sch Improv. 2025:1-27. https://doi.org/10.1080/09243453.2025.255666
6. Evans DK, Acosta AM, Yuan F. Girls' Education at Scale. World Bank Res Obs. 2025;39(1):47-74. https://doi.org/10.1093/wbro/lkad002
7. Evans DK, Acosta AM. Education in Africa: What Are We Learning? J Afr Econ. 2021;30(1):13-54. https://doi.org/10.1093/jae/ejaa009
8. Fitzgerald A, Avirmed T, Battulga N. Exploring the factors informing educational inequality in higher education: a systematic literature review. Perspect Policy Pract High Educ. 2025;29(4):199-209. https://doi.org/10.1080/13603108.2024.2381121
9. Hopfenbeck TN, Lenkeit J, El Masri Y, Cantrell K, Ryan J, Baird JA. Lessons Learned from PISA: A Systematic Review of Peer-Reviewed Articles on the Programme for International Student Assessment. Scand J Educ Res. 2018;62(3):333-53. https://doi.org/10.1080/00313831.2016.1258726
10. Hudson B, Olin-Scheller C, Wegner A. A critical knowledge-led approach to curriculum research and teacher education across school subjects. J Curric Stud. 2025;57(5):507-26. https://doi.org/10.1080/00220272.2025.2575653
11. Hunter J, Nguyen B. Forever feeling guilty: How ineffective curriculum planning approaches can exacerbate teacher workload and undermine professional satisfaction. Curric Perspect. 2024;44:573-7. https://doi.org/10.1007/s41297-024-00281-8
12. Hunter J, Samu T, Rimoni F. Re-framing Pacific education, teacher knowledge and practice: innovations from within Aotearoa New Zealand. J Educ Teach. 2024;50(5):783-800. https://doi.org/10.1080/02607476.2024.2413451
13. Karlen Y, Hertel S, Grob U, Jud J, Hirt CN. Teachers matter: linking teachers and students' self-regulated learning. Res Pap Educ. 2025;40(3):414-41. https://doi.org/10.1080/02671522.2024.2394059
14. Kumar K. Girls outperform boys in literacy and numeracy: PILNA report. FBC News. 2024 Sep 4. Available from: https://www.fbcnews.com.fj/news/girls-outperform-boys-in-literacy-and-numeracy-pilna-report/
15. Kyriakides L, Vrikki M, Psycharis G, Vandervieren E,

Barbier K. Supporting teachers' participation in Lesson Study with Facilitators or Advisors: investigating the impact on their students' mathematical reasoning. Res Pap Educ. 2026:1-21. https://doi.org/10.1080/02671522.2026.2630348
16. McLaren J. Literacy and numeracy education in schools in Pacific Island states: Solomon Islands and Tuvalu. Canberra: Development Policy Centre; 2023. Available from: https://devpolicy.org/publications/reports/McLaren-Education-in-schools-in-Pacific-island-states_2023.pdf
17. McNamee L. Regional Politics in Oceania: From Colonialism and Cold War to the Pacific Century. J Pac Hist. 2025;60(3):454-6. https://doi.org/10.1080/00223344.2025.2464315
18. Ministry of Education and Culture (MEC). Secondary Education. Apia: Ministry of Education and Culture; 2025. Available from: https://www.mesc.gov.ws/secondary-education/
19. Mensah RO, Amponsah KD, Adiza Babah P, Jibril HS. Factors affecting students' academic performance and teachers' efficiency in Ghana; a case study of Wa senior high school. Cogent Arts Humanit. 2024;11(1). https://doi.org/10.1080/23311983.2024.2412944
20. Mikaelsson M, Wibeck V, Linnér B. Navigating the waves of change: Framing Pacific Small Island Developing States within a geopolitical and climate context. Environ Dev. 2025;25. https://doi.org/10.1016/j.envdev.2025.101270
21. Mudaliar C, Leach M, Barbara J. Popular attitudes to international relations in Samoa. Aust J Int Aff. 2025;79(6):938-53. https://doi.org/10.1080/10357718.2025.2511116
22. Nietschke Y, Dabrowski A, Arasi-Mulitalo M, Warren N. Building Education System Resilience in Samoa: systems, policies, and practices that foster equitable learning. Front Educ. 2025.
23. Nunkoo R, Thelwall M, Croes R, *et al*. Academic Publishing in Small Island Developing States: Does University Research Support Development? High Educ Policy. 2025;38:775-96. https://doi.org/10.1057/s41307-024-00368-x
24. Oduwaye O, Kiraz A, Sorakin Y. A Trend Analysis of the Challenges of International Students Over 21 Years. Sage Open. 2023;13(4). https://doi.org/10.1177/21582440231210387
25. OECD. PISA 2018 results: What students know and can do. Paris: OECD Publishing; 2019.
26. Pak K, Polikoff MS, Desimone LM, Saldívar García E. The Adaptive Challenges of Curriculum Implementation: Insights for Educational Leaders Driving Standards-Based Reform. AERA Open. 2020;6(2). https://doi.org/10.1177/2332858420932828
27. Popa S. Towards 2030 and beyond: challenges, constants, and the need to transform education. Prospects. 2024;54:507-13. https://doi.org/10.1007/s11125-024-09715-7
28. Semel R, Muliaina P, Amituanai FS. A longitudinal trend analysis of proficiency and performance in the Samoan Year 13 mathematics national examination: 2006–2024. Int J Multidiscip Res Growth Eval. 2025;6(6):1157-67. https://doi.org/10.54660/IJMRGE.2025.6.6.1157-1167
29. Semel R, Vitale SE, Taotofi O, Amituanai FS. Bridging the Gap: Curriculum Reform, Systemic Barriers, and Student Voices on Exam Readiness in Samoa. Int J Multidiscip Res Growth Eval. 2026;7(1):612-24. https://doi.org/10.54660/IJMRGE.2026.7.1.612-624
30. Short M, Plummer RS. Three exemplars of Church and agency partnerships growing hope in uncertain times: a practical theology conversation. Pract Theol. 2024;17(6):536-50. https://doi.org/10.1080/1756073X.2024.2399916
31. Stenberg I, Sundgren M, Bostedt G. The boy paradox: exploring motivational factors in gender differences and academic achievement across ages 9–14 years. Educ Psychol Pract. 2025;41(2):211-30. https://doi.org/10.1080/02667363.2025.2469242
32. Tuia TT, Schoeffel P. Education and Culture in Post-colonial Sāmoa. J Samoan Stud. 2016;6:41-51. Available from: https://www.sadil.ws/bitstream/handle/123456789/23/JSS-volume-6_FINAL_9.12.2016-1.pdf?sequence=1&isAllowed=y
33. Ullah R, Ullah H. Boys versus girls' educational performance: Empirical evidences from global north and global south. Afr Educ Res J. 2019;7(4):163-7. https://doi.org/10.30918/AERJ.74.19.036
34. UNESCO. Regional collaboration strengthens education in Pacific Island countries. Paris: UNESCO; 2025. Available from: https://www.unesco.org/en/articles/regional-collaboration-strengthens-education-pacific-island-countries
35. Vaka'uta FCK. Rethinking Pacific Education for the Future: Cultural Wellbeing and Youth Resilience for Sustainable Pacific Societies. ResearchGate; 2023. Available from: https://www.researchgate.net/publication/372245269_
36. William D. The impact of church-based ESL classes on their students' social capital. J Contemp Minist. 2025;10(1).

How to Cite This Article
Semel R, Muliaina P, Amituanai F. The 2024 Samoa Secondary School Curriculum Reform: Exposing Systemic Inequalities in Mathematics Achievement by School Type, Location, and Gender. International Journal of Multidisciplinary Research and Growth Evaluation. 2026;7(1):1044-1060. doi:10.54660/.IJMRGE.2026.7.1.1044-1060.