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The State of Education in Adamawa State

September 2023

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1. Executive Summary

- **Adamawa State has demonstrated persistence to improve education quality via multiple initiatives spanning the last two decades.** The State has recently begun an ambitious State Education Sector Strategic Plan, with access, equality, and educational standards at its core.

- **Under the current education system, however, learning outcomes in Adamawa State are critically weak.** According to UNICEF, only 10% of pupils in Adamawa State possess foundational literacy skills throughout primary school, while 92% of these pupils cannot solve fundamental maths problems (UNICEF, 2021).

- **The number of out-of-school children in Adamawa is a severe challenge for schools.** According to UNESCO, there are more than 437,000 children out of school in Adamawa (UNESCO 2022).

- **Remediating these challenges will require literacy- and numeracy-focused instruction targeted to pupils' current learning levels, structured pedagogy for teachers to optimise instructional time, and data-informed school management systems.** These will be critical for implementing holistic educational reforms and ensuring that pupils have every necessary tool to close the dramatic gaps in their learning.

2. Adamawa State Has Made Dedicated Efforts to Promote Education Quality Over Time, but Learning Outcomes Are in Dire Need of Improvement

For decades, Adamawa State has been active in introducing reforms to the education system that benefit thousands of the state's children, and recent initiatives have maintained this momentum. Since 2016, the state government has committed significant funding toward the provision of free school meals. Under the National Home-Grown School Feeding Program (NHGSFP), 162,000 children are fed monthly across 1,286 schools in the state. This has led to an increase in school enrollment, helping to reduce the number of children still out of school across Adamawa State.

More recently, in 2019 a "free education" policy was introduced. This removed many of the costs which had previously acted as barriers to education, such as school fees and the cost of supplemental materials like textbooks. Adamawa's free education policy reaffirms its commitment to increasing access towards education across the state, and represents an important step toward universal enrolment.

In 2023 the State embarked on a new State Education Sector Operational Plan (SESOP). The plan aims to improve foundational learning outcomes, increase enrolment, and increase the

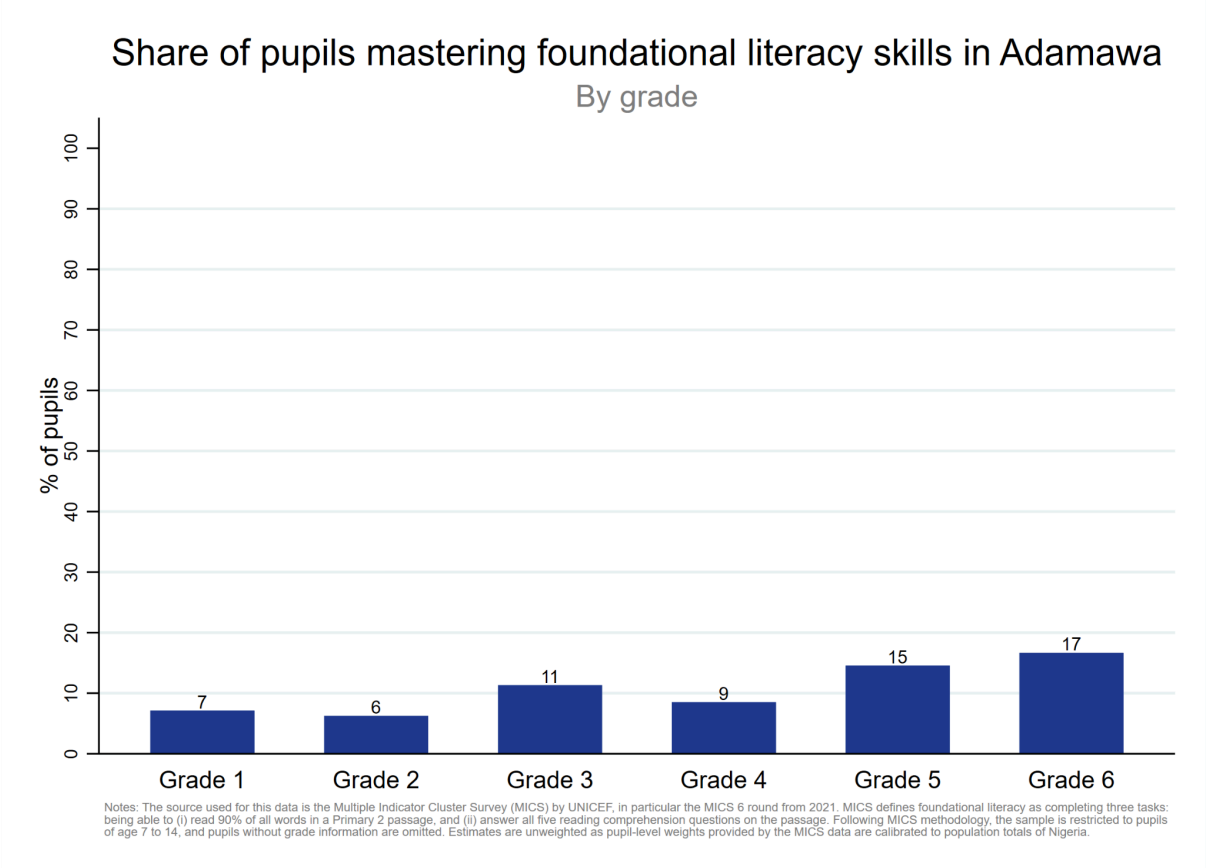
number of teachers in the state. This ambitious plan was conceived in partnership with UNICEF, demonstrating Adamawa's willingness to work with outside partners in order to deliver excellent results for the state's youth.

Having made these foundational investments, the success of Adamawa State's current objectives is now predicated on the ability to foster significant learning outcomes among the country's primary–school-attending population. Ensuring that all pupils achieve the utmost academic success will ensure that there are meaningful returns on the state's variety of investments. However, Adamawa State is not an exception to the extremely weak learning outcomes seen throughout Nigeria. According to UNICEF'S Multiple Indicator Cluster Survey, the vast majority of Adamawa State pupils lack foundational literacy and numeracy skills (MICS 2021), and the state is currently facing a significant learning crisis. In fact, as learning assessments become more widely available, it has become clear that learning levels are consistently low throughout Adamawa State, and they are falling well below the nationally and globally expected levels for a high-performing education system.

a. Literacy levels in Adamawa State are low and do not improve significantly grade-on-grade

Reading is a foundational skill that unlocks the ability to master content in other subjects, and in turn, full mastery of literacy skills is essential for children's success in school and beyond. However, the most recent evidence on learning outcomes in the state highlights that current literacy levels in Adamawa State are critically low. The Multiple Indicator Cluster Survey (MICS, 2021) — led and administered throughout all of Nigeria by UNICEF — quantifies the share of pupils who have mastered 'foundational literacy' as those children who are able to accurately read at least 90% of all words in a Primary 2 passage, and who can answer five reading

comprehension questions about this passage.



Only 11% of all pupils enrolled in Primary 1–Primary 6[1] in Adamawa State reach this benchmark in foundational literacy. Even by Upper Primary, more than four-fifths of pupils in the state do not reach the minimum foundational literacy goals as defined by UNICEF. This shows that — as other sources have highlighted (Adeniran & Obiakor, 2022) — the education system in Adamawa, and in Nigeria as a whole, has traditionally allowed pupils to move on to higher grades regardless of their content competency and, in fact, many of them are leaving school without ever mastering the most foundational reading skills.

Put differently, a large swath of pupils in the state spend years in the education system without mastering the ability to deeply engage with written material. This is a pattern that implies that a large amount of the funding devoted toward education in Adamawa is not delivering a satisfactory return on investment in terms of literacy outcomes.

[1] Note that MICS was developed to benchmark national learning levels. Therefore, when zooming into smaller sub-samples like state*grade pairs, there might be some volatility in the results due to smaller sample sizes.

From the point of view of the academic career of pupils, this stagnation in foundational literacy can be highly problematic for future learning outcomes. Although full mastery of literacy skills by Primary 3 is widely acknowledged by researchers as a major threshold to ensure success throughout the rest of a pupil's academic career (Annie E. Casey Foundation, 2010), 89% of pupils fail to achieve this benchmark by Primary 3 in Adamawa (MICS, 2021). Therefore, the current status quo in the education system in Adamawa State is failing to place most pupils on a positive trajectory toward gaining meaningful foundational literacy throughout their primary schooling careers.

These results can also be contextualised by translating the achievement levels recorded in MICS (2021) into highly policy-relevant, international metrics, like 'learning deprivation'. Learning deprivation is a metric introduced by the World Bank and UNESCO, and it captures the dearth of foundational skills in reading by quantifying the share of pupils who cannot read and comprehend a simple text by the end of primary school. Using MICS data, this metric can be estimated by calculating the share of age 10 pupils who answered every reading comprehension question correctly, in line with the Sustainable Development Goal 4.1.1.a — although this may still be an underestimate, especially relative to other international comparisons, as this passage was tailored to Primary 2 and not for this older age group. In the case of Adamawa State, at least 80% of all pupils are understood to be experiencing learning deprivation by age 10. This is a proportion that indicates that the majority of children are not mastering basic literacy skills at an appropriate point in their academic careers.

Whether examining literacy outcomes in absolute terms, or relative to the world, the situation in Adamawa State is unambiguous: children are not learning to read, and trends suggest the situation is likely to only get worse if left untreated.

Box 1 How overambitious curricula are facilitating low learning outcomes in low- and middle-income countries

Curricula play a crucial role in educational systems because they establish standardised content and instructional approaches on a system-wide scale. Ideally, curricula should align with the economic and developmental needs of students and the country. However, in many low- and middle-income countries, researchers have documented the common discrepancy between students' actual performance and curricular expectations, particularly in the early grades — resulting in "overambitious curricula" (Pritchett & Beatty, 2015). In other words, many countries have national curricula

that fail to focus on key fundamental skills, such as foundational literacy and numeracy (FLN), and instead expect students to grow at a much faster rate than what is feasible for the typical student's preliminary learning levels. This discrepancy has been suggested to be one of many contributors to the current learning crisis (Glewwe et al., 2009; Muralidharan et al., 2019). Importantly, the consequences of poorly structured curricula that drive low foundational literacy and numeracy outcomes are not exclusive to the early grades, due to the cumulative nature of learning. Students who perform poorly in early elementary school, are more likely to drop out when compared to their peers (World Bank, 2017). On the other hand, mastery of FLN skills is correlated with future success in secondary school and future employment opportunities (Evans and Hares, 2021; Muralidharan and Sundararaman, 2010). Therefore, effectively implemented, large-scale curricular reforms focusing on foundational literacy and numeracy in low- and middle-income countries can bridge the gap between students' knowledge and policymakers' educational goals and lead to improved learning outcomes and increased regional economic productivity.

Curricular changes that increase focus on FLN — either through stronger pedagogy or more instructional time — have been shown to assist low-performing students in achieving national standards. For example, a study in India implemented a curriculum that was better suited to the median student's level with scientifically tested learning materials and accessible technology, which resulted in increased achievement in maths and Hindi after just 4.5 months (Muralidharan et al., 2019). In Tanzania, targeted restructuring of early elementary curriculum to better suit the median student's performance was found to increase all participating students' proficiency in literacy and numeracy in grades 1 and 2. Students were twice as likely to reach minimum proficiency in grade 2 maths and significantly improved their language proficiency when compared to their peers who did not receive the restructured curriculum (Rodriguez-Segura & Mbiti, 2022). In both studies, researchers note that a key element to the success of these programs was the initial low learning outcomes in the nation. Bringing instruction closer to the average student's levels led to wide-spread benefits, as the median student in many low- and middle-income countries tends to have similar outcomes to the lowest performing students. Also, in both India and Tanzania, these curricular reforms were found to be cost-effective in that they did not require expensive inputs, such as increased staffing in schools or additional classroom resources. Because curricula can be restructured and implemented on a system-wide scale with minimal cost, curricular reforms can yield high returns on learning outcomes in LMICs.

To effectively develop and implement high-quality curricula, data collection and effective educational pedagogy must be incorporated with intention. Accurate and regular data collection on student performance is crucial for tailoring the curriculum to the needs of the student population. Analysing student performance throughout the academic year enables policymakers to identify areas where students are struggling and allocate more attention accordingly. In a curriculum reform in Costa Rica (Rodriguez-Segura, 2020), the lack of monitoring teaching methods and reliance on end-of-year results resulted in unintended consequences, such as long-term grade repetition and insufficient improvement in reading skills. However, when curriculum reforms are aligned with the median student's academic performance and incorporate effective pedagogical practices at the individual level, they can successfully enhance learning outcomes on a broader scale (Rodriguez-Segura & Mbiti, 2022). Well-designed curricula provide clear guidance to teachers regarding prioritised topics, pacing, and learning objectives for students at different academic stages, leading to improved learning outcomes without requiring high-cost measures, such as additional teachers or instructional time. By prioritising mastery of essential pre-skills in curricula before introducing new content, governments can significantly enhance the likelihood of meaningful learning outcomes for both whole classes and individual students.

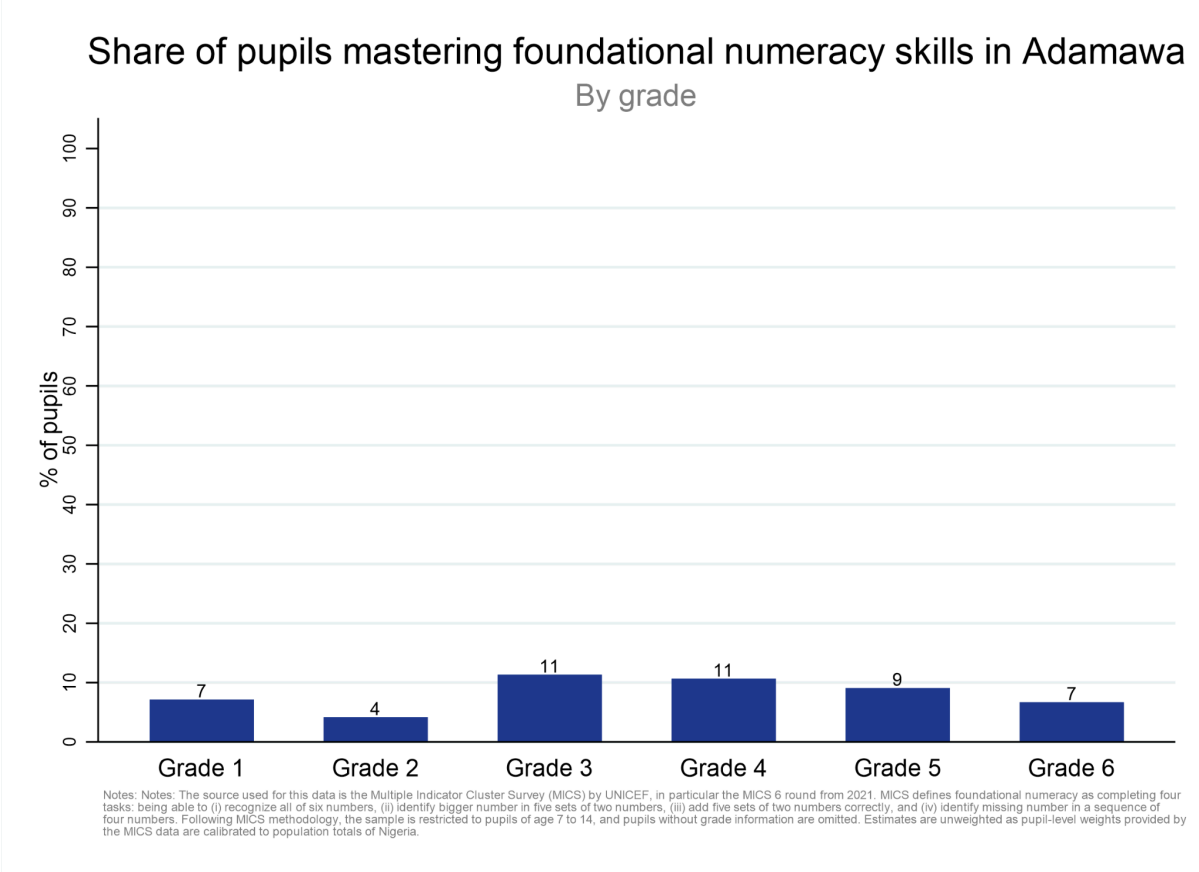
b. Foundational numeracy levels are also weak

Numeracy levels show an even weaker pattern than those shown in literacy. Strong numeracy skills are crucial for continuing with more advanced education in later grades, and for conducting daily activities outside of school. It is especially important for pupils in Adamawa

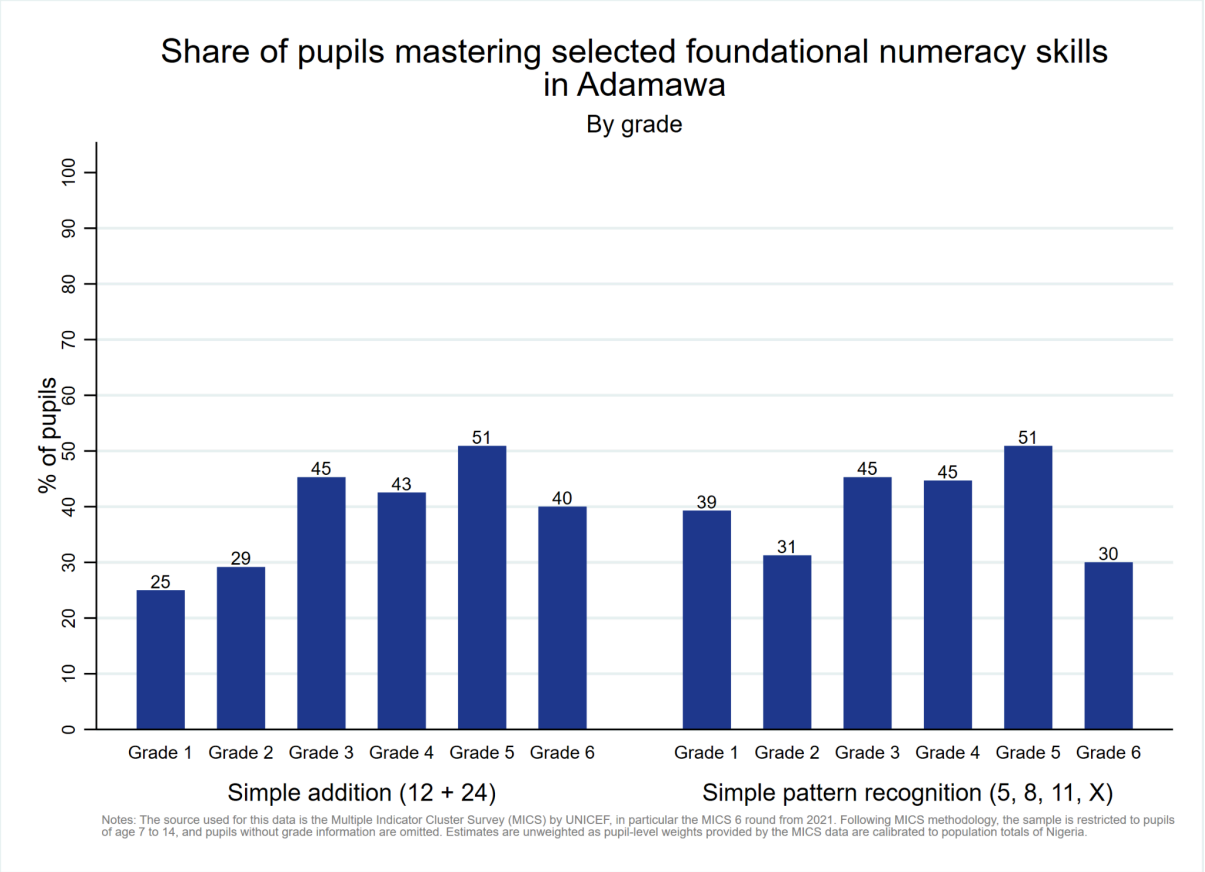
State to receive an uplifting numeracy education when considering that Nigerian pupils display the lowest performance on numeracy skills among 21 other African countries, and additional sources like the Nigerian Education Data Survey (NEDS) found that more than three-quarters of assessed lower-primary pupils in Nigeria had not yet mastered basic skills like number identification (Obiakor, 2023). Pupils in Adamawa State are not an exception to the critically weak performance in numeracy across Nigeria, and they are lagging far behind where they should be given the curricular expectations for pupils in their grade groups.

Using the same data source from UNICEF as was used to gauge literacy, the share of pupils who lack 'foundational numeracy' can also be quantified for Adamawa State. UNICEF defines a pupil as having 'foundational numeracy' skills if they can complete all exercises in basic number reading, number discrimination, addition, and pattern recognition. Through this lens, it appears that being innumerate in Primary 1 and Primary 2 is almost a universal experience among pupils in the state.

Across Primary 1–6, 8 in 10 pupils in Adamawa State are innumerate, and even by Upper Primary, 90% of pupils still do not reach this basic benchmark. Grade-on-grade improvement is flat — reflecting a similar pattern in Adamawa as in the rest of the country, where pupils spend years in formal schooling without a meaningful return on their efforts in numeracy skills.



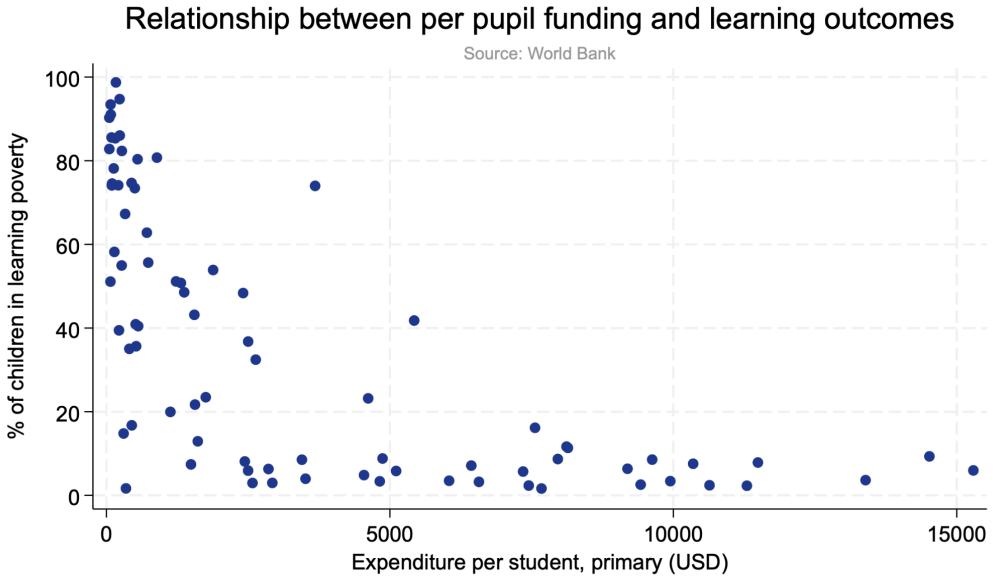
To understand these gaps more concretely, one can examine students' skills in two specific areas: basic two-digit addition without carrying (e.g., 12+24) and a simple skip-counting pattern, where pupils were asked to identify the next number in the series (e.g., 5…8…11…X). In Adamawa State, over 60% of all pupils in Primary 1–6 cannot solve 12+24, and even by Upper Primary, more than half of pupils cannot solve this basic addition problem. When it comes to skip counting, 60% of Primary school pupils cannot fill in the number that correctly completes the pattern 5…8…11…X. This is especially problematic as skip counting is a foundational skill that pupils must possess to then develop a deep, conceptual knowledge of multiplication operations later on.



According to the curriculum and to cognitive science, these two basic skills should be mastered by the very early grades of a pupil's educational career. The fact that, even by late primary, there is a significant share of pupils who have spent years in the public education system and cannot solve these speaks to the fact that pupil competencies are severely misaligned with expected levels for their respective grades. In turn, this suggests that a large number of pupils have not been able to keep up with an increasingly more challenging school curriculum, and that without additional intervention, the gap between their skills and where the curriculum expects them to be will keep increasing over time, hindering their prospects for future knowledge and putting at risk other soft skills, like pupil motivation (Rameli, 2016).

c. The educational and economic value of closing these learning gaps

Adamawana has experienced significant economic growth in recent years; its GDP now stands at 2.66 trillion Nr as of 2021 (BudgIT 2021). Recently, the state has capitalised on its economic successes by investing in its education sector, with 20 billion Nr allocated towards the sector in 2022.



Despite this, Adamawa, and Nigeria as a whole, is still underspending on education in absolute terms. Nigeria spends 1.4% of its GDP on education, which is far lower than the Education 2030 agenda's recommended 4–6%. When examining the correlation between funding and educational outcomes worldwide, a clear pattern emerges: strategic investment in education holds significant importance. Studies cited by the World Bank indicate that sustained increases in annual per-pupil spending are positively correlated with improved test scores and higher school completion rates, and even translate to better wages for working adults (Evans, 2019). Thus, increased allocation of resources on education will be an important component of continued economic growth.

To ensure maximum impact, increased monetary investment in education must be accompanied by transformative interventions that optimise the utilisation of existing resources such as teacher salaries, school buildings, and books, thereby enhancing children's educational outcomes. In the end, it is the educational attainment of citizens–and not inputs–that will drive the advancement of Adamawa State's economy. However, current data reveal that educational outcomes in India are falling short of expectations.

Currently, Nigeria is not enjoying an effective return on its education investment. Pupils learn the equivalent of only 5 years' worth of formal education, despite there being 9 years of compulsory schooling (USAID), due to poor education quality and high dropout. Especially compared to the global average, these are very weak outcomes — placing the country's human capital index at

the 141st rank out of 167 countries (USAID). As a result of shortfalls like these, a Nigerian child born in 2020 will only be 40% as productive when entering the labour market as they would have been with a strong education (World Bank, 2020). Consequently, Nigeria is missing out on the potential for a significantly stronger economy. Researchers estimate that if all current pupils in the Nigerian education system were to master at least the most fundamental learning outcomes, the Nigerian economy would grow by over USD 5.5 trillion by 2100, which is more than five times (515%) the size of the current economy (Gust et al., 2022). Given that the economy of Adamawa State constitutes approximately 1.3% (BudgIT, 2022; World Bank, 2021) of the total Nigerian economy, this means that closing the gaps in foundational learning in Adamawa State could amount to a benefit of USD 71 billion over the next 80 years. Strategic education reforms will be key in addressing this shortfall, leading to huge economic benefits and putting Adamawa State on a path toward prosperity.

2. Low Enrolment Rates and Public Opinion Speak to an Education System that Is Not Delivering

a. There is still a large number of out-of-school children in Adamawa State

Pupil enrolment alone does not guarantee learning, but it is a necessary prerequisite. Therefore, enrolment rates are an early metric that can be monitored to assess an education system's health. In Adamawa State, there are more than 437,000 children out of school (UNESCO 2022), representing a large share of pupils contributing to the severe enrolment challenge throughout all of Nigeria, where there are 9.7 million children out of school at the primary level alone (UNESCO, 2022). This means there are more children out of primary school in Nigeria, in absolute terms, than in any other country in the world (Adeniran, 2020).

Enrolment rates can also serve as an indicator that reflects communal prioritisation of education based on levels of confidence in the education sector. According to recently published research (Oyekan et al., 2023), poor education quality was a foremost supply-side reason for Nigerian children to drop out of government schools or refrain from entering school. Therefore, a large number of enrolled pupils, like what is currently being experienced in Adamawa State, evidences a lack of trust in the education system among parents, and it indicates an insufficient

level of confidence in the returns on education in the state, given the scarce learning that actually takes place in school. In other words, parents and pupils who do not see the level of education quality or significant learning gains that would justify the investment of their time are more likely to forgo formal education altogether.

Box 2 The Problem of Out of School Children Worldwide

The world has made great strides toward increasing educational access, with currently nine out of every ten children enrolled in primary school (UNICEF, 2022). Yet, achieving the Fourth Sustainable Development Goal (SDG4) however, which aims for universal enrolment by 2030, remains distant as 244 million children still remain out of school worldwide (UNICEF, 2022). The situation is particularly acute in low- and middle-income countries (LMICs), where one in every six children is out of school (UNICEF, 2019). This group likely represents children living in extreme poverty and/or remote areas with poor access to schools. Therefore, enrolling them is the first step toward guaranteeing learning outcomes for some of the most marginalised children in society, bringing them a multitude of benefits such as improved health and lower poverty rates (UNICEF, 2023).

The consequences for out-of-school children are severe. Although it is common across LMICs for children who regularly attend school to still be subject to low learning outcomes, those children who are missing from school and not learning at all, and will quickly fall even further behind their peers (Bau, 2021). Moreover, the gaps between those participating in formal education and those excluded from it grow year over year, further decreasing the likelihood that out-of-school children will ever be in alignment with the performance standards set by the education system.

Traditionally, poverty and violence have been viewed as the two of the most significant barriers preventing a child's participation in education. The poorest primary school age children are 4 times more likely to be out of school compared to their peers from the richest households (UNICEF, 2018), as they are often not able to meet costs associated with education, such as school fees, uniforms and textbooks (Global Citizen, 2019). Violence can destroy school infrastructure as well as displacing populations, making accessing school more difficult (World Bank 2022). Efforts towards eliminating poverty and violence remain crucial, and progress in this area will go a long way to increasing enrolment worldwide. There exists however a third, and often overlooked, factor keeping children out of school that must be addressed if the world is going to achieve the promise of universal enrolment: the 'learning crisis'.

The learning crisis refers to the chronically weak learning outcomes still present across global education, with a particular concentration in low- and middle-income countries. If the perceived value of education is low, parents will be less likely to enrol and send their children to school. This is an expected response, as in a context of limited resources, parents have to make difficult decisions on where to allocate their scarce resources (Rivken, 2005), and will be more likely to put these towards education if they believe this investment will indeed reap rewards. While there are a variety of ways through which to improve parents' perception of an education system, increasing learning outcomes has been consistently cited as the most effective (Alderman, 2001), and therefore represents an effective route through which to increase enrolment worldwide. For each year of learning a child receives, their future earnings will increase (World Bank 2017), helping those newly enrolled students, who typically come from marginalised communities, to lead healthier, wealthier, more productive lives. This in turn will reduce poverty, another factor suppressing enrolment, creating a positive cycle of educational enfranchisement uplifting the world's most vulnerable learners.

Addressing the problem of out-of-school children requires tackling its root causes. Though progress has been made in the global fight against poverty and violence, these are incredibly complex issues, and remain difficult to solve. Addressing low learning outcomes on the other hand, through smart investments in educational quality (GEEAP, 2023), represents an achievable step that visionary governments can take toward increasing enrolment in education, and make progress toward solving the problem of out-of-school children worldwide.

b. The education sector is seen as an important, but underfunctioning, institution

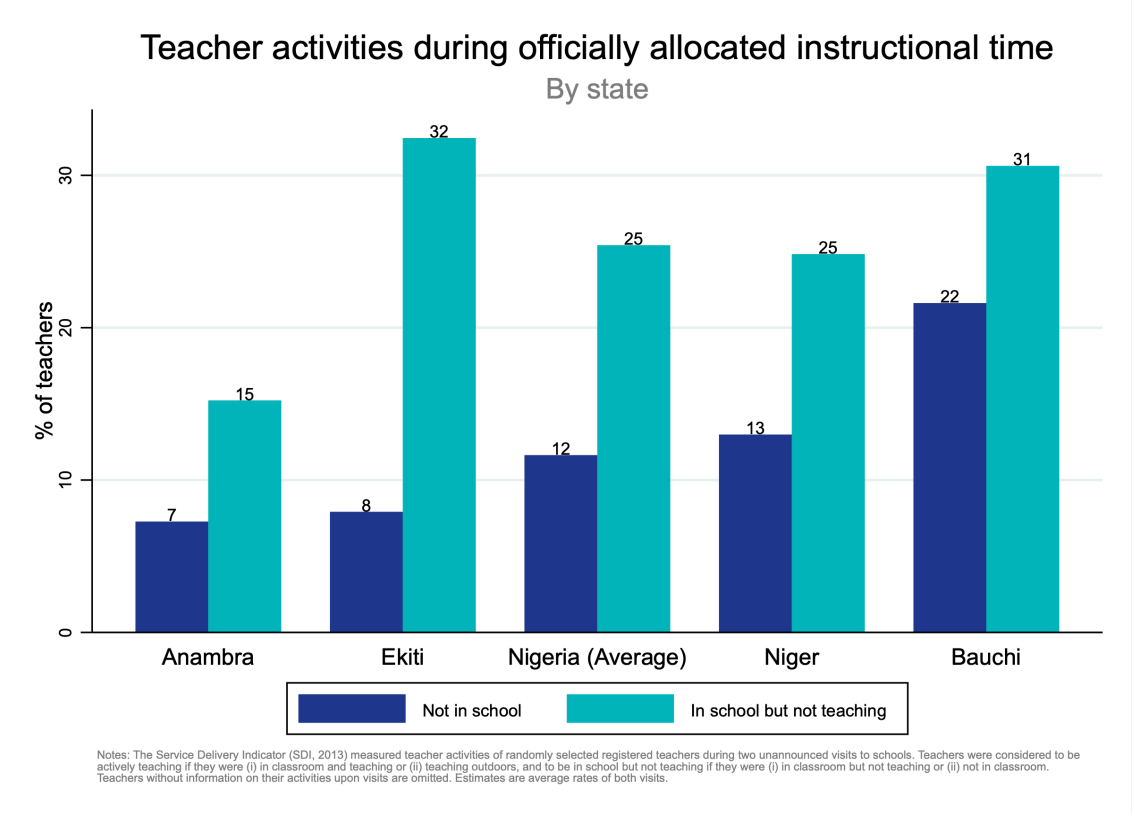
Citizens' opinions and attitudes toward public policy can be a powerful reference for the future priorities of governments. In this sense, public opinion data like the Afrobarometer survey (2021) can be leveraged to better understand how the Nigerians feel about their education system. When asked to rate government performance on education, 66% responded that its quality was either "bad" or "very bad". Worryingly, it appears that citizens' views are becoming more critical over time; when asked the same question in 2013, responses had been much more positive, with half of Nigerians approving of the government's performance on education (Afrobarometer 2021). While Nigerians are typically critical of the government's performance on education, they consistently identify it as one of the issues they view as most important. In Adamawa State for example, respondents surveyed placed education in the top half of all priorities when asked what the government needs to improve in the state (Afrobarometer, 2021).

In other words, while residents of Adamawa State think education should be among the top priorities of the government, they think that current government performance in this space is weak.

Therefore, strengthening the current education system will not only improve current learning gaps and deliver economic prosperity, but it will also address one of the main policy concerns among the residents of Adamawa State.

3. The Current Systems Around Teacher Support and Accountability Are Not Empowering Teachers to Deliver High-quality Instruction for All Pupils

a. A large portion of the allocated schooling time is not actually being translated into instruction



One essential driver of learning outcomes is whether teachers are actually present in their classrooms and actively delivering lessons when they are supposed to be. For this, education systems need coherent governance and support for teachers and head teachers, both to prevent teacher absenteeism and to encourage active instruction. Unfortunately, research shows that teacher absenteeism and off-task behaviours are rampant in low- and middle-income countries (Mbiti, 2016), and Nigeria is not an exception. Furthermore, other analyses also show that the education workforce in Nigeria is still recovering from the shocks

caused by the COVID-19 pandemic, which underscores the need for professional development that promotes acclimatising to the changed education environment (Adeniran, 2020).

According to the World Bank's Service Delivery Indicators survey (SDI, 2013), less than two-thirds of teachers in Nigeria were actively teaching during periods when they were expected to do so across two monitoring visits to schools. Although data on teacher activities do not exist for Adamawa State in particular, it is highly unlikely that teacher absenteeism or time off-task in Adamawa would be significantly different from the rates seen nationally, as presented in this report and other research cited. Overall, these findings indicate that improvements in governance are needed to gradually dissuade teachers from behaviours that detract from optimal learning gains for pupils and that simultaneously pose a large fiscal burden for the state. As such, the appropriate preventative measures should be applied to mitigate likely teacher absenteeism in Adamawa State.

Box 3 Teacher absenteeism in low- and middle-income countries: challenges, implications, and effective solutions

Teacher absenteeism is a deep and widespread challenge that jeopardises returns on substantial investments in student learning outcomes and enrolment outreach (World Bank Group, 2017). Teacher salaries in low- and middle-income countries (LMICs) often represent a significant portion of the public education budget. For instance, in Uganda, Tanzania, Nepal, and Namibia, 60–95% of the government budget that is earmarked for education is invested in teacher salaries. Yet, high rates of teacher absenteeism have been consistently recorded across many LMICs: In a global study, teachers were not in school 16% of the time in Bangladesh, 18% of the time in Togo and Senegal, and 45% of the time in Mozambique (Chaudhury et al., 2006). Even among the teachers that were present in school across 8 Sub-Saharan African countries, less than half of them were found to be in their assigned classrooms during instructional time when measured by the World Bank via drop-in visits (World Bank Group, 2017). Hence, the large shares of fiscal resources spent on teacher salaries, coupled with the ingrained prevalence of teacher absenteeism, indicates that the fiscal and educational repercussions of this issue are a serious policy concern that deserve immediate governmental action.

From a fiscal standpoint, one study in India found that an unauthorised teacher absence rate of 23.6% cost the government an estimated 1.5 billion INR in 2017 alone (Muralidharan et al., 2017). The World Bank has estimated that teacher absences also cost Senegal, Mozambique, and Tanzania over 300 million USD each in 2013 (World Bank Group, 2017). This financial loss not only correlates with diminished learning gains due to inadequate instruction time and quality, but also with the payment of salaries using limited government funds in contexts where public budgets are particularly constrained.

From an academic perspective, for the students in the system, the most direct consequence of teacher absenteeism is significantly reduced instructional time, which, in turn, translates into weaker learning outcomes. According to The World Bank's Service Delivery Indicators, out of the 8 LMICs that were surveyed in sub-Saharan Africa, including Nigeria, Kenya, Uganda, and Togo, an average of 2 hours and 46 minutes of instructional time was lost daily due to teacher absenteeism (World Bank Group, 2017). Teacher absenteeism not only detracts from total learning time, but also negatively impacts the quality of learning that takes place in school (Vargas & Patricia, 2016). When classes are combined to compensate for inconsistent teacher attendance, students experience disruptions in their lessons. Furthermore, chronically absent teachers were found to be less productive in school when compared to their peers (Utami & Vioreza, 2021). This lack of consistency and quality contributes to parents and student's poor perceptions of the public education system, which leads to lower rates of enrolment and attendance among students, therefore permanently stunting their positive educational trajectories (World Bank Group, 2017).

High rates of teacher absenteeism are symptomatic of inadequate management systems and data tracking, which fails to facilitate accountability and motivation. Investment in increased teacher attendance can lead to more efficient national education systems that yield greater learning outcomes. By not targeting educational management systems and data collection, national governments are continually funnelling funds into an ineffective system that produces increasingly diminished returns.

Despite the severity of the challenges around teacher absenteeism, cost-effective, evidence-based solutions have been shown to yield high-impact results that mitigate this systemic issue. Studies done by entities like the World Bank and UNICEF suggest that funds should be directed towards improving accountability systems and to the oversight of teachers, rather than towards other applications, such as increasing staffing where shortages are not prevalent, or unconditional salary increases. For example, one study in Chile found that increasing teacher salaries by 4–30% decreased instructional time per student by an average of 1 hour a week, and another study in Indonesia found that the unconditional doubling of teacher salaries did not lead to better self-reported attendance or, most importantly, improved student learning outcomes (Vargas & Patricia, 2016; Utami & Vioreza, 2021). Conversely, cost-effective interventions that have been shown to significantly decrease teacher absenteeism include in-person or technological accountability systems, supportive and competent management, and increased data tracking. When studied in India, attendance tracking systems that relied solely on self-reporting among teachers were found to be ineffective. Instead, randomised, unannounced drop-in visits and daily check-ins to monitor both attendance and curriculum progression were found to produce substantial improvement, and ultimately increased the productivity of the existing workforce (Muralidharan et al., 2017). Therefore, investing in these systems that improve visibility of stakeholder behaviour and allow policymakers to better support teachers on a national level yields increased teacher attendance, performance, and, consequently, greater returns in student learning outcomes.

b. There is a troubling lack of teacher content knowledge in literacy and numeracy

Without external pedagogical support, education systems rely on teachers' content knowledge of the subjects they are teaching to deliver accurate instruction to pupils. However, in Nigeria, many teachers do not have a mastery of the content that they should be teaching in class. For example, according to the World Bank's Service Delivery Indicators survey (2013), the average

teacher in Nigeria cannot pass a mathematics and language test at the primary level, regardless of the subject that they teach[2]. In fact, the share of teachers in Nigeria who possess 'minimum teacher knowledge', as defined by the World Bank (2013), is only 4%. This represents a problematically weak grasp of the content that teachers need to be able to impart to their pupils, and requires urgent attention.

More specifically, on a literacy-focused evaluation composed of grammar, language, and reading comprehension tasks[3], more than a quarter of teachers (27%) were unable to answer every question on the grammar portion of the assessment correctly. The reading comprehension task revealed even bleaker results, on which only 39% of the teachers were able to answer all questions correctly. Therefore, while teachers are expected to take pupils from low literacy levels all the way to being proficient readers, 2 in 5 teachers in the country are not proficient readers themselves (World Bank, 2013).

In terms of numeracy, the majority of teachers in Nigeria answered questions correctly when they pertained to simple operations—like addition and subtraction—with whole, two-digit numbers. However, on incrementally complex operations like multiplication, there was a sharp decrease in the percentage of teachers who could answer questions correctly, and 1 in 2 teachers (48%) could not do these slightly more advanced, yet still foundational, operations. Another prominent area of concern for teachers' numeracy skills is their ability to apply operational skills in mathematics to real-world scenarios. An average of 80% of teachers in Nigeria could not correctly answer questions related to real–world-applicable skills, such as reading time on a clock and interpreting data on a graph. As such, it will be important not only to address low operational numeracy levels amongst teachers, but also to support their professional development so they can apply foundational numeracy skills to appropriate contexts pertaining to their work in the classroom (World Bank, 2013).

National data are used here to illustrate likely similar levels of teacher content knowledge in Adamawa State, in the absence of state-specific data availability. Given the low levels of teacher content knowledge in comparable states for which data are available, it is highly likely that a similar landscape exists in Adamawa. Based on this, there is a significant opportunity for

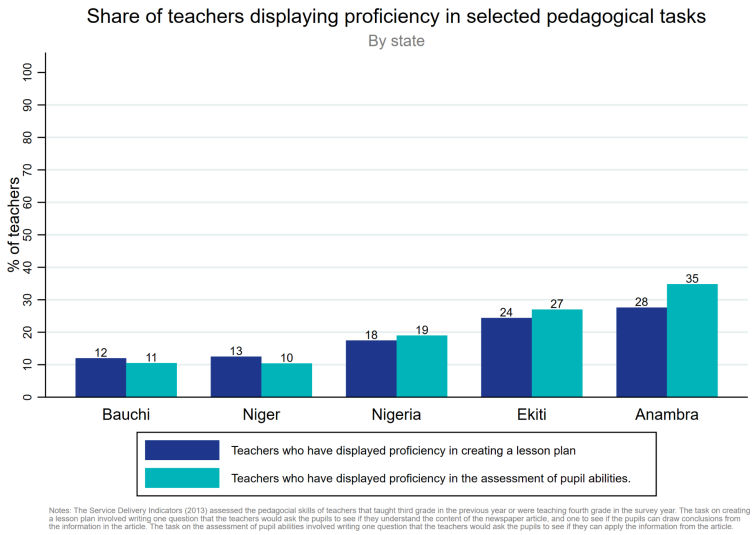
[2] 'Passing' is typically defined as achieving a score of 80% or more. This is the official proficiency threshold for this assessment, which is in turn used to understand the share of teachers who possess what is referred to as 'minimum teacher knowledge'.
[3] The reading comprehension tasks teachers were evaluated on is more specifically referred to as a cloze task, for which teachers would be given a reading passage with blanks deliberately inserted where words needed to understand the passage should be. Teachers were thus evaluated on their ability to select the correct word to fill in the blanks and make the passage sensical.

supporting teachers by equipping them with accurate and accessible subject-area content, which will allow them to instruct efficiently and foster needed foundational skills in their pupils.

c. Pedagogical practices across many states in Nigeria are poor

Even if teachers do have the necessary content knowledge and/or other aids to close the gaps in their instruction, they need to know how to best convey this information to their pupils. In this sense, effective teachers are well-equipped with the classroom management capabilities and preparatory expertise necessary to assess their pupils' disparate achievement levels, track disengaged pupils, and facilitate productive learning gains.

Because pedagogical skills are a major factor for elevating learning outcomes, another portion of the SDI assessments by the World Bank (2013) evaluated teachers in Nigeria on these skills, namely on their proficiencies in preparing a lesson plan and assessing children's abilities. While data were not available for Adamawa State specifically, overall, the overwhelming majority of teachers in Nigeria were unable to demonstrate competencies in these two areas. On average, only 18% of teachers in Nigeria displayed proficiency with preparing a lesson plan, and a similarly small share, 19%, demonstrated their ability to accurately assess children's abilities. Skills in both of these areas are essential for teachers to ensure that they are instructing equitably and accurately, regardless of their level of content knowledge, and especially under circumstances where they may be lacking in content knowledge.



Fortunately, teacher performance is not a fixed construct. It can respond to different pedagogical support systems. In this sense, the observation that the majority of teachers are not delivering high-quality instruction does not mean that they are incapable of growing, provided they are given access to high-quality support. Yet, research shows that teachers in other low- and middle-income countries are not getting the support they need to improve. According to the World Bank (2016),

> *Providing teachers with good quality professional development opportunities has been shown to be an effective way of increasing their competencies and improving student learning outcomes in many different settings. A series of systematic reviews have been undertaken recently to assess the impact of different interventions on student learning outcomes in developing countries. One of the most consistent findings from these reviews has been the positive and significant impact that interventions to strengthen teaching practice, introduce innovative instructional methods, and strengthen teachers' subject knowledge can have on student learning. However, in many countries, such professional development opportunities frequently fail to meet even minimum levels of quality and fall short of what teachers want and need (p. 1).*

One solution that could address the quality of teacher training is the use of structured pedagogy, which research has shown to be an effective method through which to improve teacher performance (Research Triangle Institute International, 2018). This has been especially effective in low- and middle-income countries. In a study, researchers reviewed 19 education programmes across 13 LMICs and found that structured teachers' guides can meaningfully contribute to improved learning outcomes in these contexts. Furthermore, a pillar of one of the most impactful interventions in low- and middle-income countries ever measured was indeed structured pedagogy (Gray-Lobe et al., 2022). Instituting an effective teacher training program, with structured pedagogy at its core, represents an achievable step toward improving the quality of teaching in Adamawa State.

4. Emerging Policy Recommendations

The findings of this report describe an education system fielding profound challenges. Adamawa State is currently facing the dual responsibility of continuing to enrol thousands of out-of-school children while simultaneously ensuring that their education meets the standards necessary to equip them with the skills they need to lead fulfilling lives. As it stands, the vast

majority of children in Adamawa State experience learning poverty, and they cannot rely on their teachers to gain the fundamental skills and knowledge that will lift them out of it. In turn, teachers do not have the content knowledge, classroom management, or leadership tools they need to exercise transformative pedagogy. A holistic, standardised approach will therefore be necessary for improving the education system.

With the appropriate investments, weak learning outcomes do not need to remain a perpetual feature of schools in Adamawa State. There are proven and achievable policy opportunities, which have demonstrated their potential to greatly accelerate learning outcomes and transform educational networks through system-wide improvements in pedagogy, teacher support, and governance.

The following investments have been classified as 'Great Buys' by an advisory panel made up of international education experts, a label reserved for those interventions that are likely to be highly cost-effective (GEEAP, 2023). This makes them particularly attractive for states who are facing budgetary challenges driven by demographic changes.

First, instruction must be targeted to the actual learning levels of pupils—with a specific focus on foundational literacy and numeracy proficiency. Pupils in Adamawa are currently placing far below grade-level according to the existing curriculum, and they require levelled, differentiated instruction in order to close the gap between current learning levels and grade-level expectations.

Second, teachers must be supported with both professional development and structured teacher guides. Training will be critical to ensure that teachers are equipped with the skills and knowledge to support each and every learner in their classroom. Structured teacher guides will allow teachers to deliver high-quality lessons rooted in learner-centred pedagogy throughout Adamawa State.

Third, any other improvement strategies must be thoroughly data- and evidence-driven. Policymakers require greater visibility into the pressing challenges faced by schools, teachers, and pupils. School leaders require data-driven systems to provide high-quality instructional coaching and teacher support, and teachers require an assessment platform to monitor classroom performance and respond to the unique needs of their pupils.

The evidence outlined here suggests that Adamawa State already possesses considerable human and material resources to support pupils' academic success, and in turn, their upward mobility and their ability to contribute to the advancement of their state. The system-wide strategies presented above offer a promising and achievable pathway for ensuring that every child across Adamawa State has the opportunity to learn and thrive in the classroom.

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