NETWORK FOR EDUCATION SYSTEMS TRANSFORMATION · GHANA

Opportunities to Learn What Matters

Evidence of Curriculum Implementation from Ghana's Kindergarten and Primary Classrooms

Pius Senanu Kwame Dzinyela · Bernice Mpere-Gyekye · Festus Buetey Longmatey · Charles Aheto-Tsegah · Fredibelle Nii Ofei Dodoo · Lawrencia Owusu · Perpetual Owusua Kwakye

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Ghana National Education Campaign Coalition (GNECC)

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ACRONYMS

BOLO — Breadth of Learning Opportunities

CBC — Competency-Based Curriculum (Kenya)

CUE — Center for Universal Education

GALOP — Ghana Accountability for Learning Outcomes Project

GNECC — Ghana National Education Campaign Coalition

ICT — Information and Communication Technology

LMTF — Learning Metrics Task Force

NaCCA — National Council for Curriculum and Assessment

NEST — Network for Education Systems Transformation

NEM — Nueva Escuela Mexicana (New Mexican School)

SBC — Standard Based Curriculum (Ghana)

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EXECUTIVE SUMMARY

Background and rationale

Around the world, what we expect schools to teach has widened beyond reading and counting to include wellbeing, social and emotional skills, creativity, science, technology and the ability to keep learning. The Breadth of Learning Opportunities (BOLO) approach developed within the NEST network and applied across several countries shifts attention from what children score to what they are actually given the chance to learn (Anderson et al., 2018). Ghana has embraced this wider vision in its Standards-Based Curriculum. Yet a broad curriculum on paper only benefits children if it is delivered in the classroom. This report, produced by the Ghana National Education Campaign Coalition (GNECC) as part of the multi-country NEST study, examines how fully Ghana's basic schools implement that broad curriculum —comparing what the curriculum intends with what is actually taught across eight recognised areas of learning.

Purpose and research objectives

The study's overarching objective was to examine the breadth of learning opportunities provided to children in Ghana's basic schools by assessing how well the ideal ("what matters") curriculum, the intended curriculum and the implemented (taught) curriculum align across the eight learning domains, and the conditions that support or constrain that breadth. Four specific objectives guided the work:

(1) to establish what teachers, parents, headteachers and policymakers believe matters most for children to learn;

(2) to determine how the eight domains are represented in the intended (written) curriculum;

(3) to examine how far classroom practice reflects that intended curriculum, and where the gaps lie; and (4) to identify the conditions that enable, and the barriers that constrain, delivery of the full curriculum.

A set of research questions sit under each objective, and the key findings below are organised to answer these objectives in turn.

Approach

The study used a mixed-methods design across eight of Ghana's sixteen regions and sixteen districts (one urban and one rural in each case), covering 30 schools across selected KG 2, Primary 2 and Primary 4 grades. It combined 90 classroom observations (128 lessons) with surveys and interviews of teachers, parents, headteachers, and district and national-level officials. In addition, there was a mapping of the national curriculum to the eight domains. The findings were subsequently validated with key education stakeholders, whose input helped refine the study's conclusions and recommendations.

Key findings

The key findings of the study are as follows:

OBJECTIVE 1 — WHAT MATTERS (THE IDEAL CURRICULUM)

Stakeholders broadly agree on what matters most in the curriculum. In the current Standards-based Curriculum, policymakers view education mainly through a jobs-and-skills lens, treating good health as the foundation for learning and literacy as the gateway to opportunity. Teachers, parents and headteachers, however, all place Physical Wellbeing, Literacy and Communication, and Social and Emotional Learning at the top, and rank Technology, Science, and Culture and the Arts lowest. The one notable difference is that parents rank "learning how to learn" (Learning Approaches and Cognition) last, even though it is central to the new curriculum.

OBJECTIVE 2 — THE INTENDED CURRICULUM

On paper, the Standards-based curriculum is broad. The written curriculum spreads attention across all eight domains and gives growing weight to thinking and problem-solving as children progress — the share of Learning Approaches and Cognition rises from about 17 per cent at KG 2 to 27 per cent by Primary 4. Its clearest weakness is Technology, which is almost absent at KG 2 and Primary 2 and barely present (about 1 per cent) at Primary 4.

OBJECTIVE 3 — THE IMPLEMENTED CURRICULUM AND THE ALIGNMENT GAP

In the classroom, children receive a narrower band of learning than the curriculum promises, and the areas the curriculum values most receive the least time. Literacy is taught almost everywhere and is over-delivered (about 21 per cent of observed teaching against 14 per cent in the curriculum), while Numeracy and Science are under-delivered (Numeracy about 11 per cent taught against 21 per cent intended; Science about 7 against 15 per cent). The maths gap is widest at Primary 4, where the curriculum expects about 27 per cent but classrooms deliver about 9 per cent, roughly a third of the intended attention. Breadth narrows as children move up the grades, Technology is the least-taught domain, and there is a sharp urban–rural divide in technology (used in about one urban classroom in seven but only one rural classroom in fifty). Patterns vary by region, but the overall direction holds across the country.

OBJECTIVE 4 — ENABLERS AND BARRIERS

Where the curriculum is not fully delivered, the cause is a shortage of resources at the point of delivery rather than the design of the curriculum or unwilling teachers. Teachers and headteachers point, above all, to too few learning materials (63 per cent of teachers and 80 per cent of headteachers), lack of technology (61 per cent) and limited funding (47 and 67 per cent). The basics are often missing: fewer than half of classrooms had enough

desks, writing surfaces or space for group work, and only 17 per cent had safe outdoor space. About two-thirds of teachers are teaching subjects they were not trained for.

Implications

Closing the gap is largely an investment and delivery decision within reach of policymakers. It calls for getting curriculum-aligned materials into every school on time; closing the technology and electricity gap, with rural schools first; providing the basic classroom conditions that good teaching requires; deploying teachers to the subjects they were trained for and supporting them with regular in-service training; strengthening numeracy and science at upper primary; and helping families understand and value the whole of the curriculum, not only reading and counting.

Conclusions

Ghana has the right curriculum and a public that values a broad, whole-child education, but its classrooms are not resourced or staffed to deliver that breadth. The shortfall is therefore one of implementation, not policy design. It falls hardest on the foundational subjects of numeracy and science, on the upper-primary grades, and on rural schools — the children are least able to make up the difference at home. In short, equity and breadth are inseparable: widening every child's opportunity to learn the full curriculum is an equity strategy.

CHAPTER 1: INTRODUCTION

Around the world, there is a growing concern about what children and young people should learn. Traditional school systems, which focus on a set curriculum and standardized exams, now face pressure to prepare students for a future shaped by climate change, fast technological advances, global instability, and jobs that do not yet exist (OECD 2018). The skills needed for this future go far beyond what most current curricula and assessments cover.

There is now broad agreement that children and young people need a wide range of skills. They need strong literacy and numeracy, but also the ability to think critically, work with others, be creative, manage their emotions, take part in their communities, and keep learning throughout life (Care, Anderson, and Kim 2016; UNESCO 2021, World Bank 2020). This view is expressed in international and regional policies, as well as in new curriculum reforms. Employers also value skills like analytical thinking, resilience, and social abilities even more than traditional literacy and numeracy for future jobs (World Economic Forum 2025).

While measuring every learning outcome that matters is a challenging feat, there is an important distinction between measuring what students learn and measuring what students are given the opportunity to learn. Learning opportunities are the conditions that make learning possible: the time devoted to different subjects, the resources available in schools, the training and support teachers receive, and the way curricula and assessments are designed. Whereas outcomes data tell us whether students arrived at a destination, opportunity data tells us whether the road was ever open to them. Examining whether systems provide a breadth of learning opportunities, and whether the levels of a system align to support those opportunities, provides a richer context than focusing on outcomes alone. This is the question the Breadth of Learning Opportunities (BOLO) study was originally created to answer, which this report returns to nearly a decade later.

The history and evolution of BOLO

BOLO emerged from deliberations of the Learning Metrics Task Force (LMTF), convened by the Center for Universal Education (CUE) at the Brookings Institution and the UNESCO Institute for Statistics from 2012 to 2016. During the development of the Sustainable Development Goals (SDGs), the LMTF successfully advocated for an unprecedented range of education indicators, including early childhood education, global citizenship, and foundational learning outcomes, which were incorporated into SDG 4 (LMTF 2013). However, one key recommendation did not make the final cut: measuring breadth of learning opportunities, which allows education systems to track exposure to a

broad range of learning domains that may not be feasible or desirable to measure at the individual student level. The justification for excluding breadth of learning opportunities was the lack of current tools for measuring it. The BOLO study was developed to address that gap (Anderson et al. 2018).

Much has shifted in the years since. The COVID-19 pandemic exposed and deepened inequities in education access, forcing a rapid pivot to digital and hybrid learning that left many marginalized students further behind (Sato et al. 2023; The World Bank, UNESCO, and UNICEF 2021). Advances in artificial intelligence (AI) and digitalization have reshaped the skills young people need and raised new equity concerns about who benefits from these tools and who is left out (Robinson et al. 2015; Dahlin et al. 2023). The climate crisis has disrupted schooling at a massive scale: at least 242 million students across 85 countries had their education disrupted by extreme climate events in 2024 alone (UNICEF 2025). Ongoing conflicts continue to destabilize education for the world's most vulnerable learners, often through heightened security risks, widespread displacement and mobility, the destruction of critical infrastructure, severe resource constraints, limited capacity within education systems, and the pervasive impacts of trauma on both children and educators (Education Cannot Wait 2025). Together, these disruptions have forced education systems to confront a fundamental two-pronged question: what knowledge and skills do students need to thrive in a rapidly changing world, and are education systems creating opportunities for all students to develop these skills? Answering this question required revisiting the original BOLO tools and conceptual model.

The BOLO conceptual model

The original BOLO conceptual model was built on the Seven Domains of Learning identified by the Learning Metrics Task Force in 2013 (LMTF 2013): Physical Well-being, Social and Emotional, Culture and the Arts, Literacy and Communication, Learning Approaches and Cognition, Numeracy, and Science and Technology. Together, these seven domains articulated a vision of learning that extended beyond academic knowledge to encompass the critical thinking, creativity, and social and emotional capacities young people need to thrive in a changing world. The seven domains were developed through extensive consultation with 37 experts in early childhood, primary, and post-primary education, alongside feedback from more than 500 stakeholders across 57 countries.

In 2023, NEST members refreshed the LMTF domains to reflect the changing landscape. The refresh separates science and technology into distinct domains, recognizing that with the rapid developments in AI and other digital innovations, technological literacy now demands attention in its own right rather than being subsumed within the sciences. The result is an adaptation of the eight domains for this study, to reflect the demands young people face today, as illustrated in Figure 1.1.

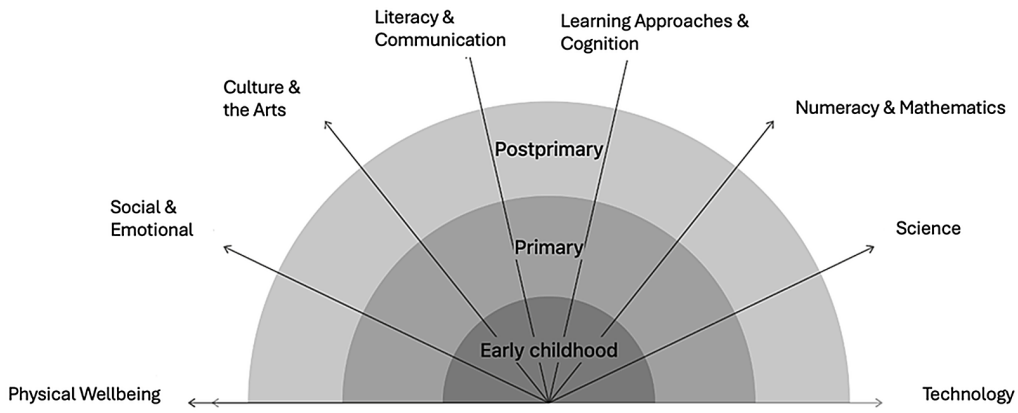


Figure .1 The Updated Eight LMTF Domains of Learning

Source: Authors' Adaptation of the Learning Metrics Task Force (2013) "Seven Domains of Learning"

The half circles in Figure 1.1 represent the three stages in which the learning domains are universal: early childhood (birth through primary school entry), primary, and post-primary (end of primary school through end of lower-secondary). The arrows extend outward beyond the diagram to indicate that an individual may continue learning across all domains or more deeply in a given area at the upper secondary, tertiary, or technical/vocational level or through nonformal learning opportunities.

Each domain of learning comprises a set of subdomains. Table 1.1 provides a high-level overview of the domains and subdomains. See Annex 1 for descriptions of each subdomain.

Table 1. BOLO Domains and Subdomains of Learning

Domain	Subdomains
Physical Wellbeing	■ Health and Nutrition ■ Physical Activity ■ Safety Knowledge
Social & Emotional	■ Self-Regulation and Awareness ■ Empathy and Social Relationships ■ Moral and Ethical Values

Domain	Subdomains
Culture & the Arts	■ Creative Arts ■ Community and Identity ■ Social Studies
Literacy & Communication	■ Oral Language and Comprehension ■ Reading Fluency and Comprehension ■ Writing and Expression
Learning Approaches & Cognition	■ Curiosity and Engagement ■ Critical Thinking and Problem Solving ■ Collaboration and Self-Direction
Numeracy & Mathematics	■ Number Sense and Operations ■ Patterns and Geometry ■ Everyday Maths and Personal Finance
Science	■ Scientific Inquiry ■ Life, Physical, and Earth Science ■ Environmental Awareness
Technology	■ Technology Awareness ■ Computational Thinking and Digital Skills ■ Digital Citizenship & Ethics ■ Robotics, Artificial Intelligence, and Emerging Technologies

The BOLO conceptual model builds on the eight domains to evaluate how well education systems provide students with equitable and meaningful opportunities to engage with the full spectrum of learning. Rather than focusing solely on academic achievement or standardized testing, this model focuses on the alignment between three interconnected elements—or the "3 I's":

■ the ideal "what matters" framework, representing the aspirations of what education should accomplish

■ the intended curriculum, as defined by policy

■ the implemented curriculum, as planned and delivered by teachers and schools and experienced by students in classrooms.

This multilevel perspective helps to identify where system-wide disconnects exist

and offers insight into how learning environments can be strengthened.

The BOLO Framework

The Breadth of Learning Opportunities (BOLO) framework provides the core theoretical model for examining learning opportunities within Ghana's education system. It assesses the alignment between three interconnected dimensions of curriculum: the **ideal ("what matters") framework**, the **intended curriculum**, and the **implemented curriculum**. Together, these dimensions provide a comprehensive understanding of how opportunities for breadth of learning are envisioned, planned, and experienced by learners.

THE IDEAL ("WHAT MATTERS") FRAMEWORK

The ideal "what matters" framework represents a broad vision of learning, the aspirations of what education should accomplish, and the knowledge, skills, values, and competencies considered most important for children and young people in Ghana. Within the BOLO conceptual model, this framework draws on two complementary sources:

- Global and regional frameworks that articulate broad visions of learning, including the OECD Learning Compass 2030, UNESCO's *Reimagining Our Futures Together* (UNESCO, 2021), and the emerging consensus on twenty-first-century skills.
- The lived values and priorities of those closest to learners, including communities, families, teachers, and learners themselves.

While international frameworks help shape educational aspirations, the ideal "what matters" framework is ultimately grounded in what matters most to those who experience Ghana's education system directly.

THE INTENDED CURRICULUM

The intended curriculum refers to the breadth of formal, school-based learning opportunities defined by the authorities responsible for determining what students are expected to learn. In this study, the intended curriculum was examined at two levels:

- **National level:** Educational policies, curriculum frameworks, and standards developed by the Ministry of Education and the National Council for Curriculum and Assessment (NaCCA), which define expected learning outcomes.
- **Local level:** The translation of national curriculum frameworks into district-level guidance, school planning, instructional resources, and implementation decisions influenced by local priorities and available resources.

Although Ghana's Standards-Based Curriculum formally incorporates a broad range of competencies (Care, Anderson, & Kim, 2016), the emphasis on national examinations often narrows classroom attention to a limited number of assessed subjects. This creates a strong incentive for teachers to prioritize examinable content while giving less attention to learning domains that are not directly assessed.

THE IMPLEMENTED CURRICULUM

The implemented curriculum captures what actually occurs between curriculum policy and students' classroom experiences. It was examined at two levels:

- **School level:** How schools organize time, staffing, infrastructure, learning materials, and other resources to support curriculum implementation.
- **Classroom level:** The daily instructional practices, lesson delivery, time allocation, and learning experiences shaped by teacher preparation, class size, learner needs, and available instructional time.

It is at this level that the gap between curriculum policy and classroom practice becomes most evident. Factors such as teacher capacity, resource availability, school leadership, and broader contextual challenges can influence which aspects of the curriculum are effectively implemented and which receive less emphasis.

RELATIONSHIPS AMONG THE THREE DIMENSIONS

The relationships among the three dimensions of the BOLO framework are not strictly linear (Figure 1.2). The ideal "what matters" framework shapes both the intended and implemented curriculum. The intended curriculum influences classroom implementation, while experiences from implementation can, in turn, inform future curriculum development and policy revision. Examining these relationships provides a deeper understanding of how breadth of learning opportunities is created, sustained, or constrained within Ghana's education system.

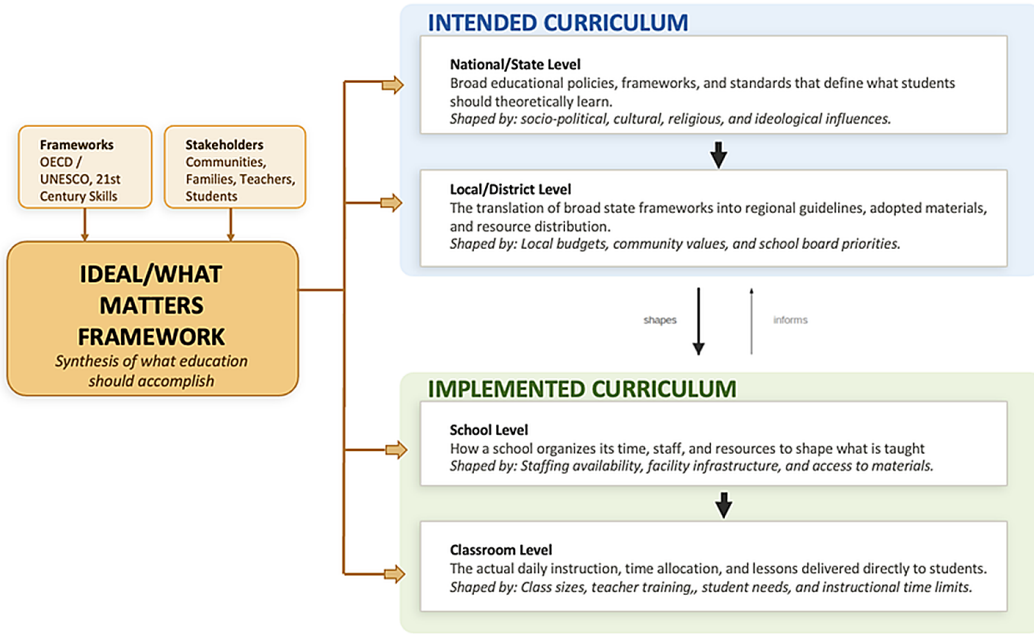


Figure 1. BOLO Conceptual Model: 3 I's of Learning Opportunity

Source: Authors' Adaptation of Anderson et al.'s (2018) "Levels of the Curriculum and Corresponding Measurements."

Together, the eight learning domains and the BOLO conceptual model form the foundation of this study. The learning domains specify what a broad vision of learning encompasses and the conceptual model specifies where that vision can be examined within an education system. Reading the two dimensions against one another makes it possible to ask a more precise set of questions than learning outcomes alone allow: which domains are named in policy but absent from classrooms, which are valued by communities but underrepresented in national curricula, and where the alignments and misalignments across levels create or restrict opportunities for children and young people to learn what matters.

A core assumption behind the BOLO conceptual model is that breadth matters: students need exposure to historically foundational subjects like mathematics and literacy, but there also needs to be intentionality around building skills such as creativity, critical thinking, empathy, problem-solving, environmental awareness, and civic engagement. By evaluating the presence and integration of these domains across educational policies, teaching practices, and learning experiences, the BOLO conceptual model helps governments and practitioners move beyond a "coverage model" of education toward a more meaningful and transformative paradigm.

Unlike conventional evaluations that center on outputs or test scores, the BOLO study focused on investigating the breadth of opportunities provided to students at policy, school, and teacher levels,

using tools at each of these levels, as detailed in the Methodology chapter.

COUNTRY CONTEXT

Ghana has undertaken significant curriculum reforms aimed at broadening what children and young people learn through the introduction of the Standards-Based Curriculum (SBC). The curriculum reflects a shift towards competency-based education, emphasizing not only foundational literacy and numeracy but also critical thinking, creativity, problem-solving, digital literacy, values, and inclusive learning. The table below (Ghana Ministry of Education, 2018) highlights the key features of Ghana's curriculum design and implementation that shape how breadth of learning is defined and delivered within the education system.

Table 1. Curriculum reforms Ghana context

Dimension	Ghana (2019)
Curriculum name	Standards-Based Curriculum (SBC)
Curriculum priorities	Competency-based; emphasises critical thinking, creativity, problem-solving, and practical learning over rote memorisation. Also promotes foundational literacy, numeracy, digital skills, values education, and inclusivity.
Structure	It shifts from a content-heavy, teacher-centred model toward a learner-centred, competency-based approach focused on active learning and real-world application.
Implementation context	Implementation varies across schools. Differences in teacher preparedness, availability of learning materials, and access to Information and Communication Technology (ICT) resources affect how the curriculum is enacted.
Key reform approach	Shift from content-heavy, teacher-centred to learner-centred, competency-based

COMMON ASPIRATIONS IN THE GHANA CONTEXTS

Ghana's Standards-Based Curriculum (SBC) reflects a set of aspirations that align with broader global trends in education reform while responding to the country's unique educational priorities and development needs.

1. **Holistic development:** Ghana's education policy aims to develop the "whole child" by moving beyond a narrow focus on academic achievement. The Standards-Based Curriculum promotes learners' cognitive, social, emotional, physical, moral, and creative development, recognizing that quality education should prepare children not only for academic success but also for responsible citizenship and lifelong learning. This vision is reflected in the curriculum's emphasis on the "3 Rs (Reading, wRiting, and aRithmetic)

plus Creativity," which positions creativity, values, and practical competencies alongside foundational learning.

2. **Competencies over content:** The Standards-Based Curriculum marks a shift from a content-heavy, teacher-centered approach to a learner-centered curriculum organized around the development of core competencies. Rather than emphasizing rote memorization, the curriculum promotes critical thinking, creativity, communication, collaboration, problem-solving, personal development, cultural identity, and digital literacy through active and practical learning experiences. This competency-based approach seeks to equip learners with the knowledge, skills, values, and attitudes required to thrive in an increasingly complex and rapidly changing world.
3. **Local relevance with global orientation:** Ghana's curriculum adopts a "glocal" philosophy that integrates local culture, traditions, and values with global knowledge and competencies. The curriculum encourages learners to appreciate Ghanaian heritage while developing the skills, attitudes, and perspectives needed to participate effectively in an interconnected global society. This balance seeks to produce learners who are grounded in their cultural identity while remaining adaptable and globally competitive.
4. **Equity and inclusion:** Equity and inclusion are central principles underpinning Ghana's curriculum reforms. The Standards-Based Curriculum is designed to provide all learners with meaningful opportunities to succeed regardless of their background or location. Complementary initiatives, such as the Ghana Accountability for Learning Outcomes Project (GALOP), have strengthened these efforts by directing additional resources and support to low-performing schools, improving teacher professional development, and promoting more equitable learning outcomes. Together, these reforms reflect Ghana's commitment to ensuring that quality education is accessible, inclusive, and responsive to the diverse needs of all learners.

About this Report

This report draws on the data, methodology, and findings of the cross-country research on the Breadth of Learning Opportunities conducted through the Network for Education Systems Transformation, with the leadership and technical support of the Center for Universal Education at Brookings. The cross-country research included Ghana, Chile, Mexico, and Kenya.

The present report does not constitute a separate research study; rather, it provides a Ghana-specific contextualisation and interpretation of the cross-country findings, with additional emphasis on issues and implications relevant to Ghana's education system. Where findings and analysis are derived from the cross-country study, the original research is duly acknowledged and cited.

This report describes the Ghana perspective of what the BOLO cross-country study revealed about children's opportunities to

learn what matters. Taking a cue from the Learning Metrics Task Force (LMTF) domains (Learning Metrics Task Force, 2013) as a common analytical lens, the Ghana report brings together the views of teachers, parents, school administrators, and local and national policymakers to understand what different stakeholders believe matters most for children to learn, how those priorities are or are not reflected in practice, and what the enablers and barriers are to providing meaningful learning opportunities.

While children's learning opportunities are shaped by many influences, including families, communities, sport and youth programs, religious institutions, and local organizations, this report focuses on formal school-based learning opportunities. By focusing on what education systems can directly shape, this report also reflects an equity imperative: for many children, particularly those from under-resourced homes, school may be the only place where certain learning opportunities are available at all.

This report presents findings from the BOLO study in Ghana using the shared BOLO conceptual framework and standardized research instruments developed for the study. Although the broader BOLO initiative spans within 4 countries: Mexico, Chile, Kenya and Ghana, this report focuses exclusively on Ghana, examining how breadth of learning opportunities is defined, intended, and implemented within the country's education system. The use of a common conceptual framework, standardized data collection instruments, and consistent field implementation procedures provides a systematic basis for understanding the alignment between policy aspirations, curriculum intentions, and classroom practice in the Ghanaian context.

This report is intended for policymakers, education leaders, civil society actors, researchers, and others involved in education systems transformation

Research Objectives and Research Questions

Building on the study's conceptual model of the ideal, intended and implemented curriculum, this report pursues one overall objective and four specific objectives, each answered by a set of guiding research questions. Together they trace how the breadth of learning is defined by those closest to it, set out in national policy, enacted in classrooms, and enabled or constrained in practice.

RESEARCH OBJECTIVES

Overall objective. To examine the breadth of learning opportunities provided to children in Ghana's basic schools by assessing the alignment between the ideal ("what matters"), the intended curriculum and the implemented curriculum across the eight LMTF learning domains, and the conditions that enable or constrain that breadth.

*Objective 1 — The ideal: what stakeholders believe matters***.** To establish how teachers, parents, headteachers and policymakers in Ghana define what matters most for children to learn, and where those definitions agree or diverge.

Objective 2 — The intended curriculum: what policy prioritises. To determine how the eight domains are represented in Ghana's national curriculum — the Standards-Based Curriculum across KG 2, Primary 2 and Primary 4.

Objective 3 — The implemented curriculum and the alignment gap. To examine the extent to which each domain is present in observed classroom practice across grades, regions and urban and rural settings, and to assess the alignment between the intended and the implemented curriculum.

Objective 4 — Enablers and barriers to implementation. To identify the conditions that enable, and the barriers that constrain, delivery of the full breadth of the curriculum, and how these vary across respondents and grade levels.

RESEARCH QUESTIONS

OBJECTIVE 1: THE IDEAL: WHAT STAKEHOLDERS BELIEVE MATTERS

- How do teachers, parents and headteachers rank the relative importance of the eight learning domains?
- Where do stakeholder priorities converge, and where do they diverge most sharply?
- How do local and national policymakers conceive of what matters, and on what rationale?

OBJECTIVE 2: THE INTENDED CURRICULUM: WHAT POLICY PRIORITISES

- Which domains receive the greatest and the least emphasis in the intended curriculum?
- How does the emphasis on each domain shift across grade levels?
- To what extent do stakeholder priorities align with the emphasis in the intended curriculum?

OBJECTIVE 3: THE IMPLEMENTED CURRICULUM AND THE ALIGNMENT GAP

- To what extent is each domain present in classroom practice, and how does presence vary across KG 2, Primary 2 and Primary 4?
- How does relative classroom presence vary across the eight study regions and between urban and rural schools?
- Where is observed practice most and least aligned with the intended curriculum's emphasis?

OBJECTIVE 4: ENABLERS AND BARRIERS TO IMPLEMENTATION

- What are the main barriers to implementing the full curriculum, as reported by teachers and headteachers?
- How do reported barriers differ by grade level, and between teachers and headteachers?
- What classroom-, school- and system-level conditions enable effective implementation?

CHAPTER 2: METHODOLOGY

This chapter describes the methodological approach used to examine the breadth of learning opportunities available to learners in Ghana's basic schools. It outlines the research design, study processes, geographic coverage, data-collection tools, sample and participants, analytical procedures, ethical considerations and researcher reflexivity. The methodology was guided by the BOLO conceptual model and the eight LMTF learning domains, with evidence drawn from the intended curriculum, classroom practice and stakeholder perspectives. The chapter also discusses the strengths and limitations of the approach and the basis for interpreting the findings.

Research Design

This study examined the breadth of learning opportunities available to learners in Ghana's basic schools, using a convergent mixed-methods study design. It applied the BOLO conceptual model and its eight LMTF learning domains as a common analytic vocabulary. The design was not intended to produce point-equivalent measurements, but to enable a structured reading across the three levels of learning opportunity: the ideal, the intended, and the implemented. Accordingly, the design triangulates evidence across an ideal "what matters" framework and two levels of curriculum, the intended and the implemented, using four complementary instruments that generate both quantitative and qualitative data.

The eight LMTF domains served as the analytical spine, integrating (1) intended-curriculum evidence from a mapping of Ghana's Standards-Based Curriculum, (2) implemented-curriculum evidence from classroom observations in Ghanaian basic schools, and (3) stakeholder perspectives gathered through surveys and interviews with teachers, parents, headteachers and policymakers.

The research team and processes

The research team was constituted by the GNECC Research Committee, drawing on Ghanaian researchers who are themselves active in the country's education sector. The work moved through four sequential phases: contextualisation of the instruments, pilot testing, field implementation, with curricular mapping and qualitative interviews running throughout as cross-cutting activities.

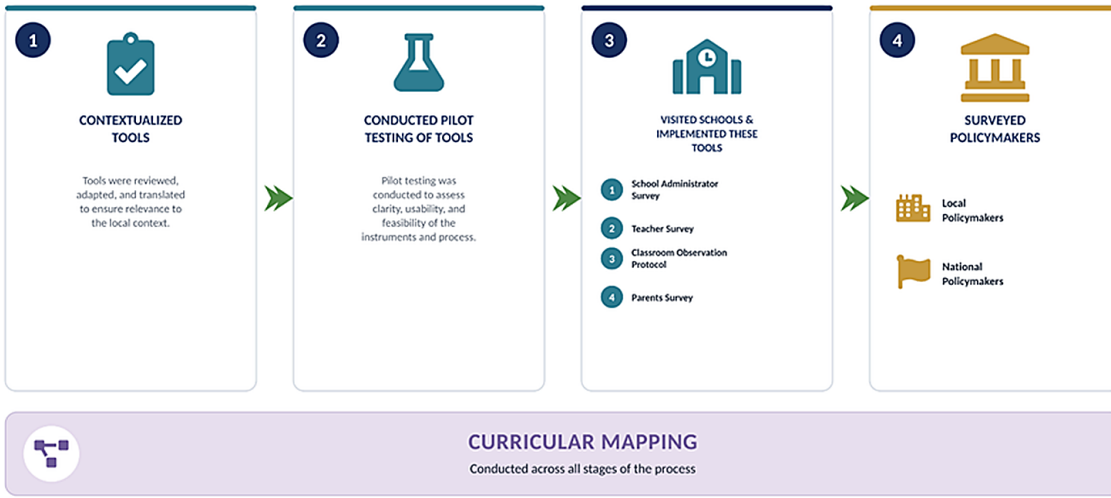


Figure 2. BOLO Study Design and Data Collection Process

Contextualisation and adaptation: Since this main research was a cross-country exercise involving Ghana, Kenya, Mexico and Chile, all participating organizations contributed to the development of the BOLO instruments. The original tools, developed in English, were reviewed and refined through a systematic examination of terminology, constructs and response formats to fit into the Ghanaian context. We concentrated on conceptual equivalence for key constructs such as the transversal skills and the LMTF domains, aligning the language with NaCCA's Standards-Based Curriculum and with the realities of Ghanaian teachers' practice. We also refined the structure of the tools to improve clarity, reduce respondent burden and ensure consistent interpretation across teachers, parents, headteachers and administrators, and district- and national-level policymakers. The result was a set of contextually valid, linguistically appropriate instruments ready for field testing.

Pilot testing: We piloted the instruments in two Greater Accra schools: Achiaman M/A Basic School and Achimota Basic School to test their feasibility, clarity and operational performance under real school conditions, following further discussions with the BOLO teams in Mexico, Kenya and Chile and the Brookings Institution. A training-of-trainers session grounded the research team in the conceptual foundations of BOLO, the structure of the tools, the ethical protocols and standardised data-collection procedures, including local reporting lines, key GNECC Research Committee and District Education Office contacts, and child-safeguarding requirements. The team in turn trained the enumerator field teams. The pilot covered all data-collection activities and doubled as a validation of field protocols, timing and sequencing. KoboToolbox held a consistent data structure, and controlled vocabularies for the LMTF domains and subdomains were applied across tablets, with

variable names and observation coding to secure internal consistency.

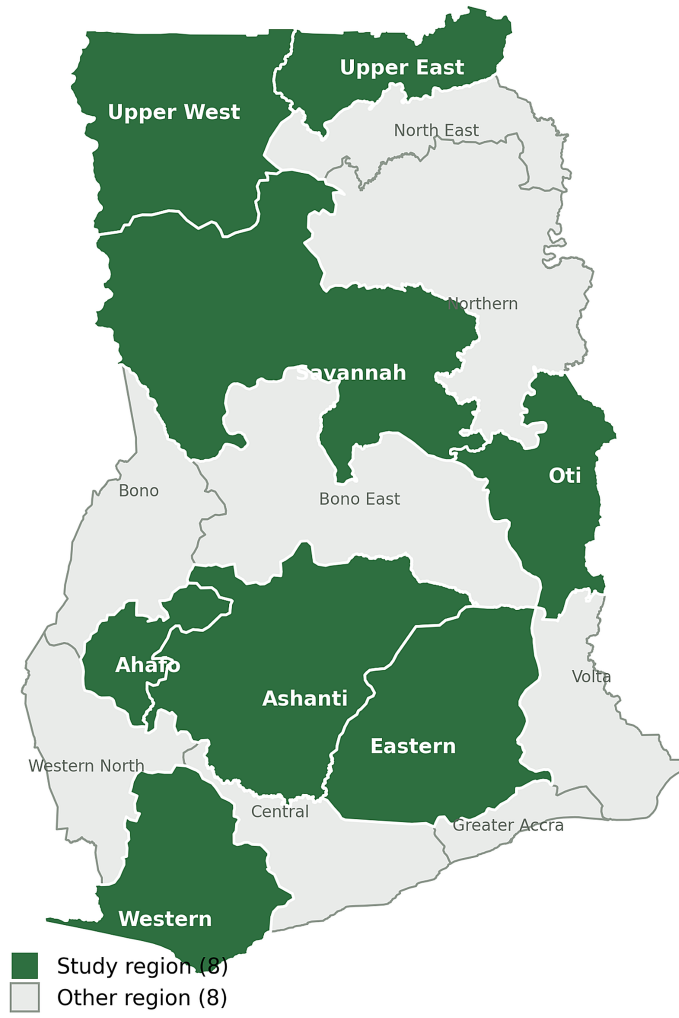
Field implementation: After the pilot and receipt of Institutional Review Board (IRB) approval from the Brookings Institution, complemented by the fieldwork clearances required in Ghana, we proceeded to full implementation between October and November 2025. Thirty trained enumerators collected the data under the research team's supervision, following protocols agreed with the Ghana Education Service and the District Education Directorates, and minimising disruption to teaching and learning. At district level, enumerators interviewed the District Director of Education or a representative; at school level, they interviewed headteachers, teachers and parents, and observed one classroom session. Observers first recorded general features of each classroom, the physical environment and available teaching and learning materials, then coded each lesson or "activity" by domain, grouping (individual, whole-class or small-group) and teacher–learner interaction. An activity was defined as beginning whenever the learner grouping, lead teacher, topic or domain, or learning material changed. Across the 90 classrooms observed, 128 distinct activities were recorded.

Curricular mapping (cross-cutting). Alongside the instruments, we carried out a systematic mapping of Ghana's official curriculum, principally NaCCA's Standards-Based Curriculum, to establish how far LMTF-aligned domains are embedded in policy (Annex 1). This provided a baseline for comparing the intended curriculum with observed practice and teachers' reported experience, and generated structured outputs such as domain classifications and alignment matrices that help identify gaps, tensions and opportunities for system-level improvement.

Scope and geographic coverage

Fieldwork spanned eight of Ghana's sixteen administrative regions, namely: Ahafo, Ashanti, Eastern, Oti, Savannah, Upper East, Upper West, and Western: selected to reflect the country's north–south spread and its varied educational contexts (Figure 2.2). Within each region we sampled two districts, one urban and one rural, giving sixteen districts in all and an even urban–rural split that underpins the disparities examined later in this report (Table 2.1). Holding one urban and one rural district in every region was deliberate: it allows differences in the breadth of learning opportunities to be read both across regions and between urban and rural settings, while limiting the confounding of location with region.

The wider geographic spread, including school counts per district, is detailed in the Technical Note.[1]



Source: Author's construction using data from Ghana Statistical Service (2024)

Figure 2. — Study coverage: the eight study regions within Ghana’s sixteen administrative regions, with the urban (▲) and rural (●) district sampled in each.

Table 2. Study districts by region (one urban and one rural per region).

Region	Urban district	Rural district
Ahafo	Asunafo North Municipal	Asutifi South

Region	Urban district	Rural district
Ashanti	Kumasi Metropolitan	Atwima Mponua
Eastern	Akuapim South Municipal	Ayensuano
Oti	Biakoye	Nkwanta North
Savannah	West Gonja	Bole
Upper East	Kassena-Nankana	Tempane
Upper West	Wa	Jirapa
Western	Tarkwa-Nsuaem Municipal	Mpohor

The full list appears in the Technical Note.

Tools

Table 2. summarises the four survey instruments and the classroom observation protocol.

Table 2. Study tools.

Tool	Information collected
Teacher survey	Teacher perspectives on instructional practice, curriculum coverage and the integration of the LMTF domains in classroom teaching.
Parent survey	Family, caregiver and community perspectives on which LMTF domains matter most for children's development.
Headteacher survey	Headteacher perspectives on curriculum priorities, implementation challenges, time allocation across domains and institutional support.
Local & national policymaker surveys	District Directors of Education and national officials' perspectives on curricular mandates, implementation processes and domain time allocation.
Classroom observation protocol	Direct evidence of the enacted curriculum through structured observation of teaching practice, learner engagement, the classroom environment and the presence of LMTF domains over a defined period.

Sample and participants

The study focused on foundational learning, sampling KG 2, Primary 2 and Primary 4 in public basic schools. Table 2.3 sets out the achieved sample; local-government surveys (16) and national-government interviews (3) were conducted at district and national level respectively, rather than by grade.

Table 2. Study sample.

Grade	Classroom obs.	Teacher	Parent	Head/Admin	Local govt	National
KG 2	30	30	61	30	—	—
Primary 2	30	30	29	30	—	—
Primary 4	30	30	30	30	—	—
Total	90	90	120	90	16	3

*Note: Local government surveys (16) and national government interviews (3) were conducted at the district and national levels respectively, rather than per grade.

Analysis

The analysis was organised around the three I's of learning opportunity: ideal, intended and implemented to enable a systematic reading of alignment, gaps, and the conditions that enable or constrain the breadth of learning in Ghanaian classrooms.

CURRICULAR MAPPING

Evidence on the intended curriculum was collected through a structured mapping of Ghana's official curriculum documents to the LMTF domains and subdomains. For each grade level in the study, the team reviewed the national curriculum frameworks: the Standards-Based Curriculum and identified discrete learning objectives or competency statements. Each objective was then coded against one or more LMTF subdomains, using criteria developed during the contextualisation phase. Coding was carried out by trained members of the BOLO research team, using shared definitions and joint coding sessions to align interpretation among the coders.

Curriculum allocation per domain was then expressed as the percentage of the total learning objectives, in a given grade, that engage each domain. This percentage is a count-based proxy for intended curricular emphasis rather than a direct measure of intended instructional time. Its comparison with the classroom observation data gives an approximation of alignment, not a direct measure of correspondence (see Strengths and Limitations).

QUANTITATIVE ANALYSIS: DESCRIPTIVE AND COMPARATIVE

Quantitative data from the surveys administered to teachers, parents, headteachers and school administrators, and to district- and national-level policymakers, were analysed using descriptive statistics appropriate to the structure of each item:

■ For ranking items (such as the eight LMTF domains ordered by importance), each respondent's ranks were retained as given and aggregated by computing the mean rank position per domain. A lower mean rank indicates higher importance. Mean ranks are reported alongside the rank ordering so that both the central tendency and the variation across respondents are visible.

■ For categorical items, such as the "top three barriers to curriculum implementation," responses were collapsed into binary indicators (selected / not selected) and aggregated as the proportion of respondents selecting each option.

■ For continuous or count-based items (such as the percentage of classrooms with adequate seating), simple proportions are reported, with the relevant denominator stated.

Where appropriate, missing data are reported alongside the descriptive statistics, so that inferences are not silently inflated.

Classroom observation data were coded by enumerators against a structured rubric of the eight LMTF domains during the observation periods. Each domain was coded as present, either explicitly present (named, scaffolded, assessed or otherwise foregrounded in the activity) or implicitly present (engaged in the activity but not foregrounded) or absent. Domain-presence rates were then computed as the percentage of observed Ghanaian classrooms in which each domain appeared at least once, disaggregated by grade level.

QUALITATIVE ANALYSIS: OPEN SURVEY RESPONSES

All qualitative data were transcribed (interviews), and analysed using thematic analysis (Braun and Clarke 2006), drawing on a common set of thematic codes.

INTEGRATION OF QUANTITATIVE AND QUALITATIVE EVIDENCE

The study used a convergent mixed-methods integration logic (Creswell and Plano Clark 2018). Quantitative results from the surveys, classroom observations and curricular mapping were placed alongside the qualitative findings to identify points of convergence, complementarity and divergence.

Ethical Considerations and Researcher Reflexivity

Ethical oversight came first through IRB approval from the Brookings Institution, complemented by fieldwork clearance from the Ghana Education Service through the Office of the Director-General. All participants received written information on the study's purpose, how their data would be used and protected, the voluntary nature of participation and their right to withdraw, and gave consent before any survey was administered or classroom observation.

Classroom observation was framed primarily as observation of teaching practice rather than direct assessment of individual learners because the study sought to examine the implemented curriculum and the learning opportunities made available through classroom instruction, rather than measure individual learner performance or achievement. Observers therefore focused on the content and domains addressed, instructional approaches, learner grouping, teacher–learner interactions, classroom environment and available teaching and learning materials. Learners were observed only in relation to their participation in classroom activities and the opportunities created for learning; no individual learner was assessed, tested or identified in the dataset. This approach also helped minimise intrusion into classroom activities and strengthened the ethical protection of children participating indirectly in the observation.

Data were de-identified at entry or first cleaning, with schools, classrooms and respondents assigned anonymised codes, and all analyses are reported in aggregate so that no individual school, teacher, administrator or learner can be identified.

The study deliberately centred on Ghanaian analytical leadership, meaning that Ghanaian researchers and education-sector practitioners played a substantive role in shaping how the research was contextualised, interpreted and reported. Local ownership extended beyond the adaptation of the instruments to include the interpretation of Ghana's curriculum, the coding of curricular and classroom evidence, the analysis of stakeholder perspectives and the development of the findings and report. While the study was part of a broader cross-country BOLO exercise, the Ghana research team worked to ensure that the interpretation of evidence remained grounded in Ghana's curriculum, education policies, institutional arrangements and classroom realities. This approach was intended to reduce the risk of applying externally developed categories or assumptions without sufficient attention to the local context.

Several tensions are worth naming. The LMTF domains, though refreshed for contemporary skills demands, retain commitments such as separating Science from Technology that do not always map neatly onto the way Ghana's curriculum organises learning. Constructs such as "social and emotional", "critical thinking" and "physical wellbeing" carry different connotations across languages, cultures and pedagogies, and even within Ghana and are interpreted differently by parents and teachers. We therefore sought conceptual rather than literal equivalence and present patterns of emphasis rather than point-equivalent measurements. Finally, several members of the research team are also involved in education programmes and policy-related work in Ghana. This insider positioning provided contextual knowledge and facilitated access and engagement with education stakeholders, but it also presented a potential risk of familiarity influencing interpretation. To manage this, the study used structured instruments, predefined coding criteria and agreed definitions for the LMTF domains. Researchers participated in joint discus-

sions and coding processes to align interpretations, while quantitative analysis was based on systematically coded responses and observations rather than individual researcher impressions. Qualitative evidence was also considered alongside quantitative findings through the convergent mixed-methods approach, allowing areas of convergence and divergence to be examined. The team further maintained a distinction between evidence generated through the study and researchers' prior knowledge of the education system. These measures did not eliminate researcher subjectivity, but they helped make the analytical process more systematic, transparent and open to scrutiny.

Strengths and Limitations of the Study

As a mixed-methods case study, this research was designed to generate insight into the alignment between the intended and the implemented curriculum in Ghana's basic education. Its contribution lies in applying a structured conceptual model to Ghana's curriculum, classrooms and stakeholder experiences, enabling a structured reading of how the breadth of learning is defined, intended and implemented. The sample was not designed to be statistically representative of the whole system; it supports analytical rather than statistical generalisation. What the model, instruments and procedures enable is a structured reading of patterns, tensions and contrasts across the three levels of learning opportunity.

Following the analysis, a draft of the report was presented at a validation session with key stakeholders, including teachers, headteachers, district education officials, curriculum and policy representatives, and civil-society partners, held on 9th September 2026 in Accra. Participants reviewed the emerging findings, confirmed their resonance with practice, and offered additional recommendations, particularly on foundational-level teaching and classroom resourcing. Their input was used to refine the interpretation of the findings and to strengthen the recommendations presented in Chapter 6.

At the same time, some limitations should be borne in mind when interpreting the findings, without undermining the rigour of the study's design. The study was not designed to be statistically representative of Ghana's entire education system; the findings reflect patterns within the selected study sites rather than nationally generalisable estimates. The selection of levels, schools and geographic areas also depended on the agreements, permissions and operational access secured for the fieldwork, which shaped the feasible scope and spread of the sample.

Classroom observations offer a snapshot of instruction during the study window rather than a complete picture of the school year. Both the classroom coding and the curricular mapping involved interpretive judgement, particularly where domains overlap in practice or where learning objectives were broad, integrated or culturally specific. These decisions were guided by clear training protocols, shared definitions and collaborative team discus-

sion, which strengthens confidence in the consistency of the coding without eliminating the inherent subjectivity of domain-level interpretation. At the classroom level, domains were coded as explicitly or implicitly present on the basis of observed practice, but the distinction still required trained judgement, especially when a single activity addressed several domains at once.

Three further limitations bear on how findings are read:

■ Coding was carried out at the domain rather than the subdomain level. We can therefore identify whether broad domains such as Learning Approaches and Cognition, or Social and Emotional appeared in classroom practice, but we cannot always specify which subcomponents were being developed.

■ The implicit presence of a domain represents a different quality of learning opportunity from explicit instruction. Collaboration, for instance, may occur during group work, but unless it is named, scaffolded, reflected upon or assessed, learners may not experience it as a deliberate learning objective. While the study's approach allowed a broader range of learning opportunities to be captured, including those embedded indirectly in classroom practice, future research could address this limitation by reporting explicit and implicit domain presence separately.

■ Although stakeholder responses on barriers and enablers were collected across the kindergarten and primary levels, the analysis prioritised thematic synthesis across stakeholder groups rather than disaggregation by level. This surfaced broader systemic patterns, though it may obscure important differences in how barriers and enablers are experienced at each level. Future research might examine how stakeholders at each level of Ghana's basic education experience these systemic barriers and enablers differently.

This study is best understood as a structured inquiry into how learning opportunities are represented in Ghana's curriculum, enacted in its classrooms, and perceived by its stakeholders. Its findings are most useful for identifying patterns of alignment and misalignment, and for informing further research and policy dialogue within Ghana's education sector.

CHAPTER 3: DEFINING AND MEASURING 'WHAT MATTERS'

This chapter examines what Ghana's national curriculum says students should learn; what parents, teachers, school administrators and policy-makers say matters most; and where these definitions agree or diverge. It is organised in two parts. The first analyses the intended curriculum, as reflected in the national curriculum documents. The second analyses how stakeholders perceive the importance of each learning domain. Throughout, learning is grouped into eight domains: Physical Wellbeing; Social and Emotional; Culture and the Arts; Literacy and Communication; Numeracy and Mathematics; Learning Approaches and Cognition; Science; and Technology.

Defining what matters in education has long been contested ground. Mid-twentieth-century approaches, most influentially set out by Tyler (1949) and extended by Bloom (1956), treated the curriculum as a technical, objectives-based process that valued clarity, standardisation and measurability. The field has since moved towards more holistic models that see the curriculum as shaped by teacher expertise and local context, and that treat goals, content and pedagogy as connected parts of a single whole (Eisner 1979; Walker 1990; van den Akker 2003; Thijs & van den Akker 2009; Priestley et al. 2021). International frameworks reinforced this shift by describing learning as spanning cognitive, social and ethical domains (Delors et al. 1996), a view carried forward in more recent global frameworks that define learning through interconnected knowledge, skills, attitudes and values (OECD 2019; UNESCO 2021). In Ghana, this holistic orientation is reflected in the Standards-Based Curriculum and its framing of broad core competencies (NaCCA 2019; LMTF 2013; Anapey 2025).

"What Matters" in Policy

To examine how the Ghanaian curriculum emphasizes the eight learning domains, experts reviewed and coded the national curriculum for each grade level in the study, counting the number of curriculum references for each domain. These references, also called learning objectives, subdomains or competencies, depending on the framework, do not indicate how much time or how many resources are devoted to a domain. But they offer a meaningful approximation of curriculum designers' priorities, and they signal which domains are formally recognised within the system. Figure 3.1 shows the concentration of learning domains across Ghana's education levels.

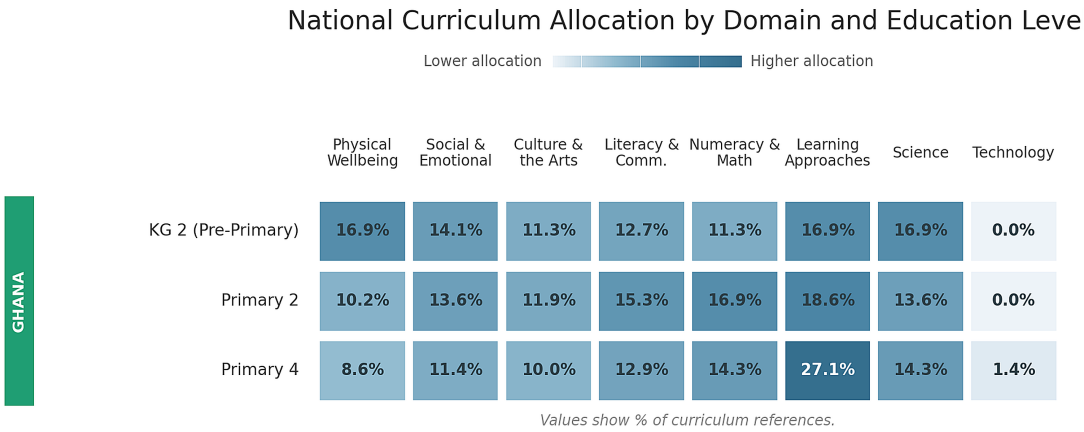


Figure 3. Ghana's curriculum allocation across learning domains and education levels (the Ghana panel of the main study's Figure 3.1).

Ghana's curriculum places particularly strong emphasis on Learning Approaches and Cognition, a domain whose share grows steadily as children progress through the system from 16.9% at the pre-primary level (KG 2) to 18.6% at Primary 2 and 27.1% at Primary 4, where it takes the largest share of any domain. This weight on metacognitive, process-oriented learning reflects a curricular philosophy that values curiosity, persistence, problem-solving and self-regulation competencies that Ghana's Standards-Based Curriculum foregrounds as central to lifelong learning (NaCCA 2019; OECD 2019). The pattern is visible in the sub-domains too: within Learning Approaches and Cognition, Collaboration and Self-Direction is the most heavily referenced strand, alongside Curiosity and Engagement and Critical Thinking and Problem-Solving.

At the pre-primary level, however, this emphasis is shared rather than dominant. KG 2 shows a notably rounded profile, with Physical Wellbeing, Learning Approaches and Cognition, and Science each drawing the largest share (16.9%), followed closely by Social and Emotional learning (14.1%). Physical Wellbeing is especially prominent in these early years and then tapers as children move up the system (16.9% at KG 2, 10.2% at Primary 2 and 8.6% at Primary 4), consistent with a developmental view that prioritises play, movement and physical development in early childhood (LMTF 2013; UNESCO 2021).

Beyond Learning Approaches, the curriculum spreads its attention fairly evenly across Physical Wellbeing, Social and Emotional, Culture and the Arts, Literacy and Communication, Numeracy and Mathematics, and Science. Literacy and Numeracy peak in the middle primary years Literacy at 15.3% and Numeracy at 16.9% at Primary 2 reflecting the consolidation of foundational reading and number work, while Science holds a steady presence throughout (13.6–16.9%). Within these domains the coding shows a balanced foundation. Literacy is split evenly

between oral language, reading and writing; Numeracy is dominated by Number Sense and Operations; Science divides between scientific inquiry and life, physical and earth science; and Culture and the Arts is led by Creative Arts and by Community and Identity. In other words, the written curriculum promises a broad, rounded primary education rather than one narrowly focused on reading and number work, an orientation consistent with the holistic, competency-based vision that frames Ghana's reform (NaCCA 2019; Anapey 2025).

The most under-referenced domain is Technology. It receives a negligible share at every level and is absent entirely from both the pre-primary and Primary 2 curricula, appearing only marginally (1.4%) at Primary 4. This is a notable gap given the curriculum's stated ambition to integrate ICT and digital literacy across subjects, and it signals a domain where the written curriculum lags behind the competencies increasingly regarded as essential for twenty-first-century learning (OECD 2019; UNESCO 2021).

"What Matters" to Teachers, Parents and School Administrators

The previous section described how the learning domains feature in the curriculum. That allocation is largely determined by those with significant influence over curriculum design. However, both the literature and practice suggest that curriculum priorities are shaped not only by policy design but also by the beliefs and priorities of the people who interpret, support and implement the curriculum (Fullan, 2015). To understand these perspectives in Ghana, we asked teachers, parents and school administrators to rank the relative importance of the eight learning domains. Figure 3.2 summarises the results, and the sub-sections below discuss each group in turn.

TEACHERS

Ghana's teachers rank Physical Wellbeing first, with Literacy and Communication close behind and Social and Emotional third. Six in ten teachers placed Physical Wellbeing above every other domain. The emphasis is even stronger among pre-primary teachers, for whom physical health and motor development are understood as prerequisites for any learning to take place. Literacy and Communication maintain a strong and consistent presence from the earliest years, suggesting teachers see it as foundational from the very start of formal education.

Technology, Science, and Culture and the Arts rank lowest for Ghana's teachers, with Technology last. In a resource-constrained system, these low rankings may reflect limited access to training and learning materials as much as a settled belief about what matters. Numeracy and Mathematics, often assumed to be the dominant foundational domain, sit in the middle tier, challenging the common assumption that literacy and numeracy automatically crowd out everything else in stakeholders' minds.

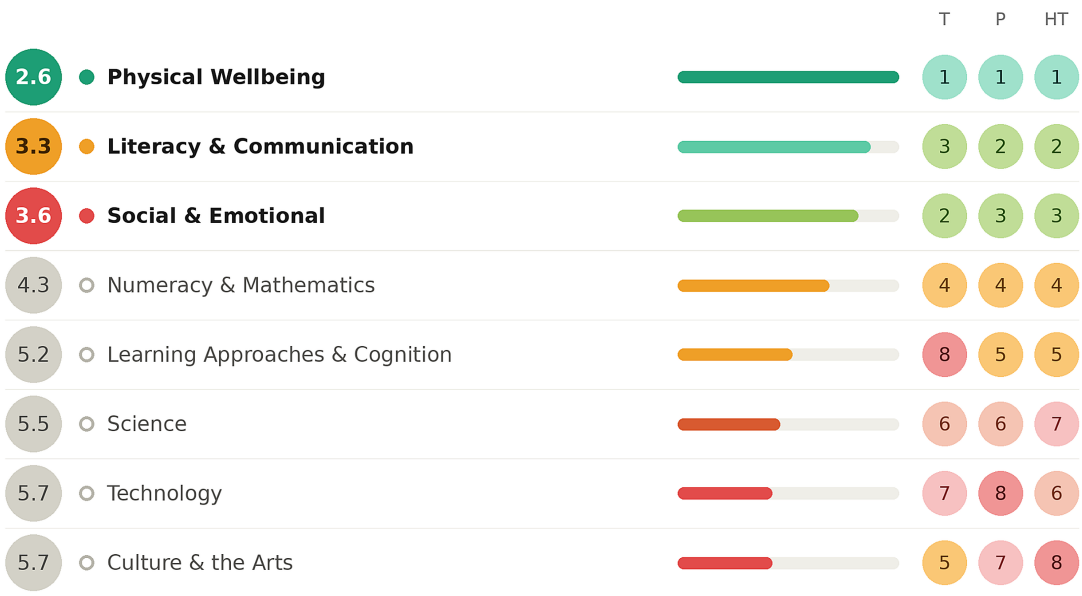
These priorities also shift as children move through school. At the pre-primary level, Ghana's teachers place Physical

Wellbeing even more firmly at the top, treating physical health and motor development as the ground on which everything else is built. By primary level, Literacy and Communication and Social and Emotional are close behind, reflecting the growing demands of reading, peer relationships and self-regulation.

How Ghana's teachers, parents and headteachers rank the eight learning domains

DOMAIN PRIORITY RANKINGS (COMBINED MEAN)

Coloured badge = top 3 priority · Badge number = combined mean rank · Circles = each group's rank (1–8)



T = Teachers (n=90) · P = Parents (n=120) · HT = Headteachers (n=30)

Mean rank across all three groups; 1 = most important, 8 = least. Values read from Figure 3.2 (±0.1).

Figure 3. Average importance rank of each domain among Ghana's teachers, parents and school administrators (a lower average rank means the domain was placed higher).

PARENTS

On average, parents in Ghana ranked Physical Wellbeing first, Social and Emotional second, ahead of Literacy and Communication, which came third. The consistent prominence of these three domains suggests a shared parental belief that children's physical health, socio-emotional development, and communication skills are the most important foundations for learning.

The most distinctive feature of Ghana's parent responses is the ranking of Learning Approaches and Cognition, which parents place last, the lowest rank in the dataset for any domain across the parent charts. This stands in sharp contrast to Ghana's teachers, who place the same domain in the middle of their rankings. It is

the single largest teacher–parent gap on any domain in the study, and Figure 3.3 makes it visible.

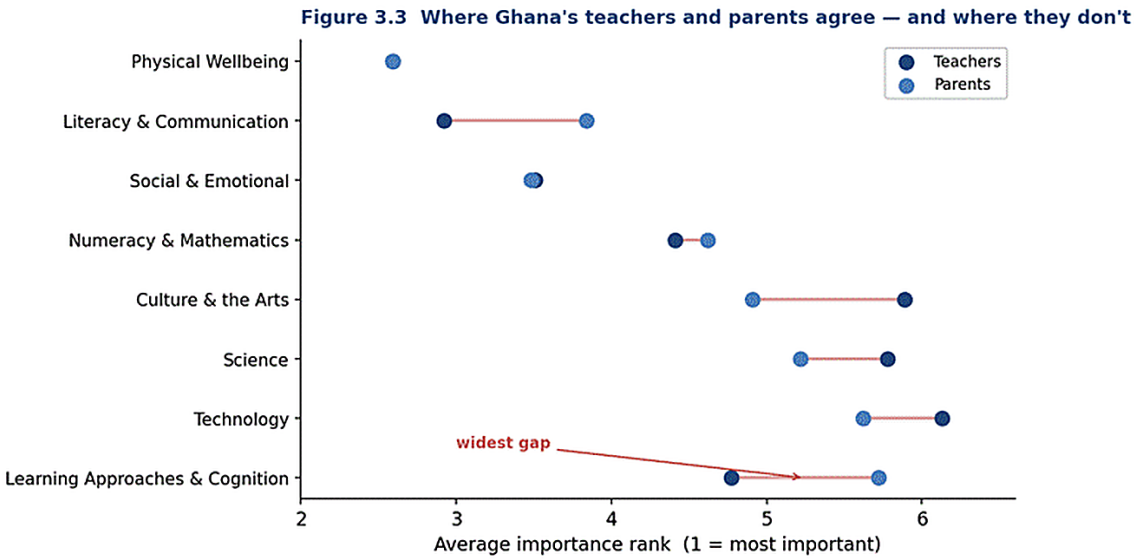


Figure 3. Domain Preference for Teachers and Parents

Parents' low ranking might reflect limited familiarity with what "learning approaches and cognition" means, or a view of it as secondary to subject content rather than a core priority. It might reflect what the survey wording may not have translated cleanly into local ideas about thinking and metacognitive skill. Teachers' higher placement, by contrast, may reflect their day-to-day awareness of how these skills underpin learning. Whatever the cause, the gap matters for policy. This is because a competency-based reform whose central organising idea is not understood or valued by the families it serves will face implementation challenges that are invisible in the policy text itself. Technology, Science, and Culture and the Arts again rank lowest, echoing the teachers' pattern.

Box 3.1 Perspectives on curriculum influence

Beyond ranking domains, Ghanaian parents increasingly see their own involvement as part of the education system. In this study, many Ghanaian parents (69%) agreed that families should have a say in what their children learn. The finding suggests that, alongside their views on specific domains, many parents want a voice in shaping the curriculum itself.

SCHOOL ADMINISTRATORS

Ghana's school administrators closely mirror its teachers and parents. They place Physical Wellbeing and Literacy and Communication at the top, with Social and Emotional and Numeracy just behind. The least prioritised domains are Culture and the Arts, and Science and Technology, the same cluster seen across the other groups. This broad agreement among administrators, teachers and parents points to a genuinely shared local conception of what a good primary education should build first: healthy, safe children who can read, communicate and relate well to others.

"What Matters" to Policymakers in Ghana

This section describes the qualitative findings on which domains matter most to policymakers, and why. The sixteen Ghanaian local-government policymakers interviewed articulated a human-capital and practical-skills paradigm, in which learning domains are valued above all for their contribution to economic participation and real-life functioning.

Physical Wellbeing is positioned as the non-negotiable prerequisite for any learning to occur. As one policymaker put it:

"The sick person cannot learn, and the child should be able to communicate with his colleagues and the teacher."

Literacy and Communication follows as the next priority, framed in terms of functional necessity. The ability to read, write and communicate is treated as the basis for access to opportunity, as with several other groups. Policymakers identified a significant gap between the paradigm they hold and how the system operates. They criticised the current curriculum as overly theoretical and as producing graduates who are insufficiently prepared for the labour market. As one local government official stated:

"The current curriculum focuses much on theory to the neglect of practical training. As a result, the curriculum produces graduates who have no practical skills and only rely on government for employment."

Another stated: "The world is driven by technology. There are many instances where graduates cannot operate simple work machines… This is not the education we should run."

Convergence of Stakeholder Perspectives

Across teachers, parents, school administrators and policymakers, a striking degree of consensus emerges within Ghana. The three domains namely; Physical Wellbeing, Literacy and Communication, and Social and Emotional occupy the top tier of priorities for every group, while Technology and Culture and the Arts sit consistently at the bottom. This alignment may reflect genuinely shared values, or common exposure to a national curriculum discourse that frames these domains in similar terms for everyone.

• **A technology paradox.** Technology ranks last or near-last for every stakeholder group, yet the same stakeholders, especially policymakers, warn that education is failing to prepare young people for a digitally driven economy. The written cur-

riculum reinforces this, leaving Technology almost unreferenced and absent entirely at Primary 2. Ghana wants the outcome that technology promises, but neither its curriculum nor its ranked priorities yet make room for it.

• **The teacher–parent gap.** Ghana's widest divergence is over Learning Approaches and Cognition, strongly emphasised in the curriculum and placed mid-table by teachers, but ranked last by parents. Any reform built around thinking and competency skills will need to explain and build value for this domain with families, not just with schools.

• **A broad idea of "what matters".** Numeracy sits in the middle of every group's rankings rather than at the top. Far from rejecting its importance, Ghanaians appear to hold a broader conception of primary education, one in which physical wellbeing, communication and social-emotional development are seen as equally foundational to a child's development and readiness for life.

The evidence suggests that measuring only literacy and numeracy would capture just a portion of "what matters" and miss much of what Ghana's teachers, parents and leaders say matters most. A fuller definition of "what matters" and a fuller set of measures would keep health, communication, social-emotional development and, increasingly, practical and technological skills in view.

CHAPTER 4: THE ALIGNMENT GAP – POLICY VS. PRACTICE

This chapter examines the extent to which the breadth of learning opportunities intended in the curriculum is reflected in actual classroom practice. It compares curriculum expectations with observed classroom activities across grades, regions, and rural–urban settings, highlighting areas of alignment and gaps in implementation.

The Classroom Reality

The perspectives on the alignment gap between policy and practice regarding the implementation of the curriculum in schools, was captured through stakeholder surveys. The views gathered offer an insight into the normative beliefs that surround breadth of learning opportunities, (i.e. what teachers believe is important to teach, what parents hope their children will learn, and what headteachers and policymakers articulate as the most important goals of their systems). Notwithstanding, beliefs and intentions do not automatically translate into what happens inside classrooms. The analysis that follows highlights concerns about stated curriculum priorities and implemented curriculum, to observed classroom practice, which examines the extent to which each of the eight learning domains is actually present in classrooms and pedagogy across grade levels. Essentially, this perspective compares how observed presence varies between the weight of each domain as factored in national curriculum frameworks. The analysis juxtaposes the gap between what educational systems and parents say they value and what teachers, navigating real constraints of time, materials, training, and assessment pressure, do.

The implemented curriculum represents what learners are taught in lessons, opportunities for independent learning and collaborative work with peers, school participation, and social interactions. It does not include the experienced curriculum, which would be evident through data collected by learners on evaluation of teaching, or the achieved curriculum, which is measured by what learners demonstrate they learned.

The collected classroom observation data were from 128 activities within 90 classroom observations revealing that Literacy and Communication achieves near-universal coverage reaching all Grade 2 classrooms and 87 per cent of pre-primary and Grade 4 classrooms. Learning Approaches and Cognition, Physical Wellbeing, and Social and Emotional were observed in more than half of classrooms across all three grade levels (KG2, Grade 2 and Grade 4). Notably, Ghana's domain coverage is more evenly distributed across grades, with relatively modest grade-to-grade variation for most do-

mains. Social and Emotional, and Physical Wellbeing, however, both show declines by Grade 4. Culture and the Arts, and Numeracy and Mathematics are present in roughly half of classrooms at pre-primary and Grade 2 but decline by Grade 4. Technology registers the lowest instructional presence across all grades. Figure 4.1 shows the percentage of classrooms in which each domain was observed at least once, across primary, Grade 2, and Grade 4.

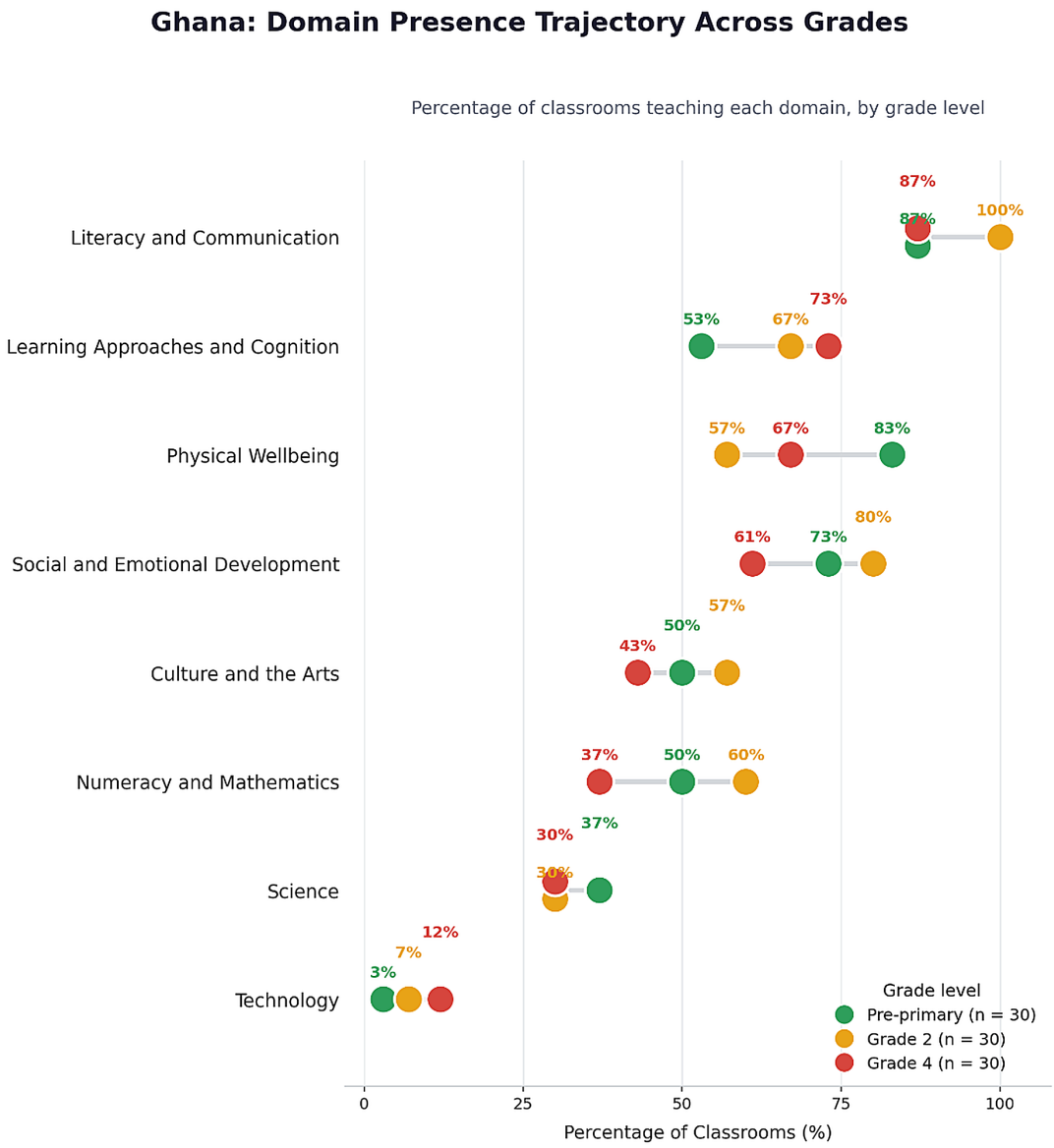


Figure 4.1 Presence of learning domains across KG 2, Primary Grade 2, and Grade 4 classrooms in Ghana

To understand how classroom presence compares to the emphasis of the domains in the national curriculum, we converted the classroom presence data to "relative classroom presence." This relative presence is the share that each domain receives of all the domains observed, so the total domain percentages equal 100 when added together. For example, instead of looking at the percentage of *classrooms* in which literacy instruction was observed, as in the previous analysis, we look at how many domain observations occurred in total and then the percentage of those that were coded as literacy. Then, we compare this percentage with the percentage of curriculum subdomains allocated to a domain in the national curriculum.

Ghana shows a pattern where a breadth of learning opportunities is more evident in early schooling and decreases with grade progression. There is also a foundation of strong literacy coverage, a recognizable pattern of socio-emotional while revealing other pronounced variations across domains and education levels. The instructional profile shows an interesting pattern for Culture and the Arts, Numeracy and Mathematics, and Science: increased presence between pre-primary and Grade 2 and then a drop-off to levels lower than pre-primary by Grade 4.

Patterns in domain presence across regions

Figure 4.2 disaggregates relative classroom presence by region. Because the number of classrooms per region is small (9–12), regional figures are indicative rather than precise estimates. The national pattern identified earlier holds across every region: Literacy and Communication is the most-observed domain in almost everywhere, ranging from about 16 per cent of observed presence in Western to roughly 26 per cent in Upper West. Together with the three relational and holistic domains — Social and Emotional, Physical Wellbeing, and Learning Approaches and Cognition — literacy accounts for around half to two-thirds of all observed presence in every region, confirming that Ghanaian classrooms gravitate towards language, relational and cognitive instruction.

The remaining domains in the curriculum show the least visible in practice, which is consistent region by region. Technology is effectively absent: it was not observed at all in Eastern, Oti, Savannah or Upper East, and reached only about 4 per cent. Even where it is most present (Ahafo and Ashanti), it reflects the scarcity of functioning devices in classrooms. Science is low and uneven, highest in Oti (12 per cent) and Ashanti (11 per cent) and lowest in Eastern (about 2 per cent) and Upper West (about 2 per cent). Numeracy and Mathematics shows the widest regional variation: under-represented in most regions and falling to about 5 per cent in Eastern, though it reached nearly 22 per cent in Savannah, about double the national figure. Culture and the Arts is modest throughout, most present in Upper East (about 18 per cent) and thinnest in Upper West (about 5 per cent). Western is the only region in which Learning Approaches and Cognition is the single

most-observed domain (about 19 per cent).

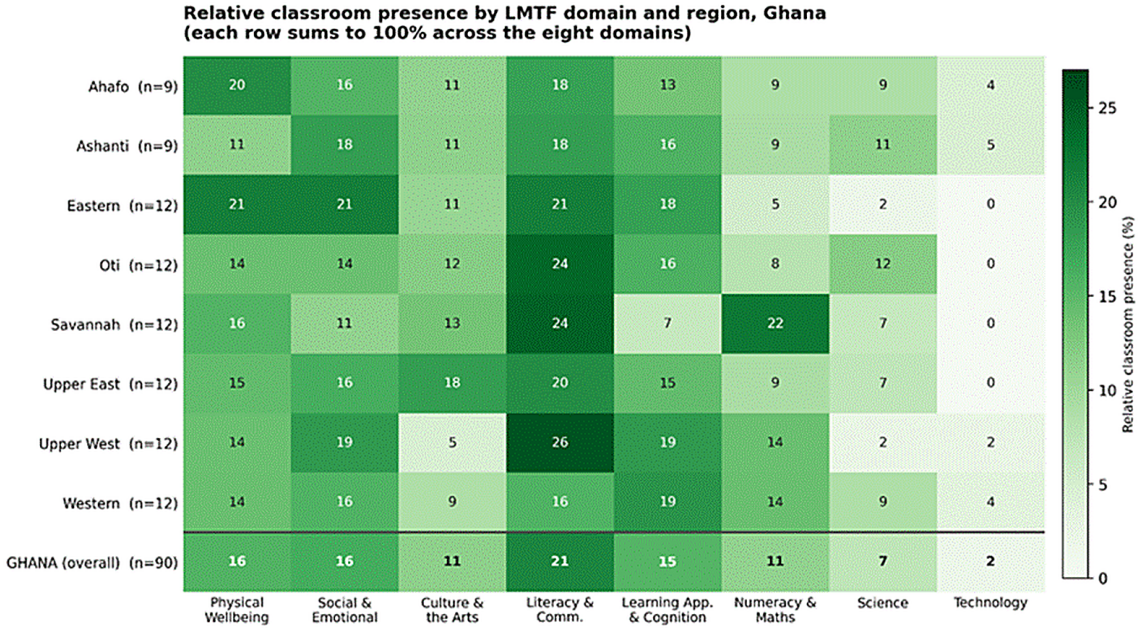


Figure 4.2 Relative classroom presence by LMTF domain and region, Ghana (each region sums to 100% across the eight domains; n = 9–12 classrooms per region).

KG 2

Figure 4.3 shows that at the pre-primary level (KG 2), the national profile is broad and wellbeing-oriented: Physical Wellbeing and Literacy and Communication are jointly the most-observed domains (about 19 per cent of observed presence each), followed by Social and Emotional Learning (16 per cent) and Learning Approaches and Cognition (14 per cent), while Numeracy (11 per cent), Science (8 per cent) and Technology (1 per cent) trail. This is consistent with an early-years emphasis on play, routine, language and social development rather than formal subject content. The regional cells, though indicative given their size, echo this in most places, with literacy prominent everywhere and technology essentially absent. Two illustrative outliers stand out: Savannah, where a third of observed presence at KG 2 was Numeracy and Mathematics with no Science or Learning Approaches recorded, and Eastern, where Physical Wellbeing, Social and Emotional Learning and Literacy each accounted for around a quarter but Numeracy was not observed at all.

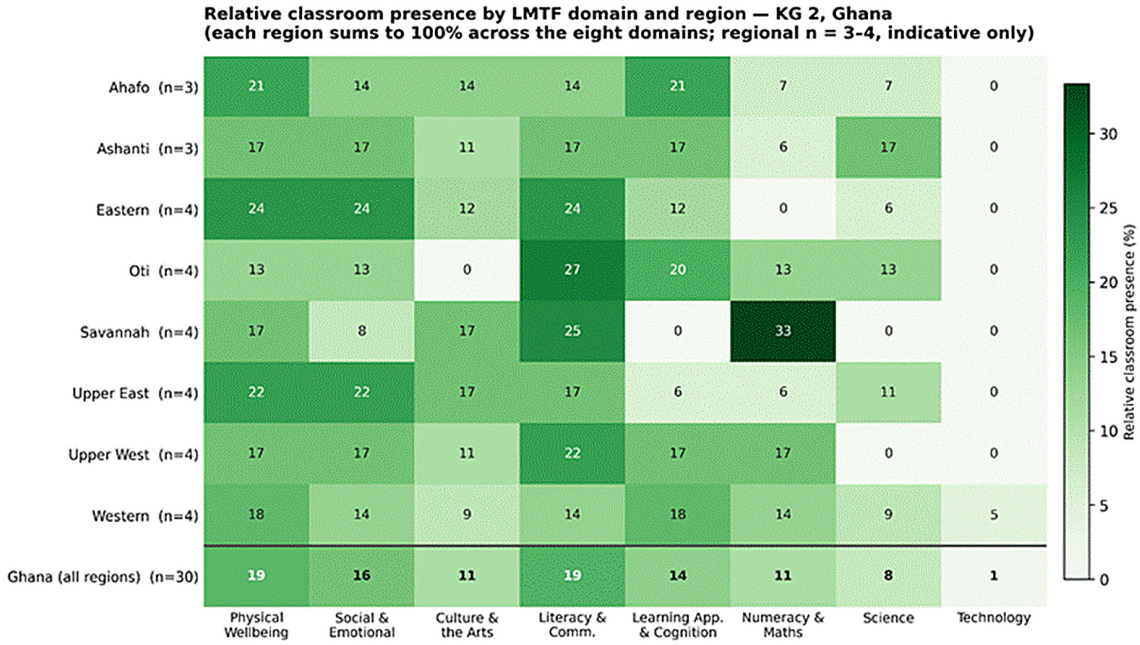


Figure 4.3 Relative classroom presence by LMTF domain, region and KG2

PRIMARY 2

Figure 4.4 shows that, by Primary 2, the profile tilts more firmly towards literacy and relational learning. Nationally, Literacy and Communication becomes the clear leader (about 22 per cent of observed presence), followed by Social and Emotional learning (18 per cent) and Learning Approaches and Cognition (15 per cent); Numeracy sits at about 13 per cent, and Science (7 per cent) and Technology (1 per cent) remain thin. Relative to KG 2, the most visible shift is the sharp fall in Physical Wellbeing (from about 19 to 12 per cent) as structured lessons displace the play- and routine-based activity of the early years, alongside a modest rise in literacy and social-emotional presence. Among the indicative regional readings, Upper West shows the heaviest literacy concentration (about 29 per cent, with no Culture and the Arts recorded), Oti the strongest arts presence (about 22 per cent), and Ashanti and Savannah the highest numeracy shares (around 20 per cent), while Science was not observed at all in Eastern or Upper East.

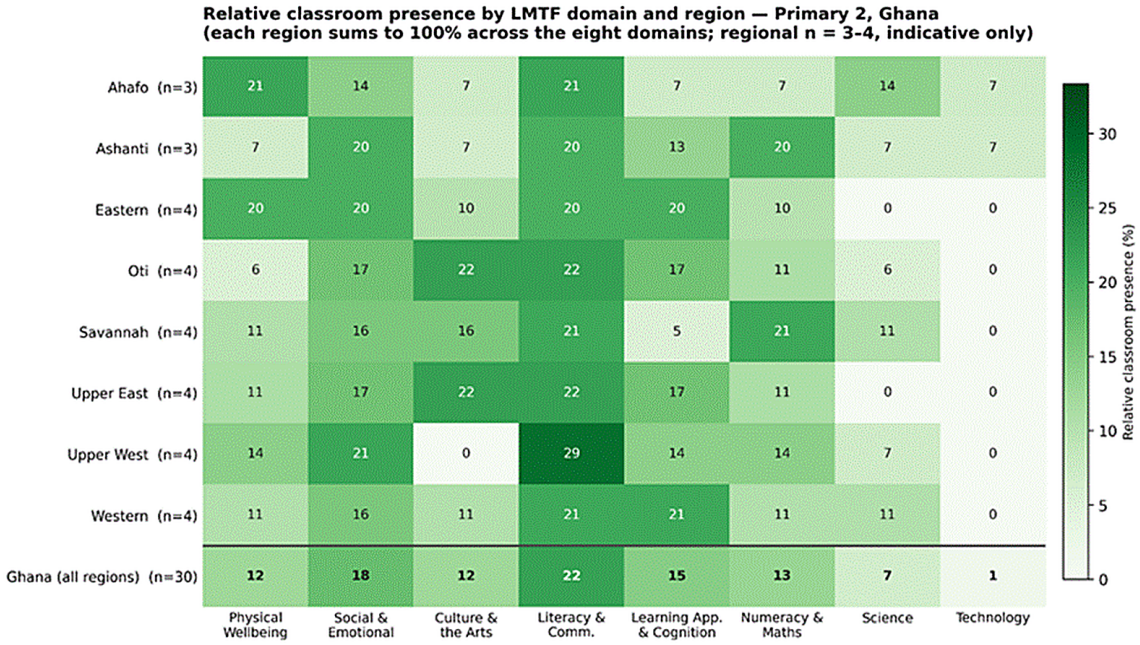


Figure 4.4 Relative classroom presence by LMTF domain, region and Primary 2

PRIMARY 4

At Primary 4 the picture is one of consolidation around literacy and cognition, with a notable retreat in numeracy. Nationally, Literacy and Communication remains the largest domain (about 21%), but Learning Approaches and Cognition rises to about 18%. It is highest across the three grades and Physical Wellbeing recovers somewhat to 16%. Numeracy and Mathematics, by contrast, falls to about 9%, its lowest point of the primary phase, even as the national curriculum's numeracy emphasis peaks at this grade; Science stays low at 7%, and Technology reaches its highest, though still minimal level (about 3 per cent). The divergence between rising curriculum expectation and falling observed presence is the clearest expression of the alignment gap discussed above. The indicative regional cells reinforce the pattern: Numeracy was not observed at all in Ashanti or Oti at Primary 4, literacy dominated in Savannah (about 29 per cent) and Upper West (about 27 per cent, alongside an equal share for Learning Approaches), and Oti was distinctive for its comparatively strong Science presence (about 18 per cent). Figure 4.5 highlights this.

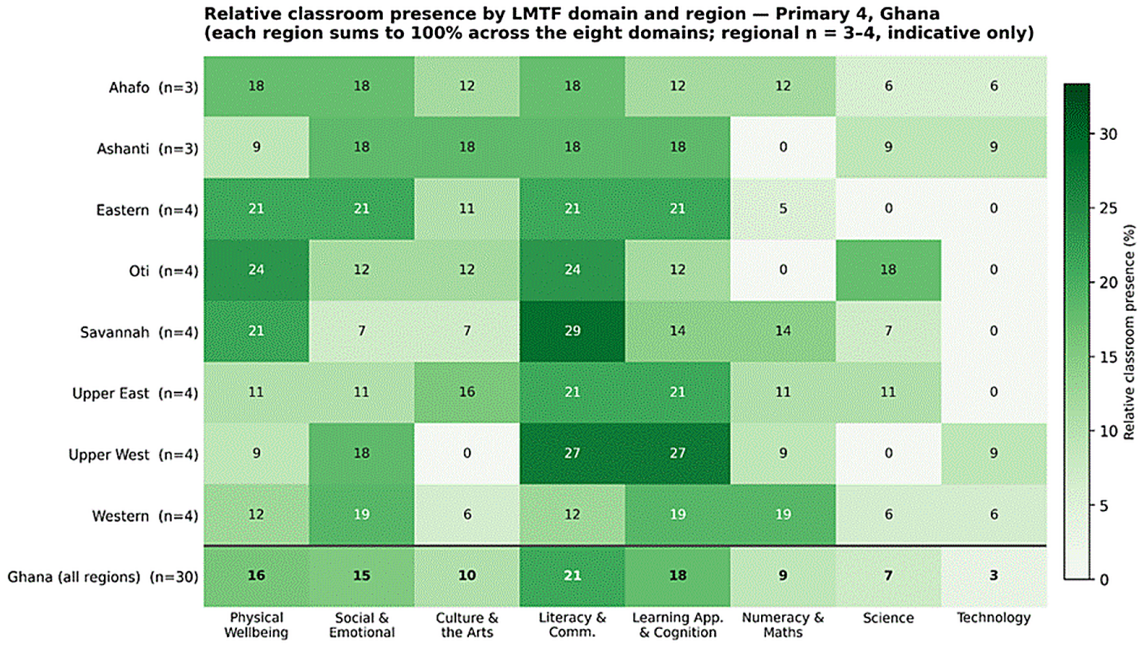


Figure 4.5 Relative classroom presence by LMTF domain, region and Primary 4

Patterns in Domain Presence in rural and urban areas across regions

Figure 4.6 compares the 42 urban and 48 rural classrooms observed. The two profiles are broadly similar a finding in itself, since it indicates that the breadth of the implemented curriculum does not differ sharply by school location. In both settings Literacy and Communication is the single most-present domain (21.7 per cent of observed presence in rural classrooms and 19.8 per cent in urban ones), followed by the relational and holistic domains Social and Emotional learning, Physical Wellbeing and Learning Approaches and Cognition, which together account for roughly half of all observed presence in each setting.

The clearest divide is Technology. It makes up 3.0 per cent of observed presence in urban classrooms but only 0.5 per cent in rural ones; expressed as coverage. Technology was observed in about one in seven urban classrooms but in only one rural classroom in fifty. Urban classrooms also showed somewhat more Physical Wellbeing (17.3 versus 14.1 per cent) and Culture and the Arts (12.2 versus 10.6 per cent), whereas rural classrooms leaned marginally towards Social and Emotional learning (17.2 versus 15.7 per cent), Science (8.6 versus 6.1 per cent) and Numeracy and Mathematics (11.6 versus 10.7 per cent). Granted that relative presence is a composition measure, in which each setting's eight domains sum to 100 per cent, a larger share reflects a bigger slice of what was observed rather than more absolute activity. Aside from technology, the urban–rural contrasts are slight and

are best read as tendencies given the modest cell sizes.

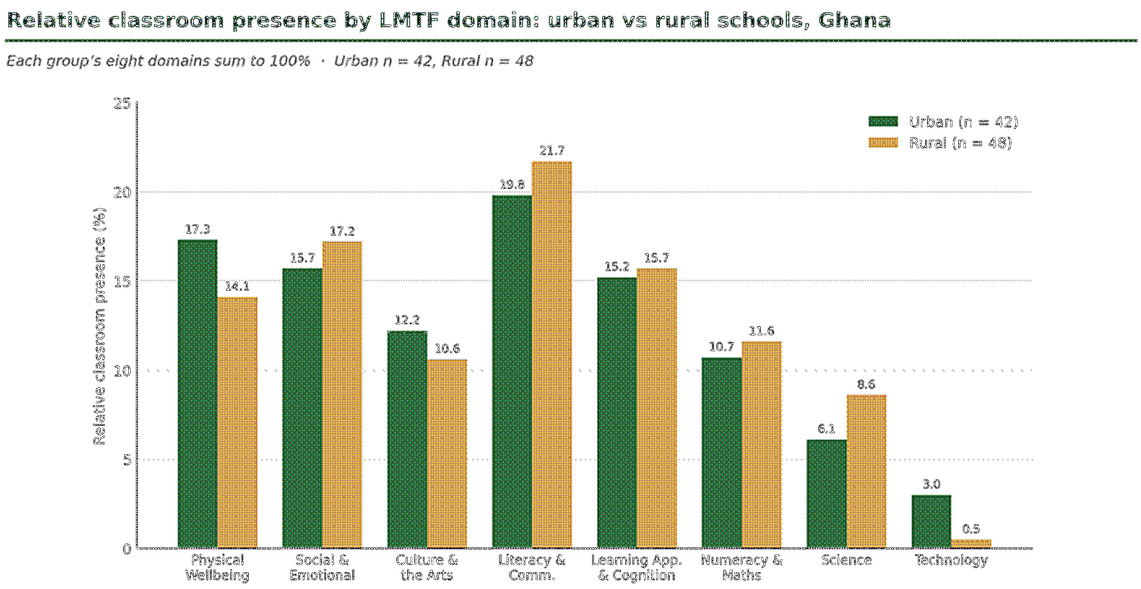


Figure 4.6 Relative classroom presence by LMTF domain: urban versus rural schools, Ghana (Urban n = 42; Rural n = 48).

Classroom presence compared to domain emphasis in the national curriculum

Setting observed practice against the curriculum's own domain emphasis reveals a consistent, and in places substantial, gap between what Ghana's basic-education curriculum prioritises and what is actually visible in classrooms (Figures 4.7 and 4.8). The two domains the curriculum weights most heavily are the two most under-represented in practice. Numeracy and Mathematics account for roughly 21 per cent of the mapped curriculum but only about 11 per cent of observed classroom presence, a shortfall of nearly ten percentage points. Science shows the same pattern, allocated about 15 per cent of the curriculum but observed at around 7 per cent, a gap of almost eight points.

The mirror image is Literacy and Communication, which occupies about 21 per cent of observed presence against a curriculum allocation of roughly 14 per cent, the largest positive gap of any domain, and a clear sign that classroom time gravitates towards language work which is beyond the weight the curriculum assigns it. The relational and holistic domains follow the same direction more modestly: Physical Wellbeing and Social and Emotional learning are each observed about three to four percentage points more often than their curriculum share, and Learning Approaches and Cognition slightly more. Culture and the Arts is the best-aligned domain, with observed presence (about 11 per cent) almost exactly matching its

curriculum allocation. Technology is minimal on both sides, the mapped curriculum allocates it under 1 per cent at these grades, and observed presence is only marginally higher so the technology gap seen elsewhere in the report reflects near-absence in both the intended and the implemented curriculum at the basic level, rather than a failure to deliver a strong curriculum emphasis.

Taken together, the pattern indicates that Ghanaian basic classrooms broadly under-deliver the curriculum's intended emphasis on numeracy and science, while over-delivering literacy and, to a lesser degree, the relational and physical-wellbeing domains. This is consistent with the report's wider finding that classrooms gravitate towards language, relational and cognitive instruction under real constraints of time, materials, training and assessment pressure, crowding out the numeracy- and science-heavy emphasis that the national curriculum sets out.

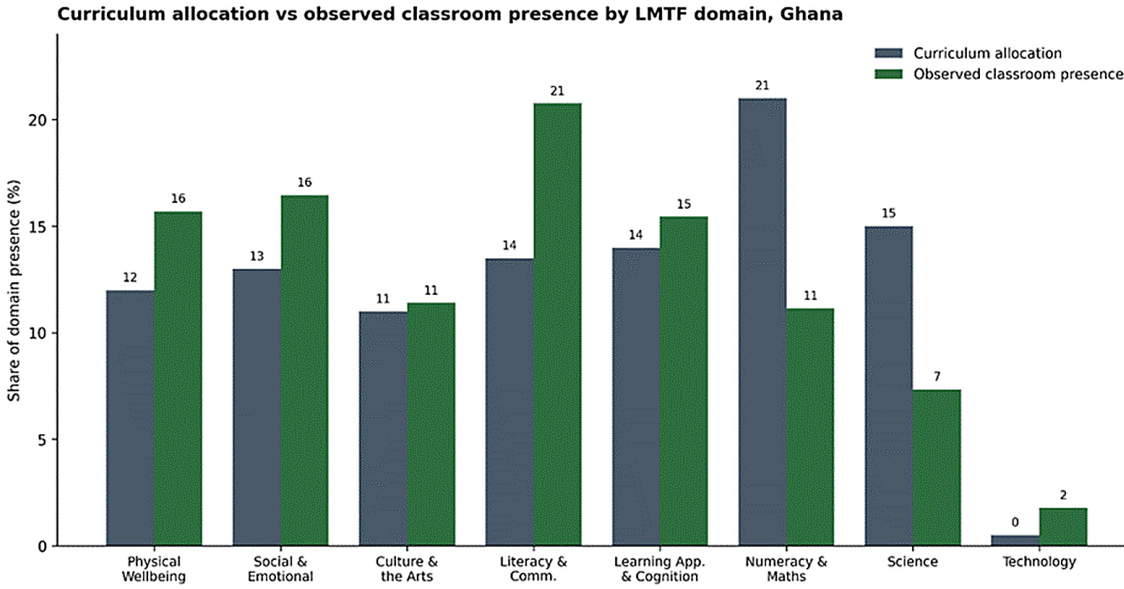


Figure 4.7 Curriculum allocation versus observed relative classroom presence by LMTF domain, Ghana (KG 2, Primary 2 and Primary 4 combined).

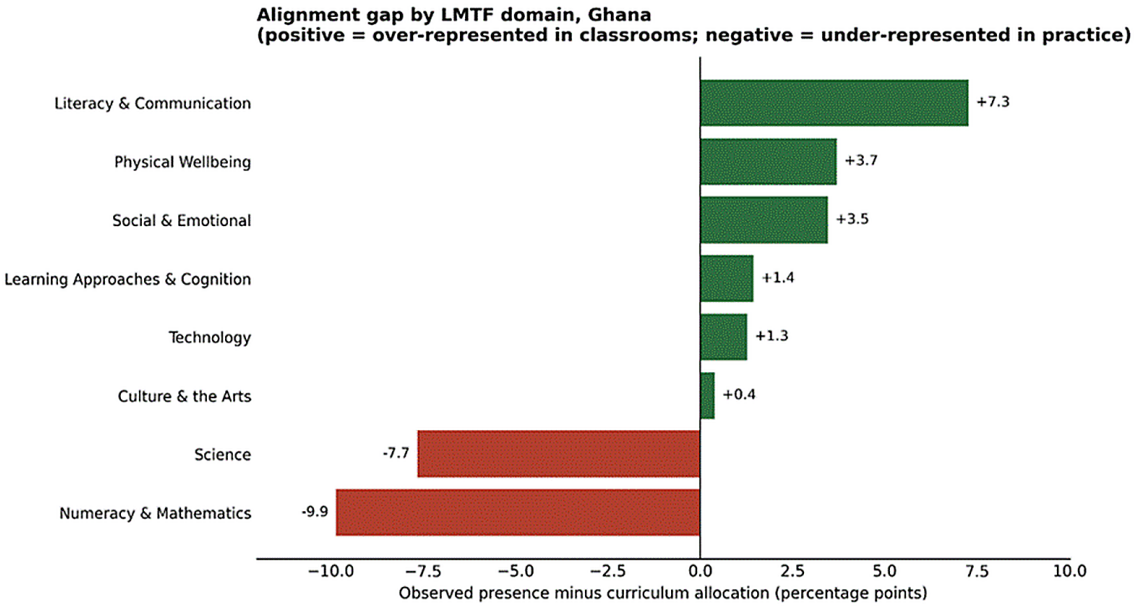


Figure 4.8 Alignment gap by LMTF domain, Ghana (observed relative classroom presence minus curriculum allocation, in percentage points; positive = over-represented in classrooms, negative = under-represented in practice).

Curriculum allocation versus observed relative classroom presence by LMTF domain per Region per Grade (KG 2, Primary 2 and Primary 4)

KG 2

At pre-primary, the curriculum reference is comparatively balanced, with its highest allocations shared by the domains on Physical Wellbeing, Numeracy and Mathematics, and Science (about 17 per cent each). The clearest departure is Numeracy: the reference bar sits well to the right, yet most regional dots fall to its left; Ashanti, Ahafo, Upper East and Eastern all deliver roughly a third or less of the intended numeracy share, with Eastern recording none at KG 2. The one striking exception is Savannah, whose dot lies far to the right at about 33 per cent, the widest single departure on the chart and the reason the numeracy dots are so dispersed. Science tells a simpler story: almost every dot sits to the left of the reference bar, confirming early under-representation, while the Literacy dots cluster consistently to the right of their (more modest) reference, the familiar over-delivery. Physical Wellbeing dots straddle the bar, and Technology dots stack at zero in line with a near-zero curriculum allocation.

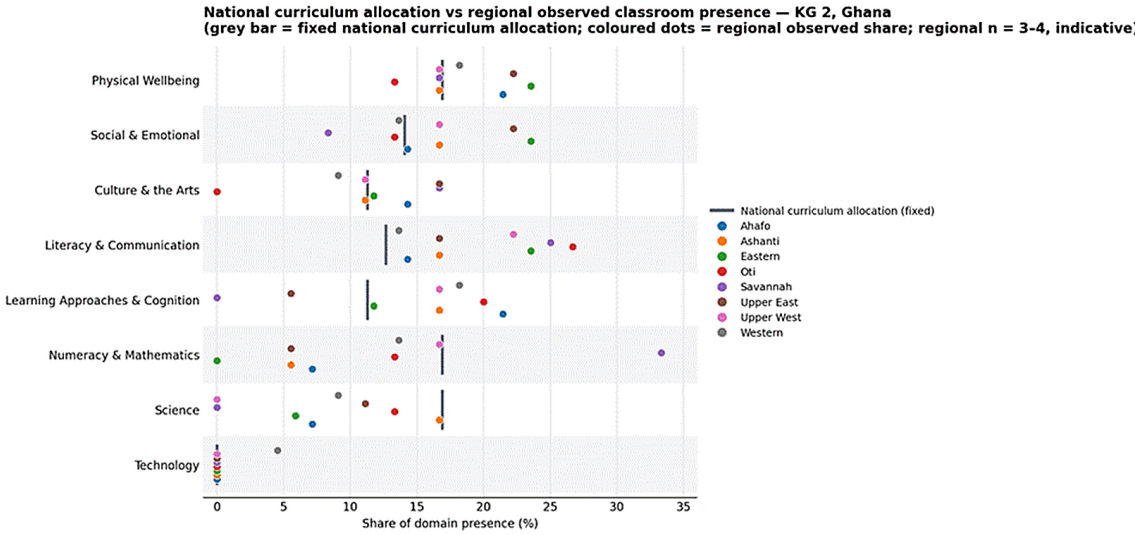


Figure 4.9 Curriculum allocation versus observed relative classroom presence by LMTF domain per Region per KG 2

PRIMARY 2

By Primary 2, the curriculum reference shifts, with Numeracy (about 19 per cent) and Learning Approaches and Cognition (about 17 per cent) now the largest allocations. The Numeracy dots again lie mostly to the left of the bar; only Ashanti and Savannah (about 20–21 per cent) reach it, so under-delivery is the rule with a couple of exceptions. Science remains firmly underrepresented. Several regions, including Eastern, Upper East and Upper West, record no science at all, leaving every dot at or below the reference. Literacy shows the opposite. Its dots are clustered tightly to the right of the bar (around 20–29 per cent across regions), the most consistent over-delivery at this grade. Culture and the Arts is the most scattered domain. Dots range from zero in Upper West to about 22 per cent in Oti and Upper East, indicating that arts provision at Primary 2 is delivered very unevenly across regions rather than tracking the curriculum.

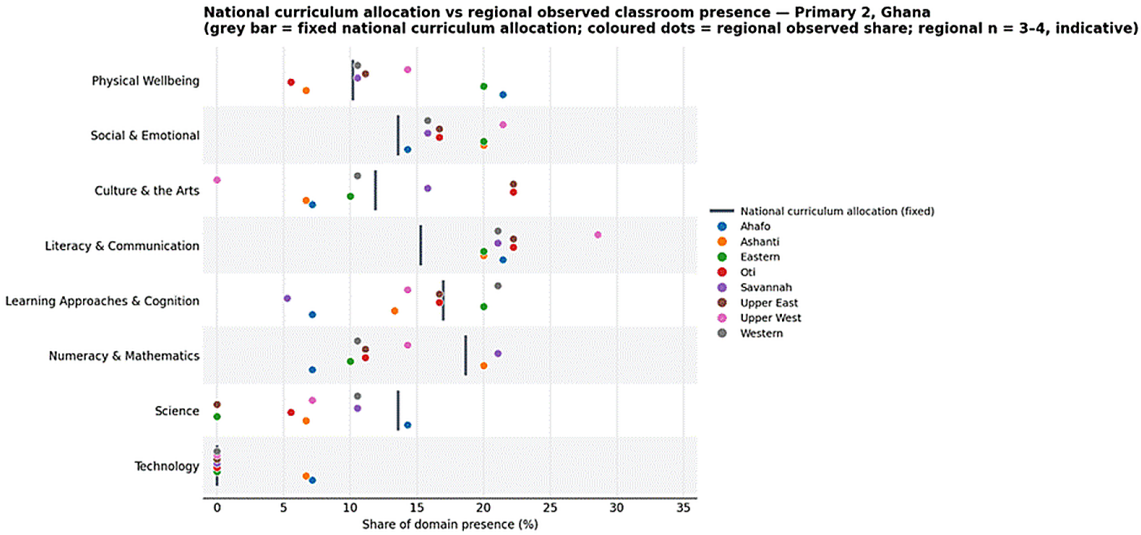


Figure 4.10 Curriculum allocation versus observed relative classroom presence by LMTF domain per Region per Primary 2

PRIMARY 4

Primary 4 produces the starkest picture. The curriculum reference for Numeracy jumps to about 27 per cent, by far the largest allocation anywhere on the three charts, yet every regional dot sits well to its left, from roughly 19 per cent in Western down to zero in Ashanti and Oti. This universal leftward gap, with no region approaching the bar, is the clearest visual statement of the numeracy alignment shortfall at upper primary. Science is similarly under-delivered, with most dots left of the reference and only Oti (about 18 per cent) exceeding it. In the other direction, the Literacy dots and, notably, the Physical Wellbeing dots sit to the right of their reference bars in most regions, so classrooms continue to over-deliver language and wellbeing activity even as the curriculum's emphasis has moved towards numeracy. The overall impression is of regional practice pulling consistently away from the curriculum's upper-primary priorities, in the same direction everywhere and most severely for numeracy.

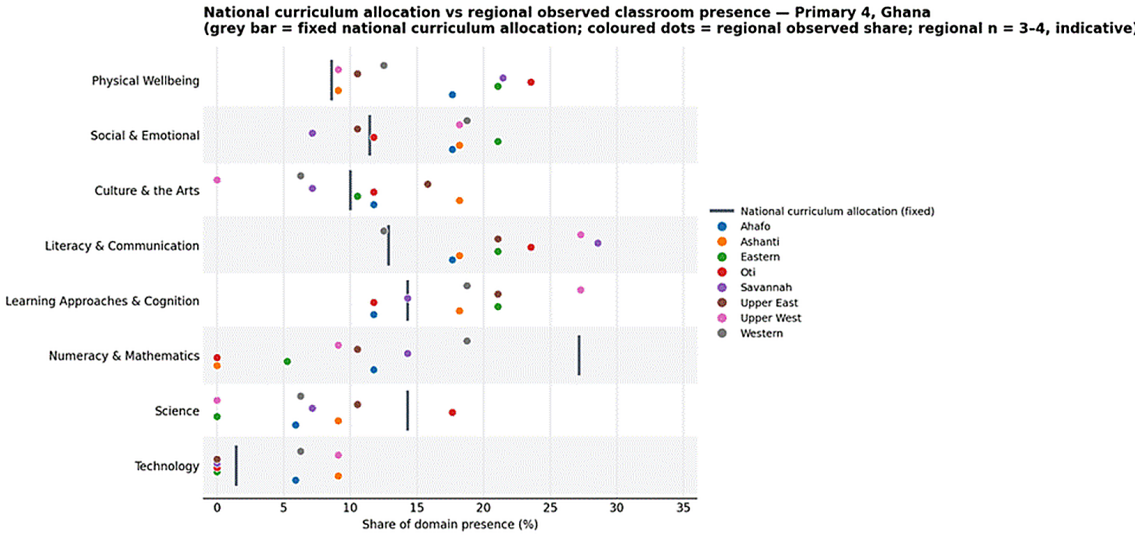


Figure 4.11 Curriculum allocation versus observed relative classroom presence by LMTF domain per Region per Primary 4

Overall, the findings reveal a clear gap between curriculum expectations and classroom practice. Literacy and Communication consistently received strong classroom attention, while Numeracy and Mathematics and Science were generally underrepresented, particularly at Primary 4, where the curriculum places greater emphasis on these areas. Social and Emotional Learning, Physical Wellbeing, and Learning Approaches and Cognition were also regularly observed. Technology remained the least represented domain, especially in rural classrooms. Although some regional and rural–urban variations were evident, the findings point to a broader pattern of reduced breadth of learning as learners progress through the grades.

CHAPTER 5: ENABLERS AND BARRIERS TO CURRICULUM IMPLEMENTATION

This chapter explores the key factors that influence curriculum implementation within Ghanaian schools and classrooms. It identifies the enablers that support effective curriculum delivery and the barriers that hinder successful implementation, providing insights into the conditions that shape teaching and learning outcomes across the country.

Barriers to Implementing the Full Curriculum

To better understand the barriers to curriculum implementation in Ghana, teachers and headteachers were asked: "What are the top three barriers that make it difficult for schools in your area to implement the curriculum as it is today?" The findings presented in this section draw on teachers' responses and qualitative evidence to provide a deeper understanding of the key challenges affecting curriculum implementation.

TEACHER-IDENTIFIED BARRIERS

Teachers in Ghana identified a set of interconnected constraints that limit their capacity to deliver the full breadth of the standards-based curriculum. As Figure 5.1 shows, the barriers cited most frequently were material and infrastructural rather than pedagogical. Limited teaching and learning materials (63%) and limited access to technology (61%) were the two most frequently cited barriers, followed by financial constraints (47%), inadequate infrastructure (33%), and staffing shortages (31%). Limited parental support was cited by a smaller share of teachers (18%), while instructional, policy, health, and emergency-related factors were rarely identified. The distribution indicates that curriculum implementation is constrained principally by the resourcing of schools rather than by the design of the curriculum itself.

The three most frequently cited barriers are closely related and, taken together, describe a resourcing gap at the point of delivery. The shortage of teaching and learning materials was the single most reported constraint, consistent with national evidence that curriculum-aligned textbooks approved by the National Council for Curriculum and Assessment remained in short supply in public basic schools years after the standards-based curriculum was introduced, with several core subjects taught without standard texts (Africa Education Watch, 2025; CREP Africa, 2025). Distribution of learning materials had earlier been flagged as an urgent priority for the sector (UNESCO, 2023), and Government has since acknowledged the deficit, allocating

GH¢564.6 million in the 2025 Budget for the procurement of curriculum-based textbooks, including revised subject and local-language materials (Ministry of Finance, 2025). The persistence of the shortage helps explain why teachers rank materials ahead of every other barrier. Without graded readers, workbooks, and teacher guides, competency-based tasks are difficult to set, and assessment tends to fall back on tests that simply ask learners to memorise and repeat facts rather than apply what they have learned.

Limited access to technology was cited almost as often (61%) and reflects a digital-infrastructure gap that is well documented. A recent survey found that only 2% of basic schools in deprived districts had functioning ICT facilities, compared with 8% in more endowed districts, even though Computing is a compulsory subject from upper primary to junior high school (Africa Education Watch, 2025). Provision of computers and electricity remains uneven. In fact, national estimates have put computer availability at about 3.5% of primary and 13% of junior high schools, and roughly half of primary schools and about a third of junior high schools are estimated to lack a connection to the electricity grid (Dzinotyiweyi & Taddese, 2020; Africa Education Watch, 2025). Because a reliable power supply underpins any use of digital tools, these deficits make the technology-supported teaching envisaged by the curriculum difficult to realise, particularly in rural schools.

Financial constraints, cited by 47% of teachers, sit beneath the first two barriers and, in practice, drive them. Public education spending is estimated to have fallen from about 3.7% of Gross Domestic Product in 2019 to roughly 3.1–3.3% in 2023–2024, below the 4–6% international benchmark, while a large share of the recurrent budget, about 82% in 2022 is absorbed by staff compensation, leaving limited room for materials, equipment, and infrastructure (Oxford Business Group, 2024; Africa Education Watch, 2025). At school level, this tight fiscal envelope restricts the procurement of instructional resources and helps account for the material and technology shortages that teachers experience most directly.

Infrastructure and staffing form a second tier of barriers, each cited by roughly a third of teachers. On infrastructure, the 2025 Report of the Auditor-General found that 10,730 public basic schools across thirteen regions had no permanent classroom block, with about 3.05 million pupils learning under trees or in temporary structures, conditions the report noted are inconsistent with Section 36 of the Pre-Tertiary Education Act, 2020 (Act 1049) (Auditor-General, 2026). Inadequate classroom space, furniture, and specialised facilities constrain the practical work, group activities, and differentiated instruction that a competency-based curriculum assumes. On staffing, schools facing shortages of trained teachers rely on existing staff to cover multiple subjects and larger classes, which increases workload and reduces the time available for lesson preparation, assessment, and individual support. These pressures are sharpest in rural and underserved districts, where teacher vacancies have been reported at

more than twice the urban rate (Ghana Education Service, 2020; Oxford Business Group, 2024).

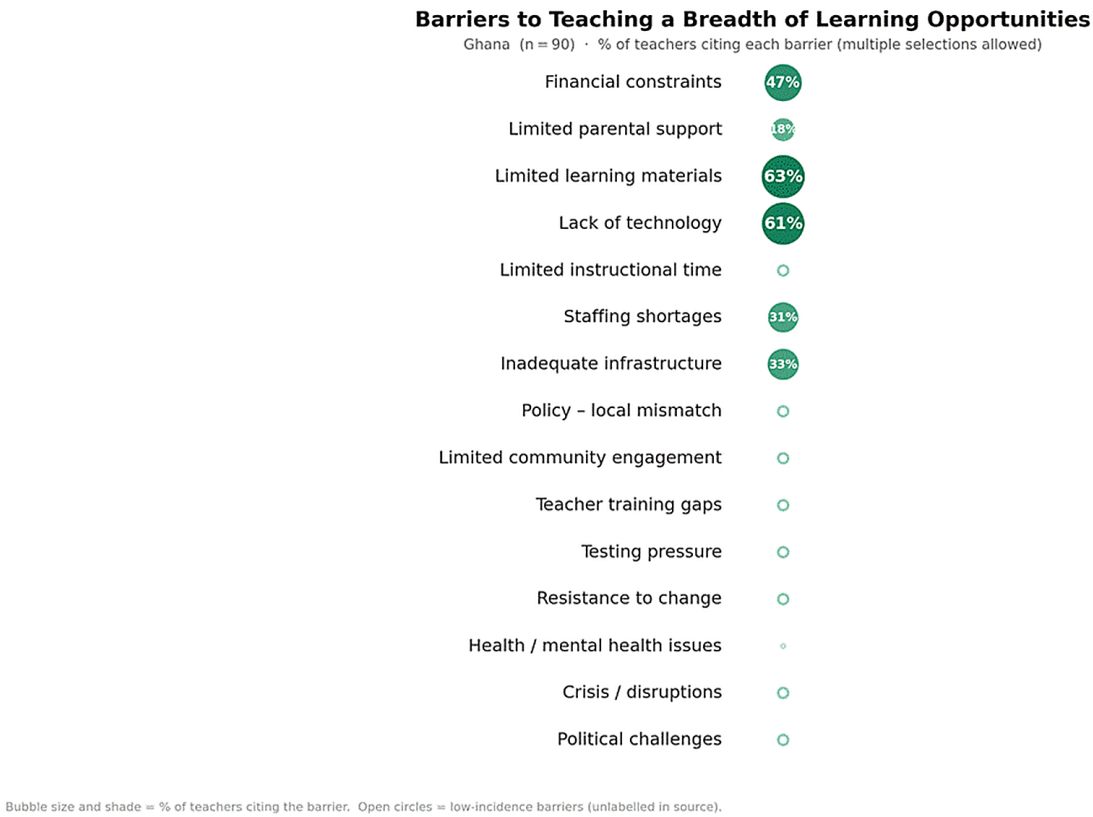


Figure 5. Barriers to Teaching a Breadth of Learning Opportunities

SCHOOL ADMINISTRATORS

School administrators in Ghana identified several key barriers to curriculum implementation, with their responses highlighting institutional and organizational challenges that complement the perspectives of teachers. Financial constraints emerged as the most frequently cited barrier, with 67% of school administrators identifying inadequate funding as a major obstacle to effective curriculum implementation. This finding suggests that limited financial resources continue to constrain schools' ability to provide the facilities, instructional materials, and support required for successful curriculum delivery.

Limited learning materials and insufficient institutional or staffing capacity were also among the most commonly reported barriers. These findings indicate that school administrators perceive resource shortages as affecting not only classroom teaching but also the broader capacity of

schools to implement the curriculum effectively. The lack of adequate instructional resources, combined with staffing limitations, reduces schools' ability to support teachers and provide students with meaningful learning experiences.

Unlike findings reported in some other national contexts, resistance to change was not identified as a major concern among school administrators in Ghana. Similarly, issues such as testing pressure, policy-to-local-context mismatches, and health or mental health concerns were reported less frequently, suggesting that administrators view material and institutional resource constraints as more pressing challenges than organizational or cultural factors.

Overall, the responses of school administrators reveal that curriculum implementation in Ghana is primarily constrained by systemic resource limitations rather than resistance to reform or accountability pressures. The prominence of financial constraints, inadequate learning materials, and limited institutional capacity underscores the need for increased investment in school resources, improved staffing, and stronger institutional support to facilitate effective curriculum implementation. These findings align closely with teachers' perceptions, indicating broad agreement among key educational stakeholders that addressing resource-related challenges is essential for improving curriculum implementation in Ghana.

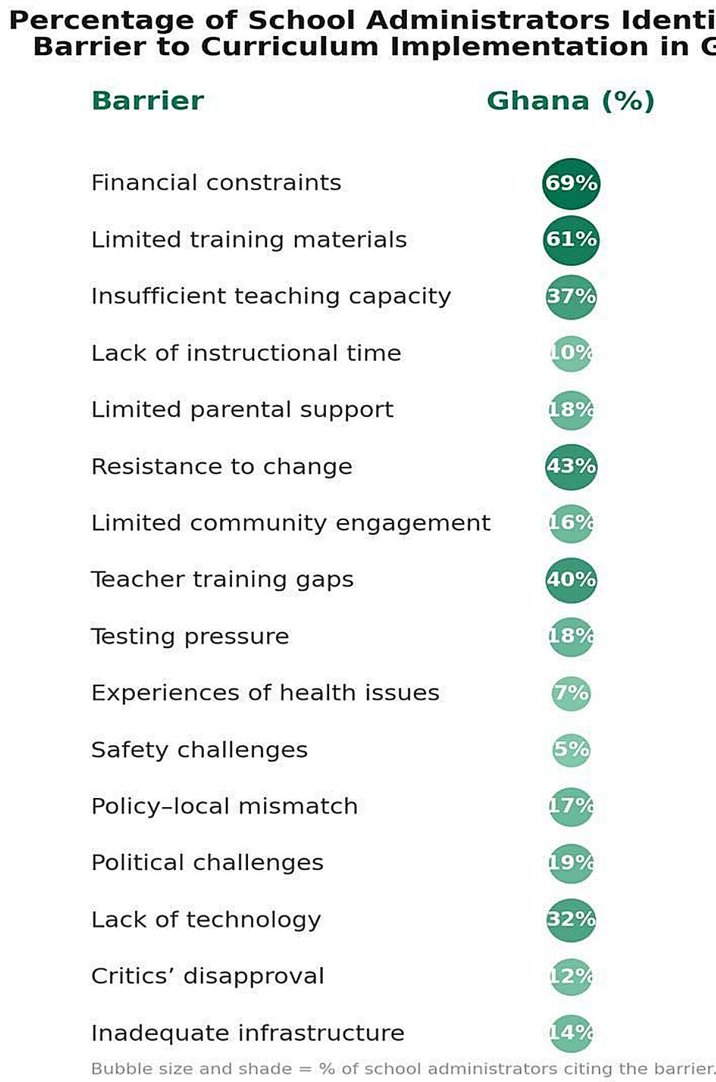


Figure 5. Percentage of School Administrators Identifying a Barrier to Curriculum Implementation in Ghana

BARRIERS REPORTED BY TEACHERS, BY GRADE LEVEL

Disaggregation of teacher responses by grade level corroborates a predominantly resource-constrained profile across KG2, Primary 2 and Primary 4, while clarifying meaningful variation beneath the pooled estimates. Across all three levels, limited learning materials, lack of technology, and financial constraints are the most commonly reported barriers. No other category is cited by more than 20 % of teachers. Health and mental-health concerns are not reported by respondents.

The presented percentages derive from samples of 30 teachers per grade and should be treated as indicative. The largest inter-level divergence pertains to access to technology: roughly 43 % of KG2 teachers report technology shortfalls as a barrier, compared with approximately 70 % of teachers at both primary levels. Reports of limited learning materials display a similar but less pronounced upward trend (about 60 % at KG2 rising to 67 % in primary). Conversely, two barriers are reported more frequently at KG2 than in primary: inadequate infrastructure (40 % at KG2 versus 27–33 % in primary) and insufficient staffing (37 % at KG2 versus about 27 % in primary), patterns that align with the greater space, furniture and adult-supervisory requirements of early-years classrooms.

The disaggregated data sharpen the national assessment. The findings show that resource constraints underlie barriers at every level, with technology scarcity representing a relatively minor concern in kindergarten but a dominant constraint across primary grades.

Enabling Conditions for Curriculum Implementation

The barriers presented in Figure 5.2 point not only to the constraints that hinder curriculum implementation but also to the conditions that make effective teaching and learning possible. Creating meaningful learning opportunities requires more than a well-designed curriculum. It depends on whether teachers and school leaders are supported to translate curriculum goals into classroom practice. Addressing the barriers identified therefore involves more than removing constraints. It also means strengthening the factors that enable teachers to deliver the curriculum successfully.

The evidence from this Ghanaian study suggests that effective implementation depends on a combination of enabling conditions operating at different levels of the education system. At the classroom level, adequate teaching and learning materials, sufficient instructional time, and supportive, inclusive learning environments are essential for translating curriculum objectives into meaningful learning experiences. At the school level, strong instructional leadership, adequate staffing, and collaborative professional cultures strengthen teachers' capacity to deliver the curriculum. At the system level, continuous professional development, curriculum support mechanisms, and ready access to curriculum documents and implementation guidelines give teachers and school administrators the knowledge and confidence to carry out curriculum reforms. Together, these conditions shape teachers' ability to deliver the intended curriculum and to provide learners with engaging and inclusive learning experiences.

While factors such as parental involvement and community support also contribute to educational outcomes, the discussion is limited to system-level conditions within the reach of policy and practice: the physical conditions of classrooms, the availability of teaching and learning resources, teacher professional support and collaboration, instruc-

tional leadership, and access to curriculum materials and implementation guidance. Understanding these conditions complements the analysis of barriers by identifying the supports needed to strengthen curriculum implementation and improve educational outcomes.

Figure 5.3 Barriers reported by teachers, by grade level (Ghana)

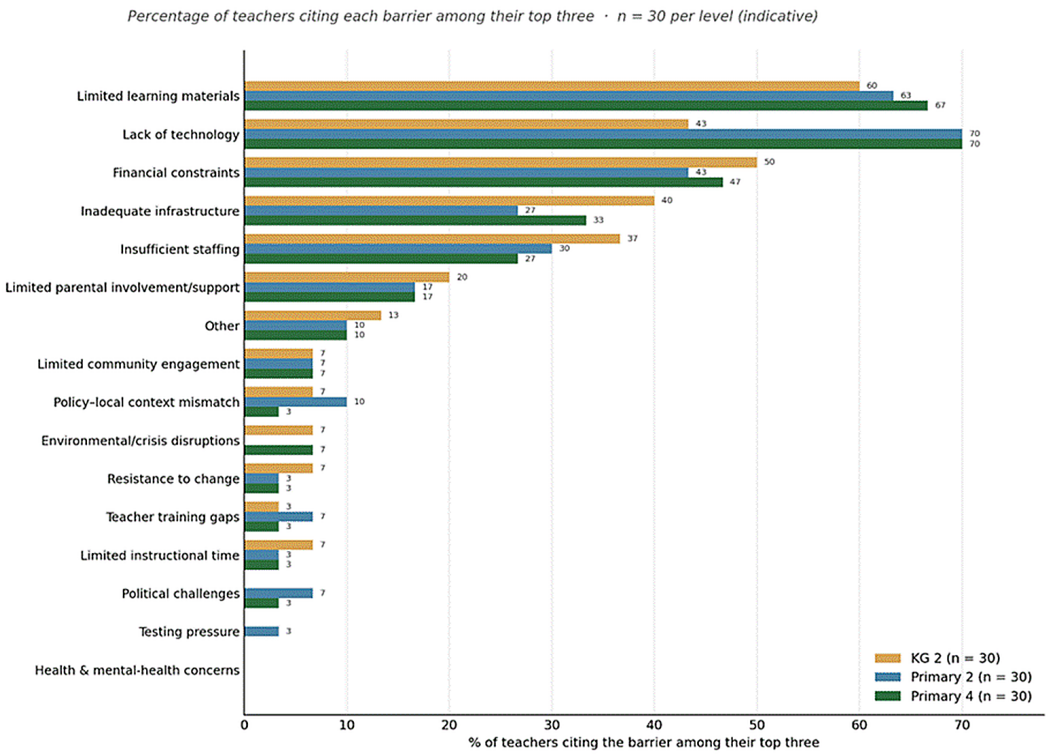


Figure 5. Barriers reported by teachers, by grade levels

BARRIERS REPORTED BY HEADTEACHERS

Headteachers were surveyed once per school (30 schools, one respondent each), so their responses describe the school as a whole and cannot be broken out by grade. Their barrier profile is even more tightly concentrated on resources than teachers': limited learning materials (80%), financial constraints (67%) and insufficient staffing (50%) dominate, ahead of a second tier of limited community engagement (23%), and limited parental involvement and testing pressure (each 17%). Because headteachers speak for their institution, their profile is best read as the whole-school backdrop against which the level-specific patterns in the teacher data play out.

Figure 5.4 Barriers reported by headteachers (Ghana)

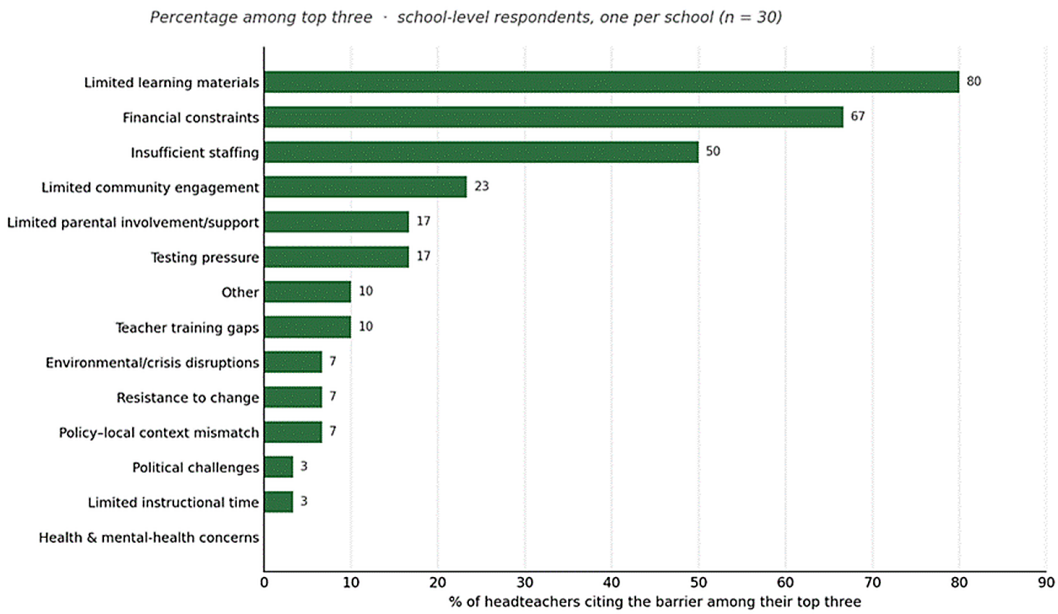


Figure 5. Barriers reported by headteachers

TEACHER RESPONSES COMPARED WITH HEADTEACHERS

Comparing responses from teachers and headteachers across the same set of reported barriers was interesting. Both respondent groups identify resource constraints as the primary challenge, but headteachers consistently report higher prevalence for each element of the resource cluster: limited learning materials (80% versus 63%), financial constraints (67% versus 47%), and insufficient staffing (50% versus 31%). This disparity is consistent with headteachers' responsibility for whole-school provision and budgets, where shortages accumulate, whereas classroom teachers tend to report constraints affecting their individual classrooms.

The two groups also diverge in how they weight barriers peripheral to the resource core. Headteachers assign substantially greater importance to limited community engagement (23% versus 7%), testing pressure (17% versus 1%), and gaps in teacher training (10% versus 4%), reflecting an organisational and accountability-oriented perspective. Both groups, however, accord similar, relatively modest importance to parental involvement (17–18%) and report low salience for political, environmental, instructional-time, and health-related barriers.

On the whole, while teachers and headteachers concur that resource scarcity lies at the centre of constraints, headteachers are more likely to frame additional barriers in institutional and com-

munity terms that may be less visible from within individual classrooms.

Figure 5.5 Barriers: teachers compared with headteachers (Ghana)

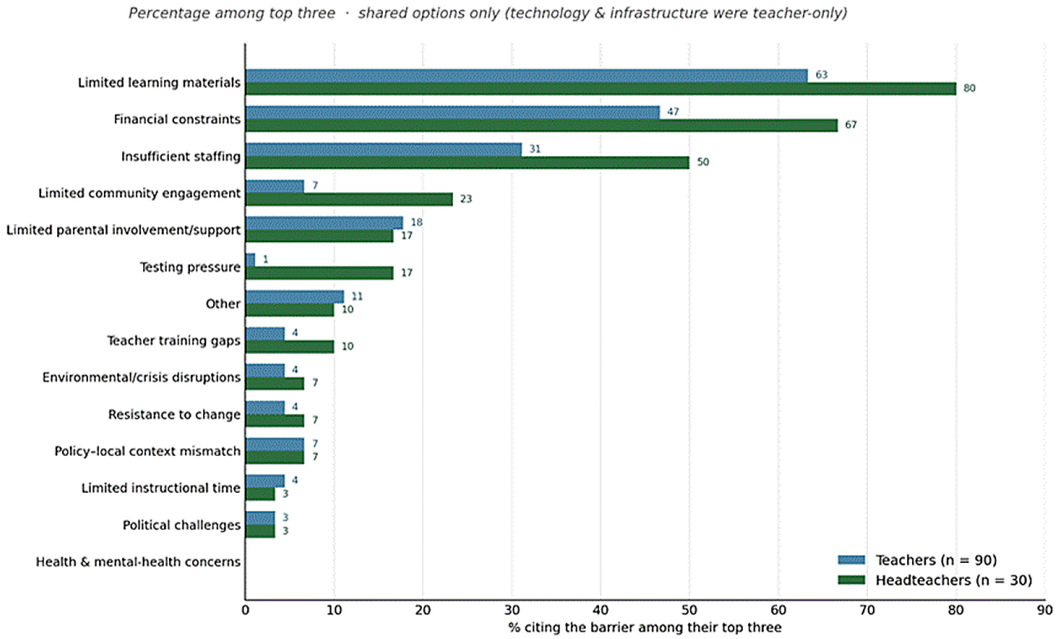


Figure 5. Barriers reported by teacher compared to headteachers

AT THE CLASSROOM LEVEL

The physical environment of the classroom provides the basic conditions for breadth of learning opportunities. Global research, including the World Bank's *Impact of School Infrastructure on Learning* report (2019) and the "Clever Classrooms" study (Barrett et al. 2015), demonstrates that spatial flexibility, adequate space, and functional writing surfaces enable varied instructional formats such as group work, hands-on application, and play-based learning while also creating better conditions for collaboration and student engagement. Beyond space and furniture, subject-specific materials can enrich the learning experience. Laboratories and equipment support science learning, digital devices enable meaningful engagement with technology, and manipulatives such as counting objects, measurement tools, and visual models can strengthen mathematics instruction. This essential infrastructure extends beyond the classroom walls too. Safe, well-maintained outdoor environments provide the necessary foundation for physical development and hands-on exploration.

The findings from this Ghana study indicate that these enabling conditions remain limited in many schools (Figure 5.6). Less than half of the observed classrooms possessed the basic physical infrastructure needed to support effective curriculum

implementation. Approximately 42% of classrooms had sufficient seating for learners, 41% had adequate writing surfaces, and only 37% provided enough space to facilitate group work and collaborative learning.

Ghana

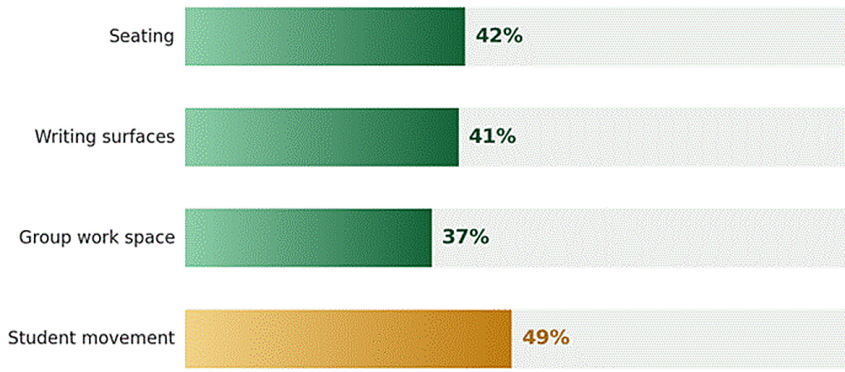


Figure 5. Percentage of resources enabling curriculum implementation

The findings on outdoor learning environments further highlight the infrastructural challenges affecting curriculum implementation in Ghana. Only 17% of schools were found to have outdoor learning spaces that were safe and well-maintained. This indicates that many schools have limited opportunities to support practical, experiential, and physical learning activities beyond the classroom. The absence of safe and functional outdoor environments restricts teachers' ability to implement learner-centred approaches that require exploration, play, experimentation, and collaborative activities. Consequently, inadequate school infrastructure limits the range of instructional strategies that teachers can employ and constrains the effective implementation of the standards-based curriculum.

AT THE SCHOOL LEVEL

Schools play a central role in translating curriculum policy into classroom practice. While teachers are the primary implementers of the curriculum, their effectiveness depends largely on the professional, instructional, and organizational support provided by school leadership. School administrators create the conditions that enable teachers to implement the curriculum successfully through professional development opportunities, instructional supervision, mentoring, collaborative learning, and the provision of teaching resources.

PROFESSIONAL DEVELOPMENT AND TEACHER SUPPORT

The findings indicate that headteachers in Ghana employ a range of professional development strategies to strengthen teach-

ers' instructional capacity. Among the various forms of support reported, in-service training (35%) was the most frequently cited, followed closely by continuous professional development (CPD) (32%). These findings suggest that schools place considerable emphasis on building teachers' knowledge and skills through ongoing learning opportunities that enhance curriculum delivery and classroom practice.

Beyond formal training programmes, school administrators reported supporting teachers through collaborative and school-based initiatives. These include subject-based discussions, mentoring of newly recruited teachers, regular staff meetings, classroom supervision, and peer learning activities. Administrators also highlighted the importance of providing teachers with instructional materials and creating supportive working conditions that encourage effective teaching. Such initiatives help strengthen teachers' confidence, promote the sharing of good practices, and improve the overall quality of curriculum implementation.

Teacher development indicators in Ghana

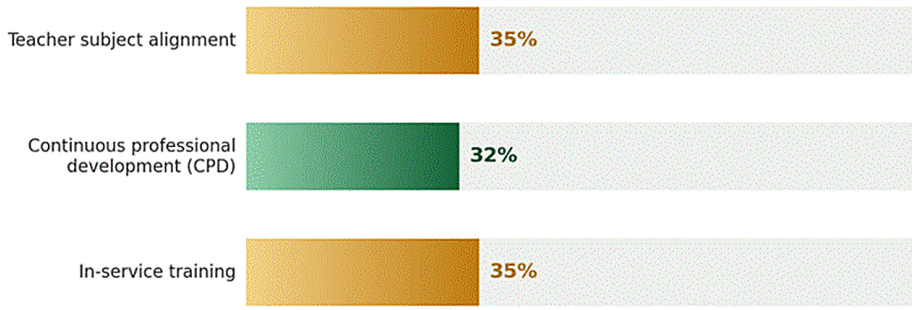


Figure 5. Teacher development indicators in Ghana

An important challenge affecting curriculum implementation in Ghana is the mismatch between teachers' areas of professional training and the subjects they are assigned to teach. Only 35% of teachers reported teaching subjects that align with their professional preparation, while approximately 65% were teaching subjects outside their area of specialization.

This level of subject misalignment has important implications for curriculum implementation. Teachers assigned to unfamiliar subject areas may have limited content knowledge and pedagogical expertise, reducing their confidence and effectiveness in delivering the curriculum. Although professional development programmes can help address these knowledge gaps, participation alone may not fully resolve the challenge. Teachers often give greater attention to strengthening expertise in their original subject specializations and may

view out-of-field teaching assignments as temporary. Consequently, improving curriculum implementation in

Box 5.1 Out-of-Field Teaching

Out-of-field teaching" refers to situations in which teachers are assigned to teach subjects for which they have inadequate training and qualifications (du Plessis 2015; Hobbs and Porsch 2021).

Ghana requires not only expanding access to professional development but also strengthening teacher deployment policies to ensure greater alignment between teachers' qualifications and their teaching responsibilities.

The findings suggest that strengthening school-based professional support systems, expanding continuous professional development, and improving teacher subject alignment are essential measures for enhancing curriculum implementation and improving learning outcomes in Ghana.

The presence of professional development opportunities does not necessarily guarantee uptake among out-of-field teachers. Research suggests that teachers may not prioritize professional development for subjects outside their training. They prefer to invest time and resources in their primary subject areas, view out-of-field assignments as temporary, or fear that undertaking training could lead to permanent reassignment (Hobbs and Porsch 2021). Addressing subject misalignment requires attention not only to the supply of professional development but also to the conditions that shape teacher participation in it.

TEACHER COLLABORATION

Teacher collaboration is an important school-level condition that supports effective curriculum implementation. Working collaboratively enables teachers to reflect on their instructional practices, exchange ideas, solve classroom challenges, and develop strategies for implementing the curriculum more effectively. Collaboration also creates opportunities for teachers to share resources, discuss lesson planning, and adopt innovative teaching approaches that promote learner engagement.

The findings from this Ghanaian study indicate a strong relationship between teacher collaboration and the breadth of curriculum implementation. Among teachers who engaged in collaborative lesson planning with colleagues, 36.4% demonstrated high coverage of learning domains, teaching across six or more curriculum domains. In contrast, only 7.4% of teachers who did not collaborate with colleagues achieved a similar level of curriculum coverage. These findings suggest that collaborative planning substantially enhances teachers' capacity to implement the curriculum comprehensively by exposing them to diverse instructional strategies and strengthening their confid-

ence in delivering different learning experiences.

The results highlight the importance of fostering professional learning communities within schools. Regular collaboration among teachers can facilitate the sharing of best practices, strengthen instructional quality, and support the successful implementation of Ghana's standards-based curriculum.

FLEXIBLE TIME ALLOCATION

The organization of instructional time also influences curriculum implementation. In Ghana, curriculum delivery is largely guided by prescribed time allocations for individual subjects. Approximately 67% of school administrators reported that schools follow fixed time allocations for each subject, providing teachers with clear expectations regarding curriculum coverage.

While structured time allocation promotes consistency in curriculum implementation across schools, it may also limit teachers' flexibility to adjust instructional time according to learners' needs, classroom contexts, or emerging learning opportunities. Effective curriculum implementation therefore requires a balance between maintaining clear curriculum expectations and allowing teachers sufficient flexibility to adapt instructional approaches and pacing where necessary.

Thus, these findings suggest that successful curriculum implementation depends not only on clearly defined instructional schedules but also on school leadership that supports teachers in making informed decisions about curriculum delivery while maintaining alignment with national curriculum objectives.

AT THE POLICY AND SYSTEM LEVEL

Beyond individual schools, the broader education system plays a critical role in creating conditions that support effective curriculum implementation. In Ghana, government efforts to promote equitable curriculum implementation are primarily reflected through curriculum support, supervision, and the provision of implementation guidance.

Figure 5. presents the activities undertaken by local government education officials to promote equitable access to the national curriculum across schools in Ghana.

The findings indicate that curriculum implementation is supported through a combination of curriculum dissemination, monitoring and supervision, provision of teaching and learning resources, infrastructure support, and targeted interventions for disadvantaged schools.

The dissemination of curriculum guidelines emerged as the most frequently reported activity, with 69% of local government officials indicating that they regularly provide schools with curriculum documents and implementation guidance. This suggests that considerable effort is being made to ensure that teachers and school leaders have access to the information necessary for implementing the standards-based curriculum effectively.

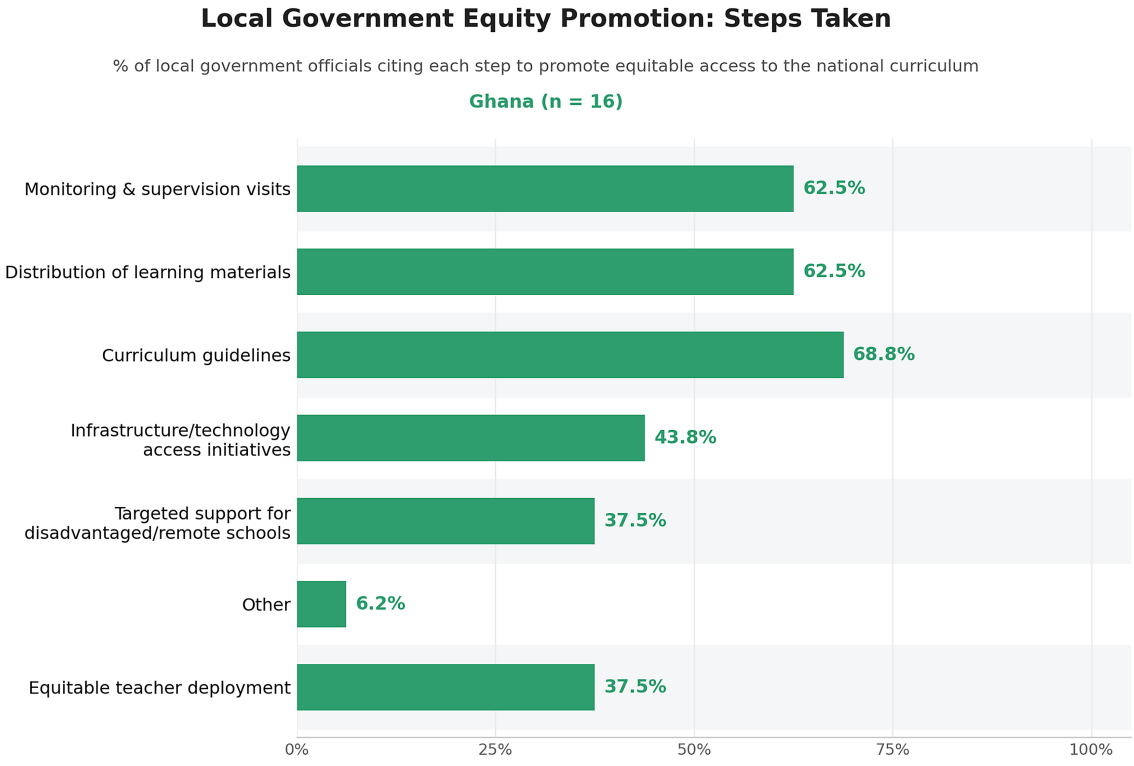
Monitoring and supervision visits were the second most commonly reported activity,

cited by 63% of respondents. These visits provide opportunities for education officials to monitor curriculum implementation, offer instructional support, identify implementation challenges, and provide feedback that can improve teaching and learning practices. Regular supervision also strengthens accountability and promotes greater consistency in curriculum delivery across schools.

Local government officials also reported supporting schools through the distribution of teaching and learning materials, improvements to school infrastructure, technology support, and targeted assistance for disadvantaged and underserved schools. Although these initiatives contribute to improving equity in curriculum implementation, the findings suggest that they are not yet consistently available across all schools. This highlights the continuing need for increased investment in educational resources and targeted support to reduce disparities between schools.

Responses provided under the "Other" category offer additional insight into the strategies used by local education authorities to strengthen curriculum implementation. Officials described organizing orientation and induction programmes for newly appointed teachers, conducting capacity-building workshops and in-service training, and collaborating with circuit supervisors and school leaders to monitor instructional quality and provide professional guidance. Respondents also highlighted community engagement initiatives and regular stakeholder meetings aimed at improving school participation and ensuring that all learners have equitable access to quality education.

The findings demonstrate that local government authorities in Ghana play a critical role in facilitating curriculum implementation through policy guidance, supervision, professional support, and resource provision. Strengthening these interventions particularly in resource-constrained schools will be essential for promoting equitable access to the national curriculum and improving educational outcomes across the country.



Note: Respondents could select multiple steps. Denominator = all respondents in Ghana (n = 16).

Figure 5. Activities Reported by Local Government Officials to Promote Equitable Access to the National Curriculum in Ghana

CHAPTER 6: KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This concluding chapter draws the study together. It first summarises the key findings, then presents the conclusions that follow from them, and finally sets out the recommendations that arise from those conclusions. It closes with a way forward for policy, practice and further research.

Summary of Key Findings

The study set out to examine how fully Ghana's basic schools deliver the breadth of learning promised by the Standards-Based Curriculum (SBC). Its main findings are summarised below, organised around the study's four objectives.

What matters. Teachers, parents, headteachers and policymakers broadly agree on what matters most for children to learn, placing Physical Wellbeing, Literacy and Communication, and Social and Emotional learning at the top and ranking Technology, Science, and Culture and the Arts lowest. The clearest divergence is that parents rank Learning Approaches and Cognition — the metacognitive skills at the heart of the reform — last.

The intended curriculum. The written curriculum is broad. It distributes attention across all eight domains and gives growing weight to Learning Approaches and Cognition as children progress, rising from about 17 per cent at KG 2 to 27 per cent at Primary 4. Its clearest weakness is Technology, which is almost absent at the lower grades.

The implemented curriculum and the alignment gap. Classrooms deliver a narrower band of learning than the curriculum intends, and the domains the curriculum prioritises most receive the least classroom time. Literacy is over-delivered (about 21 per cent of observed teaching against 14 per cent intended), while Numeracy and Science are under-delivered (Numeracy about 11 against 21 per cent; Science about 7 against 15 per cent). The gap is widest for mathematics at Primary 4 (about 9 per cent taught against 27 per cent intended). Breadth narrows as children move up the grades, and there is a sharp urban–rural divide in technology, observed in about one urban classroom in seven but only one rural classroom in fifty. These patterns vary by region but hold in the same direction across the country — a design–implementation inversion in which the domains most emphasised in policy are the least visible in practice.

Enablers and barriers. Where the curriculum is not fully delivered, the cause lies in the conditions of delivery rather than the design of the curriculum. Teachers and headteachers point above all to shortages of teaching and learning mater-

ials (cited by 63 per cent of teachers and 80 per cent of headteachers), lack of technology (61 per cent) and limited funding (47 and 67 per cent). Basic classroom conditions are often missing — fewer than half of classrooms had adequate seating, writing surfaces or space for group work — and about two-thirds of teachers were teaching subjects for which they were not trained.

Conclusions

Ghana's Standards-Based Curriculum (SBC) reflects a national commitment to a broad and holistic education, one that extends beyond literacy and numeracy to include critical thinking, creativity, collaboration, communication, citizenship, digital literacy, social and emotional development, and physical wellbeing. In recognising that learners need a balanced set of competencies to succeed in school, work, and society, the curriculum aligns closely with the vision of the Learning Metrics Task Force (LMTF). The findings of this study, however, reveal a considerable gap between these policy aspirations and the realities of implementation in schools.

One of the most significant findings is what may be described as a design–implementation inversion within Ghana's curriculum reform. The learning domains that the curriculum framework emphasises most, particularly Social and Emotional Learning, Learning Approaches and Cognition, Physical Wellbeing, and Technology, are among those least consistently implemented in classrooms, while the traditional academic domains of Literacy and Communication, Numeracy and Mathematics, and Science continue to dominate instruction and assessment. This pattern reflects the persistent influence of examination-oriented practices, teachers' perceptions of foundational learning priorities, and accountability systems that continue to reward performance in core academic subjects.

The study shows that this gap is shaped less by curriculum design than by broader systemic factors. Teachers frequently reported insufficient professional development, inadequate teaching and learning materials, limited technological resources, overcrowded classrooms, and insufficient instructional time as major barriers to delivering the full breadth of the SBC. School leaders pointed to resource constraints, limited monitoring capacity, and difficulties in supporting learner-centred instruction across all domains. Parents recognised the value of holistic education but generally prioritised literacy, numeracy, and examination success, while local government officials acknowledged challenges of funding, supervision, equitable resource distribution, and institutional capacity.

Despite these challenges, stakeholders across all groups consistently affirmed the importance of broad learning opportunities. Teachers, school leaders, parents, and local government officials all regarded Social and Emotional Learning and Physical Wellbeing as essential to children's development, even where these domains received less classroom attention than the curriculum intends. Their limited implementation therefore reflects systemic

constraints rather than any lack of commitment to holistic education.

The consequences of these constraints are not felt equally. Learners in under-resourced schools, particularly in rural and disadvantaged communities, have fewer opportunities to take part in activities that build creativity, technology skills, physical education, and social-emotional development. Where schools lack adequate infrastructure, materials, qualified teachers, and community support, learners depend increasingly on classroom instruction as their only source of broad learning experiences. Disparities in school resources thus translate directly into unequal access to the full range of competencies the SBC envisages.

The study also demonstrates that curriculum reform cannot succeed through design alone. Successful implementation requires coherent alignment between curriculum objectives, teacher preparation, instructional resources, assessment systems, school leadership, monitoring mechanisms, and community engagement. Where these systems remain weak or fragmented, the curriculum is narrowed in practice despite its broader intentions. Strengthening implementation therefore calls for sustained investment not only in curriculum development but also in the institutional capacity that supports teachers and schools throughout the reform process.

Ultimately, this study concludes that equity and breadth are inseparable dimensions of curriculum implementation in Ghana. Expanding access to broad learning opportunities is itself an equity strategy, because many learners, especially those from disadvantaged communities, cannot acquire digital literacy, creativity, social-emotional skills, or physical development outside school. Ensuring that every learner experiences the full breadth of the SBC therefore has the potential to strengthen not only holistic development but also engagement, participation, and achievement in foundational academic learning. Realising this will require sustained political commitment, adequate financing, continuous teacher professional development, stronger district-level implementation support, improved assessment alignment, and systematic monitoring. Only through coordinated action across every level of the education system can the aspirations of the curriculum become meaningful and equitable learning opportunities for every Ghanaian learner.

Recommendations

The recommendations below are derived directly from the empirical findings of this study, the analysis of Ghana's Standards-Based Curriculum (SBC), and the evidence generated through interviews with teachers, school leaders, parents, and local government officials. They are intended to inform policy and practice by strengthening the implementation of curriculum reform and promoting equitable access to broad learning opportunities across Ghana.

i. Sequence curriculum design, teacher preparation, and assessment reform coherently

The findings demonstrate that the sequencing of curriculum reform is critical

to successful implementation. Ghana introduced the Standards-Based Curriculum shortly before the COVID-19 pandemic, leaving limited time for teacher preparation, assessment development, and the production of supporting instructional materials. Consequently, many teachers entered implementation without sufficient understanding of the curriculum's pedagogical expectations, while assessment systems remained largely aligned with traditional content-based approaches. Future curriculum reforms should ensure that teacher preparation, assessment frameworks, instructional resources, and implementation guidelines are fully developed before or, at a minimum, alongside curriculum rollout. A coherent sequence will improve teacher confidence, reduce implementation uncertainty, and strengthen alignment between curriculum intentions and classroom practice.

ii. Invest in implementation infrastructure, not just curriculum design

One of the central findings of this study is the gap between curriculum intentions and classroom implementation. Although the Standards-Based Curriculum promotes holistic learning across multiple domains, classroom practice continues to prioritise literacy and numeracy because these areas receive stronger institutional support through assessments, teaching materials, accountability mechanisms, and teacher preparation. Expanding learning opportunities therefore requires investment beyond curriculum design. The government should strengthen implementation infrastructure by providing high-quality teaching and learning materials, continuous professional development, curriculum support services, and school-level monitoring systems that encourage implementation across all learning domains rather than concentrating primarily on examinable subjects.

iii. Focus on developmental progression when determining curriculum priorities across education levels

The findings indicate that curriculum priorities should reflect children's developmental needs throughout their educational journey. Although the Standards-Based Curriculum seeks to promote broad learning, classroom observations show that several domains including Social and Emotional Learning, Physical Wellbeing, and Culture and the Arts become less prominent as learners progress through the education system, particularly where examination pressures increase. Curriculum review processes should therefore adopt a developmental perspective by identifying which competencies deserve greater emphasis at different stages of schooling while ensuring that all learning domains remain visible throughout basic education. Such an approach would help balance breadth and depth without overloading teachers or learners.

iv. Treat technology as a core curricular priority rather than a supplementary component

The study found limited integration of technology within classroom instruction despite its inclusion in Ghana's curriculum framework. Teachers, school leaders, and parents also placed relatively low emphasis on technology compared with

foundational academic subjects. In an increasingly digital world, technological competence should be regarded as an essential learning outcome rather than an optional addition. Achieving this requires sustained investment in ICT infrastructure, reliable electricity, internet connectivity, digital learning resources, and teacher capacity to integrate technology effectively into everyday teaching. Technology education should also promote responsible, ethical, and creative use of digital tools rather than focusing solely on technical skills.

v. Promote pedagogical practices that support meaningful learning across all curriculum domains

Curriculum implementation depends not only on what is taught but also on how learning is facilitated. The findings suggest that while teachers often cover curriculum content, opportunities for deeper engagement with several learning domains remain limited. Effective pedagogy should therefore encourage active learning, critical thinking, collaboration, creativity, and problem-solving alongside the acquisition of foundational knowledge. Professional development programmes should strengthen teachers' capacity to implement learner-centred instructional approaches across all curriculum domains so that students experience meaningful and authentic learning rather than superficial curriculum coverage.

vi. Strengthen the provision of teaching resources and institutional support

Successful implementation of the Standards-Based Curriculum requires adequate institutional support and learning resources. Teachers consistently identified shortages of teaching materials, inadequate infrastructure, insufficient ICT resources, and limited professional support as major barriers to implementation. Addressing these challenges requires sustained investment in instructional materials, classroom resources, digital technologies, and continuous professional development. Equally important is strengthening school leadership and district-level support systems to ensure that teachers receive practical guidance throughout curriculum implementation.

vii. Strengthen district and local government capacity to support curriculum implementation

The study highlights the important role played by district education offices, local government officials, and school leaders in translating national curriculum policy into classroom practice. However, variations in institutional capacity, resource availability, and technical expertise limit the effectiveness of curriculum support across districts. National policy should therefore prioritise strengthening sub-national implementation capacity through regular training, improved coordination, adequate funding, and clearer implementation guidelines. Enhanced collaboration between the Ministry of Education, the Ghana Education Service, Metropolitan, Municipal and District Assemblies (MMDAs), and schools would facilitate more consistent implementation of curriculum reforms across the country.

viii. Design curriculum implementation strategies that sustain breadth throughout learners' progression

The evidence indicates that learning opportunities become progressively narrower as students advance through the education system. Domains such as Social and Emotional Learning, Physical Wellbeing, and Creative Arts receive greater attention in the early years but become increasingly marginalised as examination pressures intensify. Policymakers should therefore design curriculum implementation strategies that explicitly protect broad learning throughout the transition from primary to junior high school. This includes aligning assessment systems with broader curriculum goals, strengthening interdisciplinary teaching approaches, and ensuring that secondary education structures continue to support holistic learning rather than focusing exclusively on examination performance.

ix. Strengthen family and community partnerships to support curriculum implementation

The findings demonstrate that effective curriculum implementation extends beyond schools and requires meaningful collaboration with families and communities. Limited parental engagement and weak community support reduce opportunities for reinforcing learning outside the classroom. Schools should therefore establish stronger partnerships with parents through regular communication, workshops, and community engagement initiatives that help families understand the objectives of the Standards-Based Curriculum and support children's learning at home. Partnerships with civil society organisations, traditional authorities, and community-based institutions can also enrich learning by connecting curriculum content with local knowledge, culture, and community experiences. Strengthening these relationships would contribute to more equitable and sustainable implementation of curriculum reform across Ghana.

The following recommendations emerged from the stakeholder validation of this report and complement those above. They focus on strengthening the foundational phase of basic education and the everyday conditions of the classroom.

x. Deploy specialised, trained teachers to the foundational levels and orient teachers to their assigned level

Stakeholders emphasised that the foundational years are decisive for all later learning, yet they are too often staffed by teachers without specialised early-grade preparation. Specialised, trained teachers should be posted to Kindergarten 1 and Kindergarten 2, and teacher orientation should be prioritised so that every teacher is proficient in the level to which they are assigned. Matching teachers' training to their teaching level would strengthen the early literacy, numeracy and social-emotional foundations on which the rest of the curriculum depends.

xi. Increase and protect funding for foundational-level learning

Because the foundational phase shapes all subsequent learning, its financing should be commensurate with its importance. Government should increase the

funding allocation dedicated to foundational-level learning and ring-fence it within the education budget, so that early-grade classrooms reliably receive the teachers, materials and support they require.

xii. Harmonise remuneration and coordinate financing across delivery agencies

The validation highlighted disparities in pay and fragmented oversight among the agencies that support foundational learning. Government should harmonise conditions of service across the agencies involved in foundational-level delivery — for example, the Ghana Education Service (GES) and the Ghana Tertiary Education Commission (GTEC) — and establish a single, uniform coordinating agency responsible for ensuring adequate budget allocation and a clear accountability framework. This would reduce duplication, improve teacher morale, and make responsibility for delivery transparent.

xiii. Provide age-appropriate furniture and right-size classes

Stakeholders identified inadequate, ill-fitting furniture and overcrowded classrooms as persistent obstacles to learning. The supply of classroom furniture should be improved and matched to the age group of learners, and class sizes should be adjusted to accommodate appropriately the number of pupils enrolled. Adequate, age-appropriate seating and manageable class sizes are basic conditions for the active, learner-centred teaching the curriculum expects.

xiv. Build teachers' capacity to manage large and multi-grade classes

Where class sizes remain large or classes are multi-grade, teachers need specific strategies to sustain quality across all learning domains. Professional development should therefore strengthen teachers' capacity to manage large classes and multi-grade teaching, enabling them to maintain breadth and give individual attention even under challenging conditions.

Way Forward

The findings of this study demonstrate that Ghana has made significant progress in redefining the purpose of education through the introduction of the Standards-Based Curriculum (SBC). By embracing a competency-based approach that promotes cognitive, social, emotional, physical, creative, and technological development, the curriculum provides a strong policy foundation for preparing learners for the demands of the twenty-first century. However, achieving these aspirations will depend not on the curriculum framework itself, but on the country's ability to sustain effective implementation over time. The way forward therefore requires a coordinated and long-term strategy that strengthens every component of the education system.

First, curriculum implementation should be viewed as a continuous process rather than a one-time policy reform. As schools accumulate implementation experience, regular curriculum reviews should be undertaken to assess how effectively the intended learning outcomes are being translated into classroom practice. Such re-

views should incorporate evidence from teachers, school leaders, learners, parents, district education offices, and local government authorities to ensure that curriculum revisions remain responsive to implementation realities rather than policy intentions alone.

Second, strengthening teacher capacity must remain a national priority. Teachers are the principal agents through whom curriculum reforms become meaningful learning experiences. Continuous professional development should therefore move beyond one-off orientation workshops toward sustained school-based coaching, mentoring, peer learning communities, and professional learning networks that support teachers throughout implementation. Teacher education institutions should also continue aligning preservice programmes with the pedagogical expectations of the Standards-Based Curriculum to ensure that newly qualified teachers enter classrooms fully prepared to implement competency-based instruction.

Third, assessment reform should continue alongside curriculum implementation. Although Ghana has made important changes to national assessment policies, classroom assessment practices should increasingly reflect the broader competencies promoted by the curriculum. Assessment systems should value critical thinking, creativity, collaboration, communication, problem-solving, digital competence, and social-emotional development alongside literacy and numeracy. Greater alignment between curriculum objectives and assessment practices will reduce the tendency for teachers to narrow instruction to examinable content.

Investment in educational resources must also become more equitable. The successful implementation of a broad curriculum depends on adequate teaching and learning materials, functional ICT infrastructure, well-equipped classrooms, libraries, science laboratories, creative arts facilities, and safe spaces for physical education. Resource allocation mechanisms should prioritise underserved schools and rural communities to reduce disparities in access to quality learning opportunities and ensure that every learner can benefit from the full breadth of the curriculum regardless of geographical location or socioeconomic background.

District education offices and Metropolitan, Municipal and District Assemblies (MMDAs) should assume a stronger implementation support role. Rather than focusing primarily on administrative supervision, district-level support should emphasise instructional leadership, mentoring, professional guidance, and collaborative problem-solving. Strengthening the technical capacity of district officials will improve consistency in curriculum implementation while enabling schools to receive timely support in addressing local challenges.

The role of families and communities should also be expanded. Parents, traditional leaders, civil society organisations, private sector partners, and local communities all have important contributions to make in creating supportive learning environments. Public awareness campaigns and community engagement initi-

atives should help stakeholders understand the objectives of the Standards-Based Curriculum and encourage greater participation in children's learning both within and beyond the classroom. Stronger school-community partnerships can enrich learning experiences while promoting shared responsibility for educational quality.

Technology should become an integral component of curriculum implementation rather than an isolated subject area. Continued investment in digital infrastructure, affordable internet access, educational technologies, and teacher digital competencies will help prepare learners for participation in an increasingly knowledge-driven and technology-oriented society. At the same time, technology should be integrated across learning areas to support innovative teaching, collaboration, and independent learning.

Looking ahead, further research is needed to monitor the long-term implementation of the Standards-Based Curriculum. Future studies could examine how implementation evolves across different regions, school types, and socioeconomic contexts, as well as its effects on student learning outcomes over time. Longitudinal research would provide valuable evidence on whether current reforms are achieving their intended objectives and identify areas requiring further policy attention. Additional studies could also explore learners' perspectives, classroom pedagogical practices, teacher professional development, and the effectiveness of assessment reforms in promoting broad learning.

Ultimately, the success of Ghana's Standards-Based Curriculum will depend on sustained political commitment, adequate financing, institutional coordination, and evidence-informed policymaking. Curriculum reform is not achieved through policy documents alone but through consistent investment in the people, systems, and resources that support teaching and learning. By maintaining this commitment and continuously strengthening implementation, Ghana can move beyond curriculum reform as policy to curriculum reform as lived educational practice, ensuring that every learner has equitable access to the broad range of knowledge, skills, values, and competencies needed to thrive in the twenty-first century.

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APPENDICES

A: Data Collectors in Special Regions/Districts

Region	District	Name of Data Collector
Ashanti	Kumasi Metropolitan/Urban	Osei Bonsu Aning
	Atwima Mponua/Rural	Aminata Ibrahim
		Haruna Yoda
Ahafo	Asutifi South	Mabel Nkansah
		Osei Collins.
	Asunafo North Municipal/Urban	Ibrahim Yusif
Eastern	Akuapim South Municipal/Urban	Juliet Eno Abiyaa Gyamerah
		Siaw Francis
	Ayensuano District/Rural	James Mensah Boamah
		Abdullah Salifu
Oti	Biakoye District/Urban	Obonse Alfred
		Klenam Kofi Agbo
	Nkwanta North District/Rural	David Ntuu
		Linus Victory Kay Fianyo
Savannah	West Gonja/Urban	Albert Poamba
		Samuel Wusah
	Bole/Rural	Godwin Etornam
		Abdul Rashid
Upper East	Kassena-Nankana/Urban	Benedict Salifu Akuka

Region	District	Name of Data Collector
		MATHIAS AKAMBA
	Tempane/Rural	ASAKIBEEM, DENIS ABOTI
		DEREK WEJEIRE KWEYU
Upper West	Wa/Urban	Huudu Abdulai
		Abubakre Sidiki Watara
	Jirapa Municipality	Abraham Zieche
		Pius Boowuo
Western	Tarkwa Nsuaem Municipal/Urban	Sarah Kwofie
		Thomas Kweku Owoo
	Mpohor/Rural	Isaac Henry Aikins
		Joshua Eshun

B. Local Government Survey		
Number	Questions	Responses
B1.	Think about an ideal curriculum for students. What skills do you think are most important for students to learn (e.g., communication, problem-solving, resilience)?	
B2.	Does the current curriculum effectively build the skills you selected above? Yes, very effectively Somewhat effectively Not very effectively Not at all	

B. Local Government Survey		
B3.	Which skills or competencies are missing or not sufficiently emphasized in the current curriculum? (Select all that apply) Communication Critical thinking Creativity Problem-solving Resilience Financial literacy Environmental literacy Civic education Media and information literacy Digital citizenship Other (please specify)	
B4.	At which education levels are these skill-building priorities not adequately addressed? (Select all that apply) Early childhood Primary education Lower secondary Upper secondary Vocational or technical education None – skill-building is adequately addressed at all levels	
B5.	What skills do you think matter most for students to develop at the primary education level? Please pick 3 domains from the list.	Domains: Physical Wellbeing Social and Emotional Development Culture and Arts Literacy and Communication Learning Approaches and Cognition Numeracy and Mathematics Science

B. Local Government Survey		
		Technology
B6.	Why do you see these three domains as the most important for primary students to learn?	
B7.	What skills do you think matter most for students to develop at the secondary education level? Please pick 3 domains from the list.	Domains: Physical Wellbeing Social and Emotional Development Culture and Arts Literacy and Communication Learning Approaches and Cognition Numeracy and Mathematics Science Technology
B8.	Why do you see these three domains as the most important for secondary students to learn?	
B9.	What do you see as the top 3 barriers that make it difficult for schools in your area to implement an ideal curriculum?	System & Resources: Limited funding or financial resources Not enough time in the school day or year Limited access to teaching and learning materials Insufficient institutional or staffing capacity People & Politics: Limited political will or support from national leadership

B. Local Government Survey		
		Pressure from exam-focused systems
		Lack of alignment between national policy and local needs
		Gaps in educator skills or training
		External Factors:
		Environmental or crisis-related disruptions (e.g. natural disasters, displacements)
		Health or mental health challenges impacting students or staff
		Lack of support, or opposition, from parents or families
		Resistance to change in school culture or traditions
		Other:
B10.	Do local or sub-national education authorities (county govt) take steps to promote equitable access to the national curriculum across schools? (Yes/No)	
B11.	If yes, what kinds of steps do they take? National or regional curriculum guidelines Equitable teacher deployment Distribution of learning materials (e.g., textbooks, digital content) Monitoring and supervision visits Targeted support for disadvantaged or remote schools Infrastructure or technology access initiatives Other (please specify)	
B12.	Does the education system (e.g., national or local authorities) officially define or mandate how many hours or periods per week should be spent on each subject in school? (Yes/No)	

B. Local Government Survey		
B13.	Which learning areas receive the most instructional time at the primary level? (Select up to 3) Language and Literacy Mathematics Science Social Studies/Civics/History Physical Education or Health Creative Arts (e.g., Music, Art, Drama) Religious Education Technology or Digital Skills	domains
B14.	Which learning areas receive the most instructional time at the secondary level? (Select up to 3) Language and Literacy Mathematics Science Social Studies/Civics/History Physical Education or Health Creative Arts (e.g., Music, Art, Drama) Religious Education Technology or Digital Skills	

C. Headteachers Tool		
Number	Question	Responses
C1.	Think about an ideal curriculum for students. What skills do you think are most important for students to learn (e.g., communication, problem-solving, resilience)?	
C2.	To what extent do you think the current curriculum effectively supports the development of the skills you selected above? Very effectively Somewhat effectively Not very effectively Not at all effectively	

C. Headteachers Tool		
C3.	Which skills or competencies are missing or not sufficiently emphasized in the current curriculum? (Select all that apply) Communication Critical thinking Creativity Problem-solving Resilience Financial literacy Environmental literacy Civic education Media and information literacy Digital citizenship Other (please specify)	
C4.	At which education level(s) are these skill-building priorities least addressed? (Select all that apply) ☐ Early childhood education ☐ Primary education ☐ Lower secondary education ☐ Upper secondary education ☐ Vocational or technical education ☐ None – these priorities are addressed at all levels For the level(s) selected above, which specific skills are most lacking at each level?	
C5.	What skills do you think matter most for students to develop at the primary education level? Please pick 3 domains from the list.	Domains: Physical Wellbeing Social and Emotional Development Culture and Arts Literacy and Communication Learning Approaches and Cognition Numeracy and Mathematics Science

C. Headteachers Tool		
		Technology
C6.	Why do you see these three domains as the most important for students to learn?	
C7.	What skills do you think matter most for students to develop at the secondary education level? Please pick 3 domains from the list.	Domains:
		Physical Wellbeing
		Social and Emotional Development
		Culture and Arts
		Literacy and Communication
		Learning Approaches and Cognition
		Numeracy and Mathematics
		Science
		Technology
C8.	Why do you see these three domains as the most important for students to learn?	
C9.	What do you see as the top three barriers that make it difficult to implement an ideal curriculum in your school?	System & Resources:
		Limited funding or financial resources
		Not enough time in the school day or year
		Limited access to teaching and learning materials
		Insufficient staff or lack of qualified teachers
		People & Politics:
		Lack of support or resources from local education authorities
		Pressure from exams or standardized testing

C. Headteachers Tool			
		Resistance to changes in school culture or teaching practices	
		Gaps in teacher training or ongoing professional development	
		External Factors:	
		Environmental or crisis-related disruptions (e.g. natural disasters, displacements)	
		Health or mental health challenges impacting students or staff	
		Lack of support, or opposition, from parents or families	
		Other:	
C10.	How does your school manage the balance between the structure of the curriculum framework and the flexibility needed in its implementation? The curriculum framework is strictly followed with minimal flexibility. The curriculum framework is followed with some flexibility for local adaptation. The curriculum framework is only a guideline, and teachers have significant flexibility in implementation. There is no formal balance; the approach varies by subject or grade level. Other (please specify)		
C11.	How is instructional time allocated across the curriculum at your school? There are set time allocations for each subject area as mandated by education authorities. Time is allocated based on subject area priorities set by the school administration. Teachers have flexibility in deciding time allocation for different subjects. Time allocation is reviewed periodically to meet changing educational needs. Other (please specify)		
C12.	How do you prepare and support teachers?	Pre-service training	
		In-service training	
		Continuous Professional Development (CPD) sessions	

C. Headteachers Tool	
	Participation in Communities of Practice
	Other (please specify):
	None of the above

C13.	In your current curriculum, which of the following aspects have been most successful? (Select all that apply) ☐ Student engagement and participation ☐ Knowledge retention and academic performance ☐ Development of critical thinking and problem-solving skills ☐ Integration of real-world applications or practical skills ☐ Support for social-emotional learning ☐ Use of technology in the classroom ☐ Inclusive education practices ☐ Other (please specify) Which aspects of the curriculum have been least effective? (Select all that apply)
	In your current curriculum, which of the following aspects have been least effective? (Select all that apply) ☐ Student engagement and participation ☐ Knowledge retention and academic performance ☐ Development of critical thinking and problem-solving skills ☐ Integration of real-world applications or practical skills ☐ Support for social-emotional learning ☐ Use of technology in the classroom ☐ Inclusive education practices ☐ Other (please specify)

C. Headteachers Tool		
C14.	How does the school engage with the local community, including industries, small businesses, churches, civic organizations, schools, learning centers, and universities? (Select all that apply) Collaboration with local industries for internships or work-study programs Partnerships with small businesses for educational projects or sponsorships Engagement with churches for community service or values-based initiatives Involvement with civic organizations in social or environmental programs Cooperation with other schools or learning centers for shared programs Collaboration with universities for research or teacher training No engagement with these sectors Other (please specify)	

D. Teachers Tool		
Number	Questions	Responses
D1.	Thinking about your students' needs and futures, what skills do you think an ideal curriculum should help them build?	
D2.	To what extent do you think the current curriculum effectively supports the development of the skills you selected above? Very effectively Somewhat effectively Not very effectively Not at all effectively	

D. Teachers Tool		
D3.	Which skills or competencies are missing or not sufficiently emphasized in the current curriculum? (Select all that apply) Communication Critical thinking Creativity Problem-solving Resilience Financial literacy Environmental literacy Civic education Media and information literacy Digital citizenship Other (please specify)	
D4.	What skills do you think matter most for students to develop? Please pick 3 domains from the list.	Domains Physical Wellbeing Social and Emotional Development Culture and Arts Literacy and Communication Learning Approaches and Cognition Numeracy and Mathematics Science Technology
D5.	Why do you see these three domains as the most important for students to learn?	
D6.	What do you see as the top 3 barriers that make it difficult to implement an ideal curriculum in your classroom?	System & Resources Limited funding or financial resources f Not enough time for teaching, planning, or assessments

D. Teachers Tool

Limited access to learning materials (e.g., textbooks, reading materials, curriculum guides)
Lack of tools (e.g., computers, technology, lab equipment)
Insufficient classroom staffing or support
People & Politics
Gaps in teacher training or professional development
Resistance to change in classroom practices or traditions
Pressure from exams or test-focused teaching
Lack of support from school leadership
Infrastructure & Environment
Inadequate classroom infrastructure (e.g., space, furniture)
Health or safety concerns in the classroom
External Factors
Student mental health or well-being issues
Environmental or crisis-related disruptions (e.g. natural disasters, displacements)
Lack of support, or opposition, from parents or families
Other:

D. Teachers Tool		
D7.	Which of the following factors influence your decision on what to teach in your classroom? (Select all that apply)	National curriculum guidelines School leadership or administration directives External program influences (e.g., donor-funded initiatives, NGO programs) Community or parental expectations Student needs and interests Profesional development and training Other:
D8.	Are you teaching the subject(s) you were specifically trained in? Yes, I am teaching the subjects I was trained in. No, I am teaching subjects outside of my formal training. I am teaching a mix of subjects related to my training and others.	
D9.	How do you generally prepare for your lessons? (Select all that apply) I follow the curriculum guide or syllabus provided by the school. I create my own lesson plans and resources. I use pre-existing materials (e.g., textbooks, online resources). I collaborate with colleagues to prepare materials. I rely on student feedback to adjust my lessons. I incorporate guidance or materials provided by external actors (e.g., UNICEF, research studies, NGOs). Other (please specify)	
D10.	Do you coordinate with other teachers to plan or prepare your lessons? Yes, I regularly coordinate with other teachers to distribute lesson planning tasks. Yes, I coordinate with other teachers occasionally. No, I prepare my lessons independently. Other (please specify)	
D11.	What is your speciality?	

D. Teachers Tool		
D12.	How many years have you been teaching?	Less than 1 year
		1-3 years
		4-7 years
		8-15 years
		More than 15 years
D13.	What is the highest level of education you have completed?	
	High school or equivalent	
	Associate's degree	
	Bachelor's degree	
	Master's degree	
	Doctoral degree (PhD, EdD, etc.)	
	Other (please specify)	
D14.	What is your dream for your students?	
	(Select the statement that best reflects your aspiration for students)	
	To become successful in their careers/	
	To develop critical thinking and problem-solving skills	
	To thrive socially and emotionally	
	To become responsible global citizens	
	To contribute positively to their communities	
	Other (please specify)	

D. Teachers Tool	
D15.	What types of classroom activities or interactions do you use to engage children and support their learning? (Select all that apply) Group work or collaborative projects Hands-on activities or experiments Interactive discussions or debates Educational games or simulations Technology-based activities (e.g., online learning tools, apps) One-on-one support or mentoring Creative arts (e.g., music, drawing, drama) Field trips or real-world learning experiences Other (please specify)

D. Teachers Tool	
D16.	What types of classroom activities or interactions do you use to engage children and support their learning? (Select all that apply, with options for Primary and Secondary school) For Primary School: ☐ Group work or collaborative projects ☐ Hands-on activities (e.g., building, arts and crafts) ☐ Storytelling and role-playing ☐ Interactive songs, rhymes, or games ☐ Educational games or simulations ☐ Visual aids (e.g., charts, drawings, flashcards) ☐ Technology-based activities (e.g., interactive apps, educational videos) ☐ Learning through movement (e.g., songs or activities that involve physical activity) ☐ One-on-one support or mentoring ☐ Other (please specify) For Secondary School: ☐ Group work or collaborative projects ☐ Case studies and problem-solving activities ☐ Debates or discussions ☐ Hands-on activities or experiments (e.g., science labs, arts projects) ☐ Technology-based learning (e.g., online research, simulations, educational software) ☐ Real-world applications and field trips ☐ Peer teaching or student-led presentations ☐ Critical reading and writing assignments ☐ Educational games or quizzes ☐ Other (please specify)
D.17	What strategies or approaches do you use to manage discipline in your classroom? (Select all that apply) Clear and consistent rules and expectations Positive reinforcement (e.g., rewards, praise) for good behavior Time-out or reflective thinking periods Individualized behavioral plans Problem solving through discussion Other (please specify)

D. Teachers Tool		
D.18	What types of discipline do you use to manage student behavior in your classroom? (Select all that apply) Verbal reprimands or warnings Time-out or withdrawal of privileges Corporal punishment (e.g., physical discipline) Non-punitive approaches (e.g., positive reinforcement, encouragement) Restorative practices (e.g., conflict resolution, apologies) Isolation (e.g., sending the student out of the classroom) Detention or after-school consequences Behavior contracts or individualized consequences Other (please specify)	
D19.	How do you ensure that students understand and follow classroom rules and expectations? (Select all that apply) I explain the rules at the beginning of the year and review them regularly I involve students in setting the rules together I use visual reminders (e.g., posters, charts) I reinforce rules through positive or corrective feedback I provide incentives or consequences for rule adherence or violations Other (please specify)	

E. Parents Tool			
Number	Question		Responses
E1.	Can you tell me a little about your child/children and what's most important to you when you think about their future? What are some of your hopes or dreams for them?		
E2.	Thinking about your hopes for your child's future, from the list, which three skills or knowledge areas do you think are most important for them to learn?	Physical Wellbeing	
		Social and Emotional Development	
		Culture and Arts	
		Literacy and Communication	

E. Parents Tool		
		Learning Approaches and Cognition
		Numeracy and Mathematics
		Science
		Technology
E3.	Can you tell me why you feel these areas are most important for your child/children to learn?	
E4.	Do all of your school-age children currently attend school? ☐ Yes ☐ No If yes, please specify the grade levels they are in:	
E5.	Where else do your children experience learning opportunities?	Religious classes or faith-based activities
		Sport teams
		Community programs or local clubs
		Cultural or art programs (e.g., music, dance)
		Extracurricular classes or programs (e.g., after-school or Saturday sessions)
		Online learning or educational apps
		Libraries or reading centers
		Other (Please specify):

E. Parents Tool		
E6.	How do you support your child's learning at home? (Select all that apply) ☐ Helping with homework or school projects ☐ Reading together ☐ Setting a a routine for study time ☐ Providing learning materials (e.g., books) ☐ Talking about what they are learning at school ☐ Helping them stay organized and manage time ☐ Other (please specify)	
E7.	How often do you engage with your child's learning at home?	Daily involvement (helping with homework, discussing schoolwork, etc.) A few times a week Once a week or less Rarely or never Other (Please specify):
E8.	Are there any challenges that prevent you from being more involved in your child's education? (Select all that apply) ☐ Lack of time due to work or other responsibilities ☐ Limited access to resources (e.g., books, internet) ☐ Language or communication barriers ☐ Limited understanding of how to help with schoolwork ☐ Distance or transportation issues ☐ Lack of support from the school or teachers ☐ Health or personal issues ☐ Other (please specify)	
E9.	Now, let's think back to when you were your child's age. What skills or knowledge do you wish you had the chance to learn—either in school or through other opportunities?	
E10.	How do you think you would have preferred to learn these skills? Which learning methods would have worked best for you?	Memorizing facts or information

E. Parents Tool	
	Working with others or in groups
	Hands-on activities (e.g., building, doing, experimenting)
	Storytelling or learning through stories
	Watching others and practicing (e.g., modeling or apprenticeships)
	Drawing or using visual tools
	Music, dance, or creative expression
	Playing games or using play-based learning
	Real-life tasks or problem-solving
	Other (please specify):
E11.	Do you see any of the learning methods or opportunities you wish you had in your child's education today? Yes No
E12.	If yes, do you feel they are taught in an effective way? Yes No Unsure
E13.	Would you like to see any changes or additions to how they are taught? Yes No Unsure

E. Parents Tool	
E14.	Do you think parents should have a say in what is taught in schools? Yes No Unsure
E15.	What type of curriculum or subjects do you think would be most relevant to your family's needs and values? (Select all that apply) ☐ Practical life skills (e.g., financial literacy, cooking, first aid) ☐ Academic subjects (e.g., mathematics, science, literature) ☐ Environmental education and sustainability ☐ Technology and digital skills ☐ Social-emotional learning and mental health ☐ Cultural and community-based knowledge ☐ Civic education and global citizenship ☐ Vocational or career-focused training ☐ Other (please specify)
E16.	What is your highest level of education? ☐ No formal education ☐ Some primary education ☐ Completed primary education ☐ Some secondary education ☐ Completed secondary education ☐ Completed post-secondary education (e.g., vocational training, associate degree, bachelor's degree) ☐ Graduate or professional education (e.g., master's, doctoral degree) ☐ Other (please specify)

F. Learning Opportunity Tracker

Domain	Example Learning Opportunities (LMTF + Bloom's)	Same/similar learning opportunities/subdomains in curriculum (please list)	Subject area in which the learning opportunities/subdomain is found	Number of learning opportunity areas	Enter grade levels if relevant
Physical Well-being	**Early Childhood/ Primary**				

Domain	Example Learning Opportunities (LMTF + Bloom's)	Same/similar learning opportunities/subdomains in curriculum (please list)	Subject area in which the learning opportunities/subdomain is found	Number of learning opportunity areas	Enter grade levels if relevant
Health & Nutrition	Basic hygiene habits, identifying food types				
Physical Activity	Running, jumping, basic coordination				
Safety Knowledge	Recognizing danger, responding to simple risks				
Social & Emotional	**Early Childhood/ Primary**				
Self-Regulation & Awareness	Recognizing emotions, simple self-control				
Empathy & Social Relationships	Sharing, turn-taking, recognizing fairness				
Moral & Ethical Values	Simple honesty, fairness				
Culture & the Arts	**Early Childhood/ Primary**				
Creative Arts	Drawing, singing, simple storytelling				
Community & Identity	Recognizing traditions, family values				
Literacy & Communication	**Early Childhood/ Primary**				

Domain	Example Learning Opportunities (LMTF + Bloom's)	Same/similar learning opportunities/subdomains in curriculum (please list)	Subject area in which the learning opportunities/subdomain is found	Number of learning opportunity areas	Enter grade levels if relevant
Oral Language & Comprehension	Listening to stories, basic conversations				
Reading Fluency & Comprehension	Recognizing letters, simple sentences				
Writing & Expression	Scribbling, simple sentences				
Learning Approaches & Cognition	**Early Childhood/ Primary**				
Curiosity & Engagement	Asking "why" questions, exploration				
Critical Thinking & Problem Solving	Basic pattern recognition, cause-effect				
Collaboration & Self-Direction	Working in pairs, simple group tasks				
Numeracy and Mathematics	**Early Childhood/ Primary**				
Number Sense & Operations	Counting, simple addition/subtraction				
Patterns & Geometry	Sorting objects, recognizing shapes				
Everyday Math & Personal Finance	Comparing sizes, simple money concepts				

Domain	Example Learning Opportunities (LMTF + Bloom's)	Same/similar learning opportunities/subdomains in curriculum (please list)	Subject area in which the learning opportunities/subdomain is found	Number of learning opportunity areas	Enter grade levels if relevant
Science	**Early Childhood/ Primary**				
Scientific Inquiry	Asking "what happens if?" questions				
Life, Physical & Earth Science	Identifying animals, plants, weather				
Environmental Awareness	Simple recycling habits				
Technology	**Early Childhood/ Primary**				
Technology Awareness	Recognizing common devices				
Computational Thinking & Digital Skills	Sorting patterns, following simple instructions				
Digital Citizenship & Ethics	Safe device use, screen time awareness				

G. Classroom Observation Guide for ECD and Primary Education

This observation tool is designed to support a review of classroom practices in Early Childhood Development (ECD) and Primary settings to understand the breadth of learning opportunities available to children. Use this tool to capture teaching approaches, student engagement, classroom routines, and the learning environment.

PILOTING NOTE: Items highlighted in YELLOW must be adapted to the country/context in which the tools will be used. Please review and modify as needed.

Note that all instructions/guidance to the assessor are in *italics*.

I. SCHOOL AND OBSERVATION INFORMATION

1.	**School Name**	
2.	School Number (EMIS or study number, ideally alphanumeric)	
3.	Date of Visit *Please enter the date in the format: Day/Month/Year* *(e.g., 6/5/2017 for May 6, 2017)*	____ / _____ /_____ Day / Month / Year
4.	Enumerator Name/ID	
5a.	School Day start time (Observed or reported by the teacher)	____:____ *[Use 24-hour time format HH:MM]*
5b.	School Day end time (Observed or reported by the teacher)	____:____ *[Use 24-hour time format HH:MM]*
6a.	Class start time (Observed or reported by the teacher)	____:____ *[Use 24-hour time format HH:MM]*
6b.	Class end time (Observed or reported by the teacher)	____:____ *[Use 24-hour time format HH:MM]*
7a.	Observation start time	____:____ *[Use 24-hour time format HH:MM]*
7b.	Observation end time	____:____ *[Use 24-hour time format HH:MM]*

II. SCHOOL ENVIRONMENT INFORMATION

A.	*QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION*		
1.	Does the school have a feeding program?	YES	NO
1a.	If yes, who is eligible to receive food? *(e.g., all students, specific grades, children from low-income families, etc.)*		
1b.	What type of meals are provided? *Mark all that apply:*		Br eakfast
			Tea (without snack)

A.	QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION		
			Tea with snack
			Lunch
			No meal provided
			Other:
2.	Are there toilets/latrines available for children to use? *Mark one*		Yes, toilets/latrines are available and in usable condition
			Yes, toilets/latrines are available but not in usable condition (e.g., broken, dirty, inaccessible)
			No, toilets/latrines are not available
2a.	Are the toilets/latrines accessible for children with physical disabilities? *Circle one*	YES	NO
2b.	Are the toilets/latrines divided by gender? *Circle one*	YES	NO
3.	Are there any barriers to handwashing facilities? *Mark all that apply*		Yes, lack of soap
			Yes, lack of clean water
			No designated handwashing area
			Yes, Other *(please specify):*
4.	Do students have access to clean drinking water during the school day? *Mark all that apply*		Clean drinking water is provided at school
			Students bring their own drinking water from home
			No drinking water is available at school
			Other *(please specify):*
5.	Are all classrooms accessible to learners with physical disabilities (e.g., ramps, wide doorways)?		Yes
			No
			Partially – please explain:

A.	*QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION*			
6.	Is there a designated outdoor play area or school yard? *Circle one*	YES		NO
6a.	How would you describe the condition of the school yard or play area? *Circle one*	Safe and well-maintained	Safe but poorly maintained	Unsafe and poorly maintained
6b.	What is the size of the outdoor play area or school yard? *Circle one*	Small (limited space for play)	Medium (Sufficient for play but may be crowded)	Large (ample space for play)
6c.	Do students have regular opportunities for outdoor play or physical activity? *Circle one*	YES		NO
7.	Does the school have any specialized classrooms or resources? *(Check all that apply)*		Art room	
			Music or performing arts room	
			Library	
			Health or wellness area / school clinic	
			Computer lab	
			No specialized classrooms	
			Other (please specify):	

III. BASIC CLASSROOM INFORMATION

A	*QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION*	
1.	What grade level is this classroom for?	
2.	Total number of children enrolled in the classroom	Male
		Female
		Total

A	*QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION*					
2a.	Actual number of children physically present in the classroom on the day of the observation. *Record this during the classroom observation; do not ask the teacher in advance.*					
3.	What is the primary language of instruction in the classroom?					
3a.	What percentage of students in the classroom use the primary language of instruction? *Circle one*	NONE	SOME	ABOUT HALF	MOST	ALL
3b.	What language(s) do students primarily use when communicating with each other in the classroom? (e.g., during group work, discussions, or casual conversations)					
4.	Are there children with special needs in the classroom? *If you do not know, mark N/A*	**Type of Disability**				**Number of Children**
		Physical Disability *(e.g., mobility impairments, use of assistive devices)*				
		Neurological or Developmental Disability *(e.g., Autism, ADHD)*				
		Sensory Disability *(e.g., Deaf, Hard of Hearing, Blind, Visually Impaired)*				
		Other (please specify):				
5.	What is the daily schedule for today in this class? *Copy the schedule into the box.*					
6.	What are the subjects children in your class learn, including the ones I will be seeing today?					

A	*QUESTIONS TO ASK TEACHER IN ADVANCE OF OBSERVATION*	
7.	What topic(s) will I be observing today? *If the subject is broad (e.g., "science" or "math"), ask for clarification on the specific focus, such as plants, weather, or addition, subtraction, etc.*	
8.	What is the length of the lesson/ instructional period I will be observing?	
9.	What is the lesson plan for today? Is it written? Can I see it? *Take a photo of the lesson plans.*	*Describe key points of lesson plan.*
10.	Do you have any student work I could look at?	*Describe student work (open-ended vs. closed-ended, rote, requiring critical thinking or creativity, etc.) Describe domains/subjects included in student work.*

IV. PHYSICAL ENVIRONMENT

A.	*CLASSROOM SET UP*			
1.	**Classroom Space**			
1a.	Can all children sit comfortably?	ALL	SOME	NONE
1b.	To what extent is there enough classroom space for students to participate in activities such as group work, movement, or hands-on learning?	ALL	SOME	NONE
1c.	Can children freely move around between seats/rows if they need to get up?	ALL	SOME	NONE
2.	**Classroom Furniture**			
2a.	Do all children have a seat?	YES	NO	
2b.	Do children have a writing surface?	YES	NO	
2c.	Does the space fit the size of the child? *(e.g. they can sit comfortably with their feet on the floor and elbows on their desk)*	YES	NO	

A.	*CLASSROOM SET UP*	
3.	**Learning Materials**	
3a.	Which of the following learning materials are visibly available and accessible to students? *Mark the box next to each item you observe*	Writing utensils Paper/workbooks Fiction books Nonfiction books Art supplies Manipulatives/math materials Science supplies Technology Other *(please specify below)*
3b.	What kinds of learning materials or visuals are displayed in the classroom? (e.g., student work, handmade or printed posters, charts, drawings, maps, or other print-rich materials)	

V. CLASSROOM OBSERVATION

A.	*LMTF Domains Observed*		
1.	*Describe which of the LMTF domains you see in the classroom and give examples of how they are being demonstrated. Domains may be observed through direct activities (explicit) or as part of other classroom activities (implicit). For example, culture could be observed directly (e.g., teaching a lesson about local traditions) or indirectly (e.g., children sharing stories or songs from their cultures during literacy activities). If a domain is observed, write down the number of minutes you see it. If you don't observe a domain, leave it blank.*		
	LMTF Domain	**Observations**	**Minutes**
1a.	Physical Wellbeing		

A.	*LMTF Domains Observed*		
1b.	Social & Emotional		
1c.	Culture and the Arts		
1d.	Literacy & Communication		
1e.	Literacy Approaches & Cognition		
1f.	Numeracy & Mathematics		
1g.	Science		
1h.	Technology		
B.	*How is Time Spent?*		
1.	*For each type of activity observed, write down approximately how many minutes were spent on it. Then, note which LMTF domains were demonstrated during that time. If multiple domains are observed in one activity, list them all.*		
	Type of Activity	**Minutes**	**LMTF Domains Observed**
	Whole Group		
	Individual		
	Pairs		
	Small Group		
	Free Play		
C.	*Classroom Climate*		
1.	How actively are students involved in the lesson? *(Select one)*		Students participate frequently (answer questions, engage in discussion)
			Students participate occasionally (respond when asked or volunteer)

A.	*LMTF Domains Observed*		
			Students are passive (rarely contribute to the lesson)
2.	How does the teacher interact with students during the lesson?		Teacher primarily speaks to the whole class without individual engagement
			Teacher engages with individual students regularly (e.g., asking questions, giving feedback)
			Teacher uses group discussions or peer learning frequently
			Teacher provides personalized support during activities
3.	How would you describe the classroom energy?		Calm and focused
			Energetic but productive
			Disengaged or distracted
			Tense or disruptive
D.	*Instructional Materials*		
1.	What types of resources does the teacher use to support instruction?		Printed materials (textbooks, storybooks, worksheets)
			Visual aids (charts, diagrams, flashcards, puppets)
			Technology (computers, projectors, educational videos, tablets)

A.	*LMTF Domains Observed*		
			Hands-on materials (blocks, art supplies, puzzles, sensory items)
			Other (please specify):
E.	*Discipline Observed*		
1.	What does the teacher do when a student behaves disruptively? How does the teacher respond? *(Check all that apply)*		Remains calm and composed
			Appears frustrated or stressed
			Uses verbal redirection (e.g., reminders, requests)
			Uses non-verbal cues (e.g., eye contact, gestures)
			Applies consequences (e.g., time-out, removal from group activity)
			Encourages positive behavior (e.g., praise, rewards)
			Involves peers in behavior management (e.g., peer accountability)
			Uses physical discipline (see separate section)
			No discipline observed during the session
			Other (please specify):
1a.	If the teacher uses physical discipline, can you describe the types of physical discipline the teacher uses?		Physical restraint or physically moving child

A.	*LMTF Domains Observed*		
			Forced physical exertion (e.g., prolonged standing or exercise as punishment)
			Hitting, slapping, or forceful contact
			Other (please specify):
2.	Does the teacher yell or shout at students to correct behavior?	YES	NO
2a.	How often does the teacher yell or shout to correct behavior? *Mark the box next to the number of times you observe the teacher yell at an individual or the whole class.*		Never
			Once
			Twice
			More than two times during the observation
3.	Does the teacher ever use shaming as a way to manage behavior? *(E.g., Does the teacher make negative comments about a student's behavior in front of the class, such as calling them names or using sarcasm?)*		
F	*Transitions*		
1.	During transitions between activities, did you observe any of the following? *(Check all that apply)*		Clear and consistent routines
			Children actively participating in the transition
			Use of songs, thymes, or counting
			Children given responsibilities (e.g., line leader, clean-up roles)
			Long periods of waiting or downtime

A.	*LMTF Domains Observed*		
			Signs of confusion or disengagement
G	*Hygiene Practices*		
1.	Is handwashing encouraged before meals? *Circle one*	YES	NO
2.	Is handwashing encouraged after using the toilet/latrine? *Circle one*	YES	NO

• H: Full Data Tables: Domain Frequencies

This appendix reports the underlying Ghana figures for the eight LMTF learning domains: Physical Wellbeing; Social and Emotional; Culture and the Arts; Literacy and Communication; Learning Approaches and Cognition; Numeracy and Mathematics; Science; and Technology.

Tables H1–H5 cover the intended curriculum and its alignment with observed practice; Tables H6–H8 give the regional and urban–rural breakdowns; Tables H9–H10 report the stakeholder barrier data. Percentages are rounded, so compositional columns may differ from 100.0 by ±0.1.

Table H Intended-curriculum allocation by domain and grade (%)

LMTF domain	KG 2	Primary 2	Primary 4	Combined
Physical Wellbeing	16.9	10.2	8.6	12.0
Social & Emotional	14.1	13.6	11.4	13.0
Culture & the Arts	11.3	11.9	10.0	11.0
Literacy & Comm.	12.7	15.2	12.9	13.5
Learning App. & Cog.	11.2	16.9	14.3	14.0
Numeracy & Maths	16.9	18.6	27.1	21.0
Science	16.9	13.6	14.3	15.0
Technology	0.0	0.0	1.4	0.5

Source: mapping of Ghana's Standards-Based Curriculum to the eight LMTF domains (Chapter 2; Figure 3.1). Values are the share of curriculum learning objectives engaging each domain; each column sums to 100%.

Table H Observed domain-presence rate by grade (% of classrooms)

LMTF domain	KG 2 (n=30)	Primary 2 (n=30)	Primary 4 (n=30)
Physical Wellbeing	83	57	67
Social & Emotional	73	80	63
Culture & the Arts	50	57	43
Literacy & Comm.	87	100	87
Learning App. & Cog.	63	67	73
Numeracy & Maths	50	60	37
Science	37	30	30
Technology	3	7	13

Source: 90 classroom observations (Chapter 4; Figure 4.2). Values are the percentage of observed classrooms in which each domain appeared in at least one activity. Domains are independent, so columns do not sum to 100%.

Table H Observed relative classroom presence by domain and grade (%)

LMTF domain	KG 2	Primary 2	Primary 4	National
Physical Wellbeing	18.7	12.4	16.1	15.7
Social & Emotional	16.4	17.5	15.3	16.5
Culture & the Arts	11.2	12.4	10.5	11.4
Literacy & Comm.	19.4	21.9	21.0	20.8
Learning App. & Cog.	14.2	14.6	17.7	15.4
Numeracy & Maths	11.2	13.1	8.9	11.1
Science	8.2	6.6	7.3	7.3
Technology	0.7	1.5	3.2	1.8

Source: classroom observations. Relative classroom presence is each domain's share of all domain-presence flags recorded; each column sums to 100%. National column pools all 90 classrooms.

Table H Curriculum allocation versus observed presence and alignment gap, national (%)

LMTF domain	Curriculum	Observed	Gap (pp)
Physical Wellbeing	12.0	15.7	+3.7
Social & Emotional	13.0	16.5	+3.5
Culture & the Arts	11.0	11.4	+0.4
Literacy & Comm.	13.5	20.8	+7.3
Learning App. & Cog.	14.0	15.4	+1.4
Numeracy & Maths	21.0	11.1	−9.9
Science	15.0	7.3	−7.7
Technology	0.5	1.8	+1.3

Gap = observed relative presence − curriculum allocation, in percentage points (Figures 4.7–4.8). Positive = over-represented in classrooms relative to the curriculum; negative = under-represented.

Table H Alignment gap by domain and grade (percentage points)

LMTF domain	KG 2	Primary 2	Primary 4
Physical Wellbeing	+1.8	+2.2	+7.5
Social & Emotional	+2.3	+3.9	+3.9
Culture & the Arts	−0.1	+0.5	+0.5
Literacy & Comm.	+6.7	+6.7	+8.1
Learning App. & Cog.	+3.0	−2.3	+3.4
Numeracy & Maths	−5.7	−5.5	−18.2
Science	−8.7	−7.0	−7.0
Technology	+0.7	+1.5	+1.8

Gap = observed − curriculum (pp) within each grade (by-grade analysis; Figure 4.9). The Numeracy and Mathematics shortfall deepens to −18.3 pp at Primary 4.

Table H Observed relative classroom presence by domain and region (%)

LMTF domain	Ahafo	Ashanti	Eastern	Oti	Savannah	Upper East	Upper West	Western
Physical Well-being	20.0	11.4	21.4	14.0	15.6	14.5	14.0	14.0
Social & Emotional	15.6	18.2	21.4	14.0	11.1	16.4	18.6	15.8
Culture & the Arts	11.1	11.4	10.7	12.0	13.3	18.2	4.6	8.8
Literacy & Comm.	17.8	18.2	21.4	24.0	24.4	20.0	25.6	15.8
Learning App. & Cog.	13.3	15.9	17.9	16.0	6.7	14.5	18.6	19.3
Numeracy & Maths	8.9	9.1	5.4	8.0	22.2	9.1	14.0	14.0
Science	8.9	11.3	1.8	12.0	6.7	7.3	2.3	8.8
Technology	4.4	4.5	0.0	0.0	0.0	0.0	2.3	3.5

Source: classroom observations, by region (Figure 4.3; regional analysis). Each column sums to 100%. Regional figures rest on 9–12 classrooms per region (3–4 per grade) and are indicative rather than precise estimates. Region sample sizes: Ahafo n=9; Ashanti n=9; Eastern n=12; Oti n=12; Savannah n=12; Upper East n=12; Upper West n=12; Western n=12.

Table H Observed domain-presence rate by domain and region (% of classrooms)

LMTF domain	Ahafo	Ashanti	Eastern	Oti	Savannah	Upper East	Upper West	Western
Physical Well-being	100	56	100	58	58	67	50	67
Social & Emotional	78	89	100	58	42	75	67	75
Culture & the Arts	56	56	50	50	50	83	17	42
Literacy & Comm.	89	89	100	100	92	92	92	75

LMTF domain	Ahafo	Ashanti	East-ern	Oti	Savan-nah	Upper East	Upper West	West-ern
Learning App. & Cog.	67	78	83	67	25	67	67	92
Numeracy & Maths	44	44	25	33	83	42	50	67
Science	44	56	8	50	25	33	8	42
Technology	22	22	0	0	0	0	8	17

Source: classroom observations, by region. Percentage of classrooms in which each domain appeared at least once; domains independent (columns do not sum to 100%). Indicative given small regional samples (see Table H6 note).

Table H Observed relative classroom presence by domain: urban versus rural (%)

LMTF domain	Urban (n=42)	Rural (n=48)
Physical Wellbeing	17.3	14.1
Social & Emotional	15.7	17.2
Culture & the Arts	12.2	10.6
Literacy & Comm.	19.8	21.7
Learning App. & Cog.	15.2	15.7
Numeracy & Maths	10.7	11.6
Science	6.1	8.6
Technology	3.0	0.5

Source: classroom observations, by school location (Figure 4.6). Each column sums to 100%. The sharpest divide is Technology (urban 3.0% versus rural 0.5%).

Table H Teacher-reported barriers to curriculum implementation, by grade (%)

Barrier	KG 2	Primary 2	Primary 4	Overall
Limited learning materials	60	63	67	63
Lack of technology	43	70	70	61

Barrier	KG 2	Primary 2	Primary 4	Overall
Financial constraints	50	43	47	47
Inadequate infrastructure	40	27	33	33
Insufficient staffing	37	30	27	31
Limited parental involvement/support	20	17	17	18
Other	13	10	10	11
Policy–local context mismatch	7	10	3	7
Limited community engagement	7	7	7	7
Limited instructional time	7	3	3	4
Teacher training gaps	3	7	3	4
Resistance to change	7	3	3	4
Environmental/crisis disruptions	7	0	7	4
Political challenges	0	7	3	3
Testing pressure	0	3	0	1
Health & mental-health concerns	0	0	0	0

Source: teacher survey (Chapter 5; Figure 5.3). Percentage of teachers citing each barrier among their top three; respondents could select several, so columns do not sum to 100%. n = 30 per grade (Overall n = 90).

Table H Barriers reported by teachers and headteachers (%)

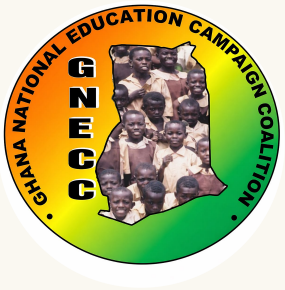
Barrier	Teachers (n=90)	Headteachers (n=30)
Limited learning materials	63	80
Financial constraints	47	67
Insufficient staffing	31	50
Limited community engagement	7	23

Barrier	Teachers (n=90)	Headteachers (n=30)
Limited parental involvement/support	18	17
Testing pressure	1	17
Other	11	10
Teacher training gaps	4	10
Policy–local context mismatch	7	7
Resistance to change	4	7
Environmental/crisis disruptions	4	7
Limited instructional time	4	3
Political challenges	3	3
Health & mental-health concerns	0	0

Source: teacher and headteacher surveys (Figure 5.5). Shared barrier options only; Technology and inadequate infrastructure were offered on the teacher instrument only and are therefore excluded here (see Table H9 for the full teacher list).

1. Below are school counts per region/district:

   Ashanti (Kumasi Metropolitan – 1, Atwima Mponua – 2), **Ahafo** (Asunafo North Municipal – 1, Asutifi South – 2), **Eastern** (Akuapim South Municipal – 2, Ayensuano – 2), **Oti** (Biakoye – 2, Nkwanta North – 2), **Savannah** (West Gonja – 2, Bole – 2), **Upper East** (Kassena-Nankana – 2, Tempane – 2), **Upper West** (Wa – 2, Jirapa – 2), **Western** (Tarkwa Nsuaem Municipal – 2, Mpohor – 2) ↑



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