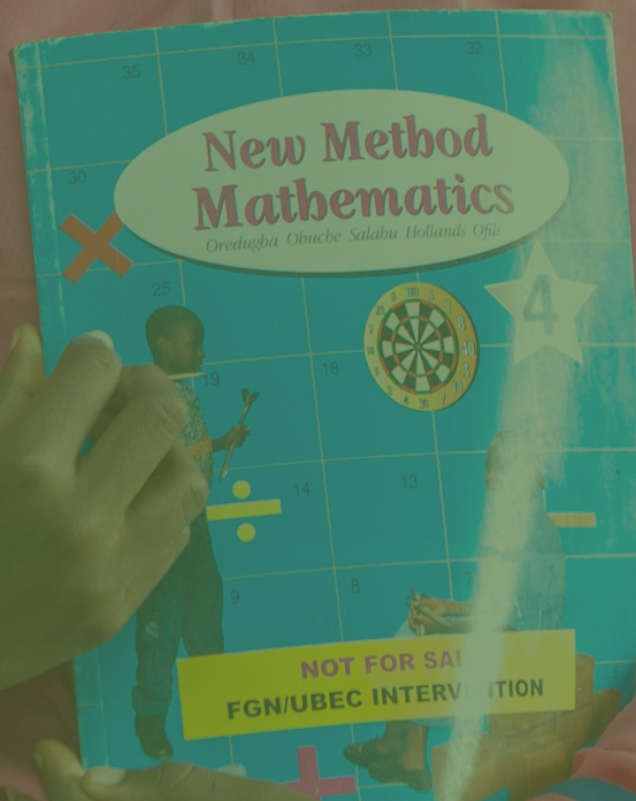


NEW EVIDENCE ON PUPIL LEARNING AND TEACHER EFFECTIVENESS FROM PRIMARY SCHOOLS IN JIGAWA, KATSINA AND ZAMFARA

Findings from a baseline survey of Teacher Development Programme (TDP)



TDP Briefing Note, February 2016

The current state of Pupil Learning, Teacher Effectiveness, School Leadership & Management, and School Infrastructure

MAJOR HIGHLIGHTS¹

SCHOOL CONTEXT

88%

of head teachers reported their school needed 'major repairs'



ONLY 11%

of schools have electricity



PUPIL LEARNING

Only small groups of assessed primary-3 pupils could demonstrate primary-2 level proficiency:

3%

In English Literacy

6%

In Numeracy

15%

In Scientific Literacy Skills



In all three subjects, girls and pupils from the poorest households performed significantly worse than boys and pupils from the richest households, respectively.

TEACHER EFFECTIVENESS

Only a handful of teachers demonstrated grade-4 level subject knowledge:

0.1%

Science

0.4%

English

8%

Mathematics



Loss of  instruction time

14% of teachers are absent on an average school day. Many lessons are shorter than the standard of 35 minutes. One day's worth of instructional time is lost each week.

ONLY 24%

of the total lesson time of teachers is spent in effective interaction with pupils.

1 of 3

teachers claim they do not have materials to do their job properly.

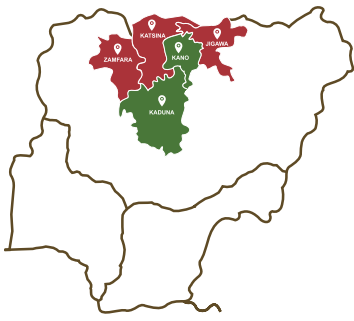
80% of teachers demonstrate limited ability to monitor and assess pupils' academic progress.

SCHOOL LEADERSHIP & MANAGEMENT

Less than one-third of head teachers reported holding formal meetings with teachers weekly or more often, but 80% reported carrying out lesson observations

Most head teachers felt constrained in their formal powers to reduce teacher absenteeism and held that SUBEB/LGEA inspections did not contribute to better school management.

¹ The baseline quantitative results are representative of the schools that participate in the programme and those selected as controls for the impact evaluation, and not of TDP states as a whole.



1. INTRODUCTION

The Teacher Development Programme is a 6-year (2013-19) UK Department for International Development (DFID) funded education programme seeking to improve the quality of teaching in primary and junior secondary schools, and Colleges of Education in six states in northern Nigeria. In its first phase (2014-2016) operations focus on Jigawa, Katsina and Zamfara. In its second phase (2016-2019), it plans to extend to Kano and Kaduna States.

This briefing note presents some of the main findings from the mixed-methods baseline survey.² This study used quantitative and qualitative research methods to establish an overview of the current state of school context, pupil learning, teacher effectiveness and school leadership & management for a sample of primary schools³ in Jigawa, Katsina and Zamfara States. This note will briefly present each of these topics, and will outline potential policy recommendations based on the results.

2. CONTEXT

It is widely acknowledged that schools in Jigawa, Katsina and Zamfara face a particularly challenging environment. In this section, this context is described in greater detail, highlighting problems related to class size, limited availability of infrastructure and materials, and the social and political context in which teachers operate.



...they are too many in a class, as you are working a pupil may be beating another while another one is dragging another and you are all alone to control the class"

A teacher in Zamfara

Class Sizes And Multi-grade Teaching

The baseline survey found the average pupil-teacher ratio (PTR) was 59:1⁴ compared to the national PTR of 36:1 in 2011⁵ and the official policy of 40:1. The 10% of schools with the highest PTRs have 106 pupils per teacher or more. Teachers admitted to having lost control of a large class, and complained that it took more time to finish a lesson with a large class. Large classes also made it more difficult to get to know, monitor or apply child-centred methods to pupils.

10%

of schools with the highest PTRs have 106 pupils per teacher or more.

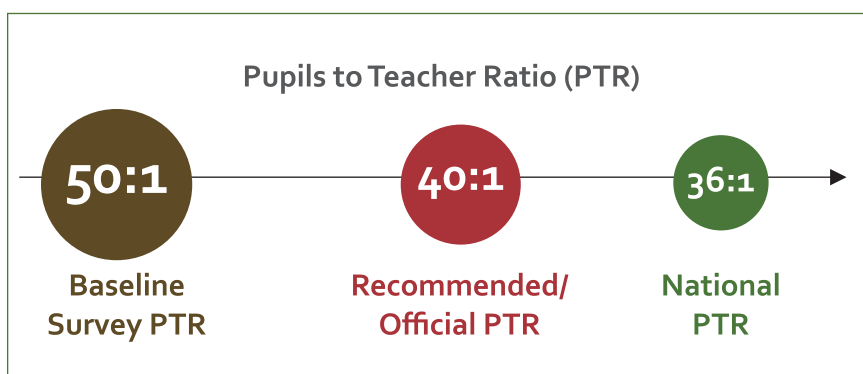


² De, Pettersson, Morris and Cameron (2016) TDP Mixed Methods Baseline Report

³ The baseline quantitative results are representative of the schools that participate in the programme and those selected as controls for the impact evaluation, and not of TDP states as a whole.

⁴ PTR was based on the total pupils registered in each school, not on number of pupils present in the school on the day of the survey.

⁵ UNESCO. (2014). Teaching and learning: achieving quality for all.



Average class size is 42 pupils per classroom. Class size may be lower than PTRs due to double shifts. Some schools do report using informal multi-grade teaching (e.g. rotating grades) due to classroom shortages. Yet, little support or explicit strategies were observed for effective teaching in a multi-grade classroom setting.

70%

of teachers noted that their school's building was in "poor condition"

"Nearby schools lack class rooms resources, no good infrastructure, the officials don't visit those school and the teachers there regularly, in our own case we have everything, enough class room resources, even these two additional blocks, were provided to us by [name of influential politician]. We have enough desks and enough teaching materials as well as qualified teachers, all as a result of his assistance"

- A head teacher in Katsina

School Infrastructure and Resources

Schools tend to have inadequate physical infrastructure and 88% of head teachers reported that their schools were in need of major repairs. Only about 11% of schools had electricity supply. In teacher interviews, 70% of teachers noted that their school's building was in "poor condition", and 33% said they have inadequate materials to do their job properly. 'Inadequate classroom resources' and 'inadequate school infrastructure' were ranked among the worst constraints faced by teachers.

Head teachers also reported needing additional resources, in particular additional classrooms, furniture and blackboards. Urban or semi-urban schools were generally found to be much better equipped than rural schools.

Head teachers frequently noted that their request for additional infrastructure, repairs, and resources from the LGEA/SUBEB go unanswered. Political connections were highlighted as an important determinant of how well-equipped schools were.

Textbooks were also not routinely given to all children, but sometimes children sat in groups with one textbook to share. This was sometimes because of insufficient textbooks. In the rare cases where school resources are sufficient, there is evidence that these are not always managed and allocated efficiently (for e.g. unused teaching resources and 'stored' textbooks in a head teacher's office).

"Inspectors don't care about what we teach as teachers, they are concerned with the record of work, they will just check our diary and praise us and move on"

A teacher in Katsina

"... once you have a problem here they will transfer you without investigating into the matter, they just transfer at any time... once the headmaster does not like you he will make a way to transfer you"

A teacher in Katsina

Social and Political Context

Teachers complained that LGEA and SUBEB inspection officers victimised and intimidated them rather than supporting them. Although they faced the risk of transfer, some teachers were reportedly unfazed by the threats of punishment from the LGEA, and often did not appear to be particularly subordinate to head teachers or LGEA officers. LGEA officers had power to caution teachers or transfer them, but not to remove them from service or deduct pay.

Teachers alleged that promotions were given unfairly, based on a teacher's political or social connections rather than seniority. Similarly delays in payment and transfers were sometimes thought to be due to political connections. Teachers thus suffered a problematic political relationship with LGEA and SUBEB officers as part of the processes of inspection, recruitment, promotion and transfer. This affected their motivation negatively and may have resulted in less competent teachers being placed in some schools, particularly remote rural ones.

Teachers' relationships with parents, communities and children were apparently cordial, but generally not on equal terms. Teachers showed little sign of accountability to parents or communities for ensuring children learn. Their authority and relationship with children and perceived role in instilling discipline, including through physical punishment, may be problematic for any attempt to move towards more child-centred learning.

3. PUPIL LEARNING LEVELS

Figure 1 provides an overview of pupils' current learning levels in Scientific literacy, Numeracy and English literacy. This was assessed by a test and, based on their performance, pupils were placed on three bands. These bands are described at the bottom of Figure 1 (Level 0 – 2).

Overall, pupil learning levels in English literacy, numeracy and scientific literacy were very low. At the higher levels of performance, only small groups of grade 3 pupils could demonstrate basic English literacy skills (3%), basic numeracy skills (6%), and scientific literacy skills (15%), expected at the end of grade 2 (Figure 1).

At lower levels of performance there are large groups of pupils who

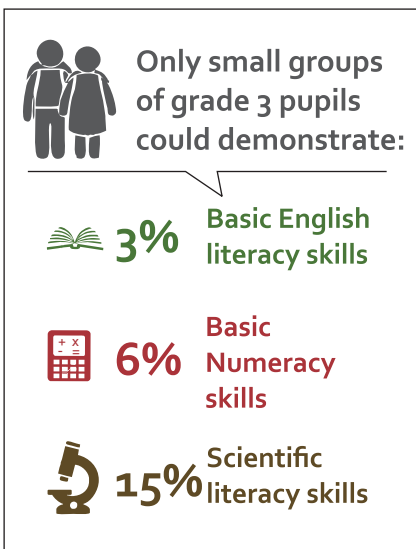
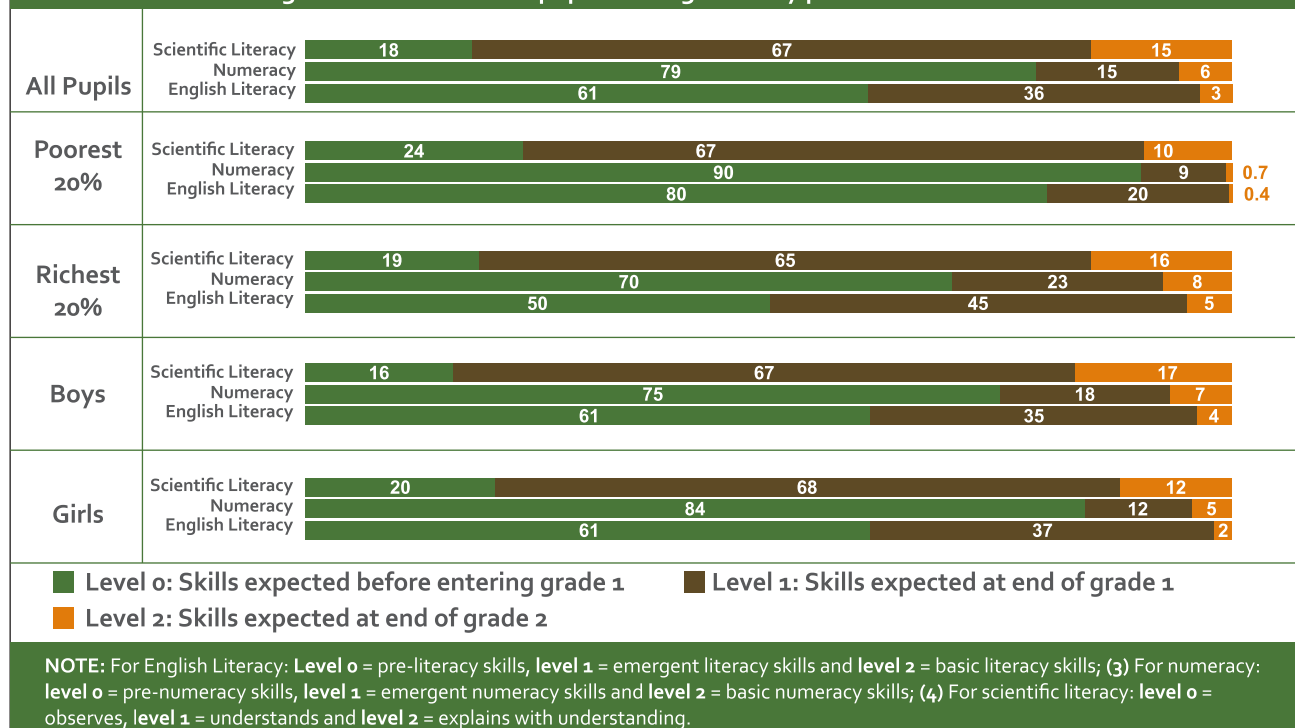


Figure 1: Distribution of pupil learning levels by performance bands



have fallen behind by at least two full grades – they can demonstrate, at best, English literacy, numeracy and scientific literacy skills expected at the beginning of grade 1. In other words, as Figure 1 shows, more than 60% of pupils only demonstrate pre-literacy skills, 79% only demonstrate pre-numeracy skills and 18% have acquired scientific literacy skills adequate to recognise basic physical properties of everyday items.

Examining learning levels for different sub-groups of pupils in all three subjects, girls perform significantly worse than boys, and pupils from the poorest 20% of households⁶ perform significantly worse than pupils from the richest 20% of households. Household income levels were determined by showing pupils pictures of household assets and asking them which ones they had in their home.

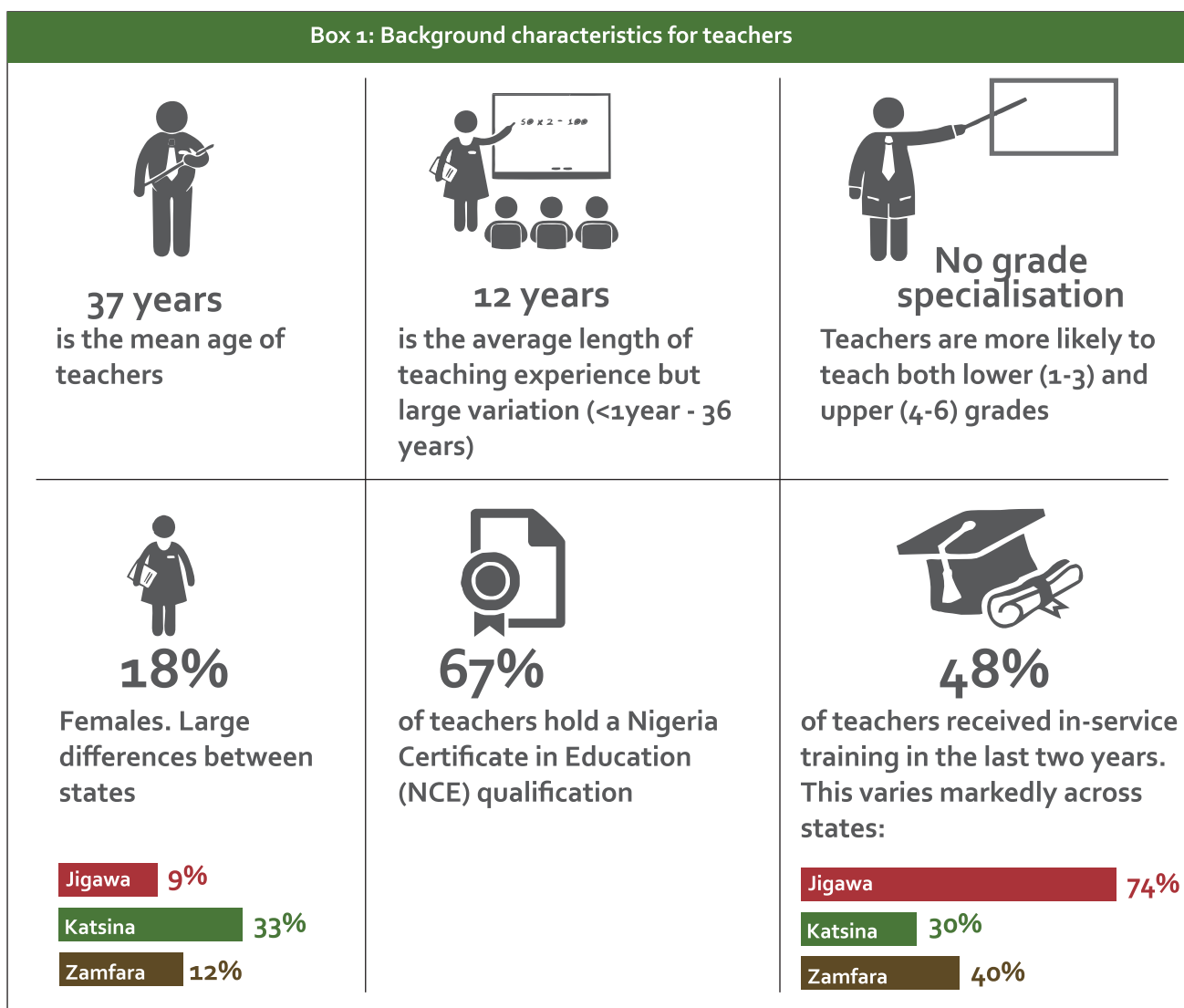
⁶ An asset index was created using principal component analysis (PCA). Based on this, the lowest 20% were categorised as "poor" and the top 20% as the "rich" quintile. The asset index was based on photos showed to children of various household assets (bicycle, mat, chair etc.) during the pupil assessment and asking them if they owned the asset or not.

4. TEACHER EFFECTIVENESS

This section will present baseline results on teacher effectiveness. Box 1 on the next page shows selected background characteristics for teachers. However, these alone cannot predict effectiveness. As described in section 2, a supportive context for teachers is critical. In addition to this, we discuss three elements that can influence teacher effectiveness:

- (i) teachers are motivated to attend school and lessons regularly;
- (ii) teachers have sufficient subject knowledge;
- (iii) teachers have the pedagogic knowledge to be able to apply new training

Each of these three areas are now described here in turn.



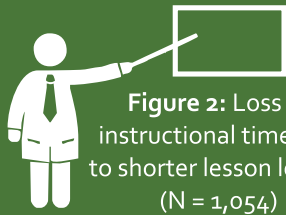
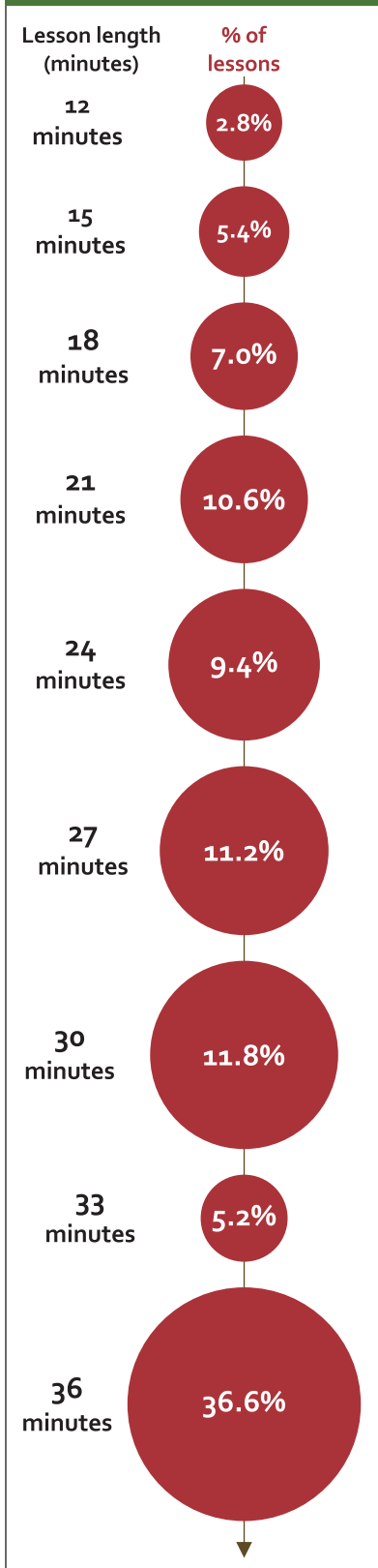


Figure 2: Loss of instructional time due to shorter lesson length (N = 1,054)

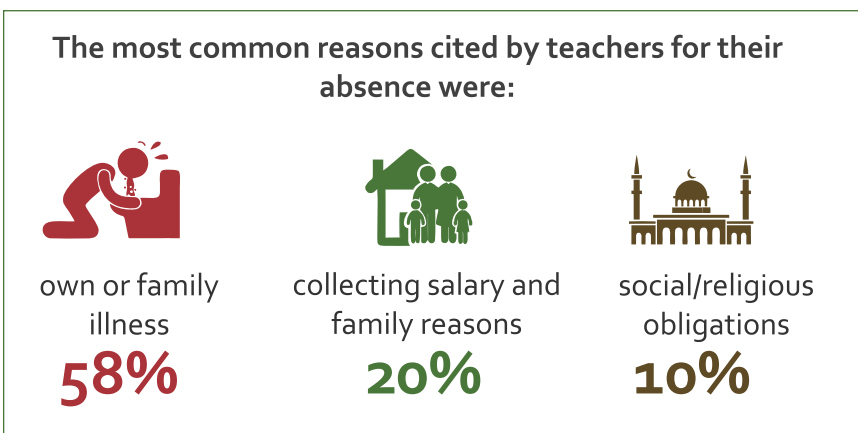


Teacher motivation, attendance and lesson length

This baseline report found mixed evidence of teachers being intrinsically motivated to try to improve their teaching, to take part in learning opportunities and to apply new knowledge when they get it. Teachers gave varied descriptions of their attitudes towards the teaching profession, ranging from those who described teaching as an inherently noble profession advancing society, to those who accepted teaching jobs because they were unable to find anything else. One teacher explicitly became a teacher because it allowed him to carry on a side business.

There was strong evidence that teachers felt demotivated due to extrinsic factors. Among demotivating factors, teachers predominantly talked about low, late and even lack of salary payments, the lack of learning resources and poor infrastructure, lack of promotion or perceived unfairness in promotions, arbitrary transfers, the poor state of infrastructure and teaching resources, over-crowded classrooms, irregular attendance of children, and 'untalented' pupils.

The average daily teacher absenteeism over the previous five days, according to the schools' records, was 14%.



However, researchers found that teachers combined their teaching work with farming or small businesses outside the school. Some teachers were undergoing further training or education at the same time as teaching, taking them away from their regular jobs. In most schools, researchers also saw teachers arriving late.

Classroom absenteeism, where teachers are present in the school but missing from the classroom, was a common observation in the qualitative survey. One possible reason for this is teachers'

"I hate teaching because people no longer respect teachers... I wish the new government would do something about it. Many services that are not like teaching get more respect and a higher salary than the teaching profession... I am doing it because I don't have any other job"

A teacher in Katsina

specialised training in their NCE often does not match the subject that is needed when they are posted to a school, and shortages of teachers in a school can arise in specific subject areas even when there is no overall shortage of teachers in the school.

Lessons were often much shorter than standard length of 35 minutes. In the three states, the average lesson length was 28 minutes, and a large proportion of observed lessons (more than 45%) were shorter than within five minutes of a standard 35 minute lesson (Figure 2). In total, this implies a whole day's worth of lesson time lost every week. Around 15% of lessons were 18 minutes or shorter, equivalent to losing nearly half of lesson time with serious implications for pupil learning.

Teachers' subject knowledge⁷

The vast majority of teachers do not have sufficient subject knowledge in English, Mathematics or Science to be considered effective in the classroom.

The average teacher was also unable to correct errors in pupils' work and provide relevant feedback, or identify learning needs of individual pupils and monitor their academic progress over time.



0.1%

of teachers have sufficient subject knowledge in science



0.4%

of teachers have sufficient subject knowledge in English



8%

sufficient subject knowledge in Mathematics, although larger, is still very small.



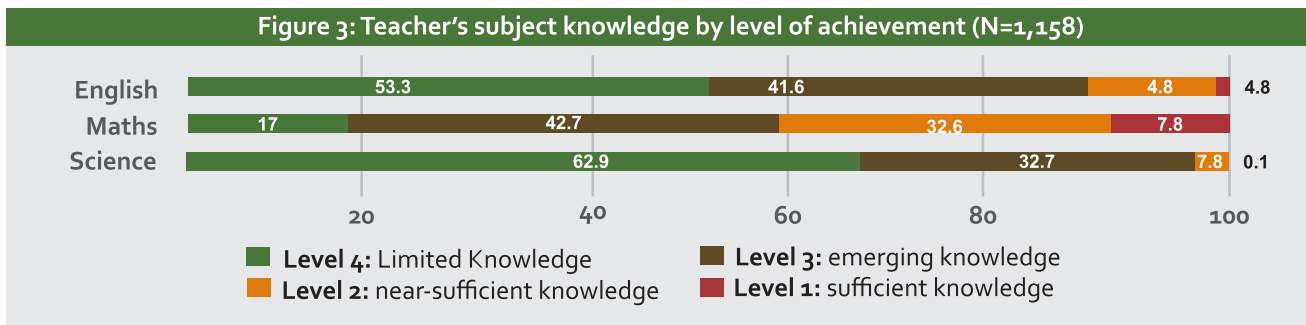
"...there is a need to address poor subject knowledge of the teachers as well as the curriculum, to be honest with you 35-40% of teachers have issues and challenges with their subject knowledge, you will find such cases in a seminar and workshops, many of us cannot present a simple thing, there is a need to boost the confidence of the teachers and make them more effective"

A teacher in Katsina

The most critical group, which has just limited subject knowledge, and that without extensive and continuous training and support cannot be considered effective in the classroom, comprise 63% of teachers for Science, 53% for English, and 17% for Mathematics.

Teacher knowledge was also found to be significantly correlated across the three subjects. So teachers who do relatively well on one subject also tend to do well on the other two subjects. The average teacher was also unable to correct errors in pupils' work and provide relevant feedback, or identify learning needs of individual pupils

⁷To measure teacher subject knowledge and assess and monitor pupils' academic progress, a test was given to all teachers and head teachers, called the "teacher development needs assessment" (TDNA).



Note: (1) The above indicators include teachers and head teachers; (2) Level 1= sufficient knowledge (TDNA score 75-100%), level 2=near-sufficient knowledge (TDNA score 50-74.9%), level 3=emerging knowledge (TDNA score 25-49.9%) and level 4=limited knowledge (TDNA score 0-24.9%).

and monitor their academic progress over time. 80% of teachers have only limited ability in this area, compared to a mere 0.3% that have sufficient knowledge to assess and monitor pupil progress.

A small group (8%) of teachers perform relatively well across subject knowledge and ability to assess and monitor pupil progress. Further study is needed to identify what makes these teachers stand out.

Most teachers did not consider their lack of subject knowledge to be an issue. Teachers tend to explain low learning outcomes in terms of pupils' inherent ability, pupils' low attendance, pupils' parental support and the lack of infrastructure in schools, suggesting that they see their own role as relatively limited.

Teacher pedagogy

The average teacher involved pupils for only 24% of lesson time in pupil-centred/participatory teaching. Time spent on 'effective' versus 'neutral' practices differed across teacher talk, action and pupil activity:

Almost 80% of teachers were found to use praise more frequently

TEACHER TALK 40%
of time was effective

(e.g. explaining how something works, asking open questions, or assisting pupils and groups). The remaining 60% of time was spent on 'neutral' tasks like presenting without asking questions, leading whole class chants, or asking closed questions.

TEACHER ACTION

38%
of time was effective

(e.g. demonstrate solving a problem or explaining a concept). Most time (62%) went to neutral activities (e.g. reading from blackboard).

PUPIL ACTIVITIES

13%
of time was effective

For, 13% of time was effective (e.g. group work). Almost all the time (87%) went to neutral activities (e.g. listening to teacher lecture, chanting or responding to closed questions).

than reprimands suggesting that the majority of teachers attempt to create a positive classroom environment.

At the end of the lesson, 53% of teachers summarised their lesson; 27% gave their pupils homework; and 23% revisited the lesson objectives. Together these results suggest that there is considerable scope for more effective teaching practices in the classroom, both during and at the end of lessons.

Teachers spoke mostly in Hausa in lessons, interspersing sections of English from the textbook. Very few teachers could correctly identify the federal government's language policy, which is to teach in mother tongue for the first three years and then in English for grades 4 to 6. Some said they read everything in English and then translated it into Hausa, which seems an inefficient use of instructional time.

Teachers rely heavily on text books and curriculum guides, especially in absence of strong subject knowledge, rather than being able to devise their own lesson plans to reach a specified learning goal. However, they have limited ability to adapt the textbook material to the real conditions they are facing in the

classroom.

When asked in interviews, teachers were often unable to explain in any detail what methods they use for teaching children and ensuring that they learn. Exceptions were the use of 'energisers' or exercise to keep children interested; using a container of soil to demonstrate what soil is; and using song to capture children's interest and help them to learn faster. Teachers also did not demonstrate ideas about how they can respond to different learning levels within the same classroom to ensure all children achieve at least a minimum level. When asked about how they would help a child who does not understand, teachers most commonly said that they would simply repeat the same information until the child absorbs it.

In general, teachers' prior training may not have adequately equipped them for the realities they faced in the classroom, including large class sizes, multi-grade teaching, limited resources, and limited ability of parents to support their children.

5. SCHOOL LEADERSHIP AND MANAGEMENT


School Leadership and Management (SLM) is crucial to motivate teachers and support them to learn and adopt the most effective teaching practices. For this to occur, three areas are most important:

- (i) Head teachers receive sufficient feedback and support (by SUBEB, LGEA and community) to improve teaching practices (e.g. offering advice on school management and assessing teaching quality).
- (ii) Head teachers have the knowledge and ability to improve teaching practices (e.g. providing direct pedagogical advice and support to teachers).
- (iii) Head teachers have sufficient formal powers to improve teaching practices (e.g. ensuring low teacher absenteeism by influencing teacher recruitment, remuneration and transfer processes).



"Welcome to the land of troubles. Being a head teacher is not easy." (Advice from one head teacher for new head teachers)

A head teacher in Katsina

86% 

of head teachers reported being inspected at least twice by SUBEB, LGEA inspectors in the past month

HeadTeacherSupport

The type of support for head teachers by SUBEB or LGEA to improve school management is inadequate.

- While frequency of school inspections was high (86% of head teachers reported being inspected at least twice by SUBEB, LGEA inspectors in the past month), information collected by inspectors is too 'shallow' to assess quality; information collected is sometimes unreliable; substantive feedback is rarely provided to head teachers and LGEAs rarely respond to head teachers' requests for advice or support; and inspectors do not necessarily promote child-centered learning approaches.
- Head teachers in a minority of schools – usually based in urban areas – reported more constructive relationships with the LGEA.
- One head teacher reported that for a serious case of teacher absenteeism (8 out of 15 teachers were repeatedly absent), general inspectors were unable to address the issue. Action was not taken until the SUBEB Chairman visited the school.

School Based Management Committees (SBMCs) existed in 99% of schools visited and 92% of schools reported an SBMC meeting in the current term or over the preceding vacation. SBMCs were generally reported to be more concerned with pupil enrollment/attendance and school maintenance rather than with the quality of teaching and pupil learning outcomes. About 72% of schools reported receiving in-cash or in-kind support from non-government organizations or programmes (including from SBMCs and parent teacher association PTAs).

The relationships between parents and teachers were cordial, but generally not on equal terms. Teachers showed little sign of accountability to parents or communities for ensuring children learn. Their autocratic relationship with children due to their perceived role in instilling discipline, including through physical punishment, may provide a challenge when attempting to move towards more child-centred learning.

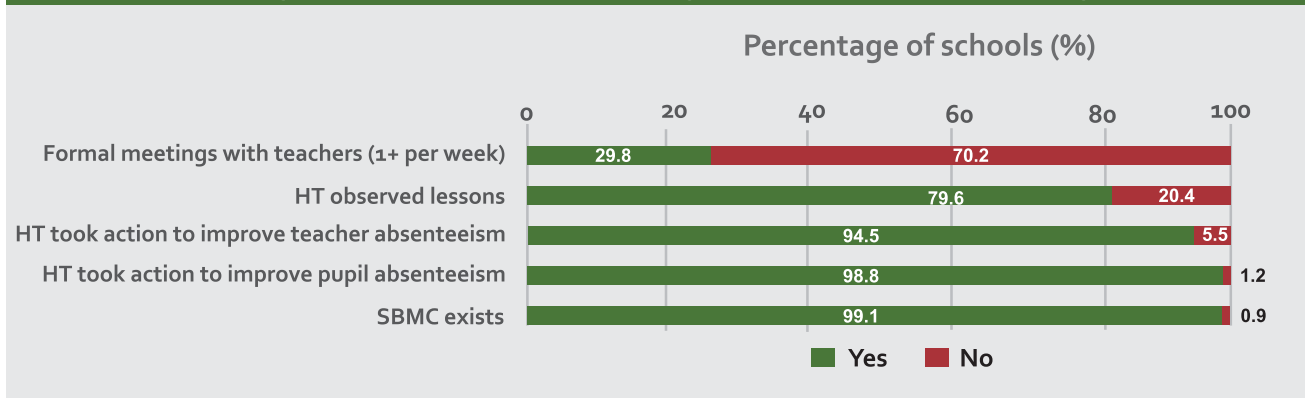
Head Teacher Knowledge & Ability

The large majority of head teachers (80%) reported carrying out lesson observations during the previous two weeks (see Figure 7).

However, only 30% of head teachers reported having a formal meeting with teachers each week.

Feedback on lesson observations only result in positive change where advice is correct. Yet, there is little reason to believe that head teachers have significantly better pedagogical or subject knowledge than the teachers that they are meant to be providing feedback on.

Figure 7: School leadership and management, based on HT self-reporting



"Some people have Godfathers who stand for them, so even if you forward [a complaint to the LGEA], nothing can be done to them"

A head teacher in Zamfara

Head Teacher Formal Powers

Almost all head teachers (95%) reported taking action to reduce teacher absenteeism in the last academic year. However, the levels of 'classroom absenteeism' observed suggest that these actions may not be effective.

Most head teachers felt constrained in their abilities to use these harder 'carrots' and 'sticks' by the limited formal powers invested in them by the government. Head teachers have little input in teacher recruitment and transfer process and little opportunity to influence teacher remuneration.

Head teachers use a number of strategies to try to influence teacher behaviour. These include gifting of financial or in-kind rewards (financed out of the head teacher's own salaries); use of teachers attendance register to signal problems to LGEA; mobilisation of SBMCs in support of dispute with LGEAs; enforcement of continual assessment of pupils; and threats to strip teachers of positions of authority.



This picture of learning levels and pupils' experience of schooling at baseline confirms that the core objective of the programme of improving pupil learning levels is highly relevant in the programme LGAs.



Action for TDP could, however, focus on how the teacher development materials and activities can take into account the reality of the difficult contexts in which teachers work, and the very limited pedagogical and subject knowledge they currently possess.

6. IMPLICATIONS OF BASELINE FINDINGS

Pupil learning levels

Pupil learning levels in English, maths and science are very low in the treatment and control areas. Qualitative accounts from pupils suggest a vicious cycle linking household poverty to exclusion from learning in school and broader social exclusion.

This picture of learning levels and pupils' experience of schooling at baseline confirms that the core objective of the programme of improving pupil learning levels is highly relevant in the programme LGAs. Pupils' own family backgrounds and community-level characteristics, which appear to be the key drivers of low pupil learning, may be beyond the scope of a teacher development intervention, yet are likely to impinge on the effectiveness of such interventions – this is indeed a sobering finding for a programme driven by school-based interventions alone and needs to be taken into account when assessing the probability of success. It may be important to ensure that pupils from poorer backgrounds are considered as a target group in the core objective, as well as girls, and to ensure that the teacher training considers how schools can address their particular learning needs in ways that are more socially inclusive.

Teacher effectiveness

This baseline survey investigated whether teachers are motivated to attend school and lessons regularly; whether they have sufficient subject knowledge and pedagogical skills; and whether they have access to sufficient infrastructure and materials. For a vast proportion of schools studied as part of this baseline survey none of the assumptions hold up fully with strong evidence.

Some of the issues raised here are likely to remain beyond the scope of a programme such as TDP. For instance, infrastructure problems and large class sizes require action at the federal, state, and local government level, possibly combined with actions to build the capacity of SBMCs to hold schools to account.

Action for TDP could, however, focus on how the teacher development materials and activities can take into account the reality of the difficult contexts in which teachers work, and the very limited pedagogical and subject knowledge they currently possess. It is worth investigating whether there is space politically to push for the government's language policy – of teaching in Hausa in Grades 1–3 and in English thereafter – to actually be enforced, which would mean producing and using Hausa textbooks and assessments for

early grade learning. This would still be a radical change as teachers may not be familiar with textbooks written in Hausa, but it would at least mean engaging with the reality of teachers' current understanding of English and would be a recognition of the fact that 99% pupils in this survey reported Hausa as their home language.

SLM

Many of the factors that shape a TDP school's SLM – such as teacher recruitment practices, and the responsiveness of LGEAs/SUBEBS to head teachers' requests – are beyond the scope of TDP.

However, there are potential lessons that can be learned from the baseline research to inform future TDP activities regarding SLM:

Teacher classroom attendance is a widespread problem but in most cases head teachers alone do not have the means to resolve it. TDP could request that good classroom attendance be an additional criterion for selecting future beneficiaries of TDP training, thereby maximising the chances that new knowledge is applied in a classroom context.

Head teachers are rarely held to account and therefore are not incentivised to improve performance. This fact makes TDP more reliant on head teachers' own motivation, which is also lacking in many cases. TDP could consider including activities designed specifically to motivate head teachers.

Head teachers are sometimes unclear about their rights and responsibilities in relation to other actors in the education system, particularly LGEAs/SUBEBS. TDP's planned head teacher training activities could increase their awareness of these rights and responsibilities and equip them with the skills necessary to navigate such a constraining system.

A large number of TDP's trainers are LGEA staff. Given that many of the constraints on effective SLM are caused by dynamics at the system level TDP may wish to consider how these trainers could foster an honest dialogue between influential community members, SUBEBs, LGEAs and schools to create a common understanding of the drivers of school performance.

This evaluation is being carried out by EDOREN (Education Data, Research and Evaluation in Nigeria) under its Teacher Development Programme (TDP) evaluation and support activities (Workstream 2) on behalf of the Department for International Development (DFID). This briefing note has been written by Zara Durrani, and is based on a baseline report by Sourovi De, Gunilla Pettersson, Robert Morris and Stuart Cameron.

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