

Implementation of the ten-year strategy, i.e the Programme Décennal de Développement du Secteur de l'Éducation (PDDE), formulated by the Government of Niger at the beginning of the last decade and covering 2003-2013, has resulted in increased enrollment at all levels of education across the country. Over the last decade, the gross enrollment rate for primary education doubled in Niger going from 36% in 2001 to 76% in 2011. This significant growth has been supported by increased priority to primary education in the budget, extensive construction and rehabilitation of schools, and recruitment of teachers. However, despite the massive enhancement, enrollment rates are still quite low compared to other countries in the region. The Service Delivery Indicators (SDI) survey was conducted in Niger between October and December 2015. The fieldwork involved collecting information from 256 primary schools, 1,748 teachers, and 3,661 grade four and five pupils. The results provide a representative snapshot of primary education service delivery in Niger.

Highlights

Input availability

- Approximately one in five schools from the Niger SDI survey had the minimum infrastructure, primarily because only one school in four had functional, private, and accessible latrines. Similarly, one quarter of schools had the minimum teaching equipment, primarily because pupils lacked exercise books.
- The observed pupil-teacher ratio in grade 4 averaged 38 pupils per teacher, slightly below than the 40 pupils that is the norm in Niger.

Teacher effort

- During an unannounced visit, 17 percent of teachers were not at their school during and a further 10 percent were at their school, but not in the classroom. However, once in the classroom, teachers taught the majority of the time, meaning that pupils receive 77 percent of the scheduled teaching time. This is the highest rate among countries that have done an SDI.

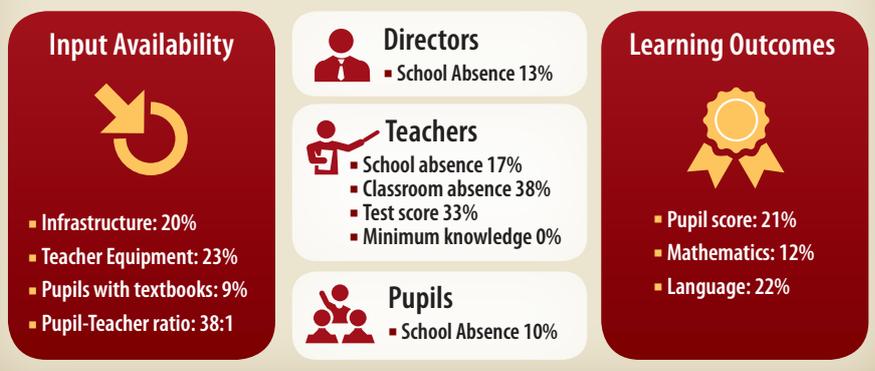
Teacher ability

- Pupils cannot learn more from their teachers than what the teachers know. On average, primary school teachers in Niger who taught fourth grade in 2015/16 or third grade the previous school year mastered 41% of an evaluation set at the lower primary level. Zero percent of fourth grade teachers (0.35 percent of all primary school teachers) scored 80% or higher on the evaluation.
- Teachers in private and rural public schools did better than their public or urban public peers.

Pupil performance and absence

- Fourth-grade pupils in Niger achieved an average score of 23 percent on the assessment, which means that children mastered, on average, one-fifth of the fourth grade curriculum at the start of the year.

Service Delivery Indicators in the Education Results Chain



- While this may seem encouraging, the details are sobering; one child in nine (11 percent) could read a simple sentence, less than one child in two could do single-digit addition, two children out of five could do single-digit subtraction.
- Private school students did between twice and seven times as well as public school students in language and mathematics until division. Likewise, urban public school students did one-third to two-thirds better than rural public school students through single-digit multiplication.
- Even rising fifth graders did not perform well on the evaluation. Three children in five could recognize a letter (61 percent), one in five (24 percent) could read a simple sentence, three in five could do single-digit addition (57 percent), and one out of two could do single-digit subtraction (50 percent). Regional disparities followed similar patterns as for fourth grade with students in Niamey outperforming other regions, sometimes quite significantly.
- Pupils in rural areas were at a disadvantage compared to their urban peers in all aspects other than class size. Combined with other factors, this translated into significantly lower scores on the learning evaluation. Girls did worse than boys in the tests and the effects were cumulative: rural boys did worse than urban ones and rural girls did the worst.

Supervision and management

- Supervision in private schools was more likely to use templates and to observe teaching. However, public school supervision

was more likely to meet with the community, to check inventory, and to review the latest school management committee annual report.

- Almost all primary schools (97 percent) had a school management committee although not all were functional. School management committees were 50 percent less likely in private than in public schools, but 1.5 times as likely to have an action plan and 1.7 times as likely to have evaluated the action plan in private relative to public schools. Among public schools, urban ones were more likely to have a school management committee, an action plan, and an annual report than those in rural areas.
- Directors' evaluation of teacher performance was more likely to include direct teacher observation, teacher absence rates, and student learning in private than in public schools. Within public schools, urban school directors paid more attention to these aspects than rural school directors

SDI Results

Availability of Key Inputs

Roughly one student in five has access to a school with minimal infrastructure (contrast to read the board and access to a clean, private, and functional toilet). Minimum school infrastructure was four times more likely in private than in public schools. Despite this, only four in five private schools had minimum infrastructure due to lack of private and functional latrines. However, private school pupils were two to three times more likely to have a toilet that was private or functional. They were also more likely to be able to read the board, whether measured by a lux meter or by the interviewer's perception.

Urban schools were 17 percent more likely to have minimum infrastructure than rural ones, primarily because they had more toilets that were available (40 percent) or toilets that were clean (36 percent). Even considering those factors, urban public schools were still 2.9 times less likely to meet the minimum infrastructure indicator's requirements than private schools.

One in four primary school children in Niger is in a classroom with pencils, exercise books, and a board with writing materials. Private school pupils were 3.1 times more likely to be in a school with all necessary elements, because they were twice as likely to have an exercise book. Rural public classrooms were 28 percent more likely to have blackboards readable from the back of the class than urban public classrooms.

Less than one in eleven pupils had the textbook for the class observed (8.9 percent). Private school students fared better than public school students for both subjects, but even they had a textbook only one-quarter of the time. Textbooks for French were more available those for math in private and public irrespective of location. Despite this, on average there were at least three children per book, even in the best case (French in private schools).

Teacher Effort: What providers do?

In order for pupils to learn, a teacher has to be present at school, in the classroom and teaching. The SDI results show that out of 100 teachers approximately 64 percent of teachers were in class teaching on a given day. Roughly one teacher in six was absent from school and a further 10 percent were at school, but not in the classroom. Private school teachers were nearly 90 percent less likely to be absent from school and 57 percent less likely to be absent from class than their public sector counterparts. Niamey had the highest levels of absence, but only Agadez and Tahoua showed differences for absent from class and absent from class, at school.

When the head was absent, rural public school teachers were 6.7 times as likely to be absent, which is similar to urban public school teachers (6.0 times). However, 54 percent of schools had all teachers present during the unannounced visit.

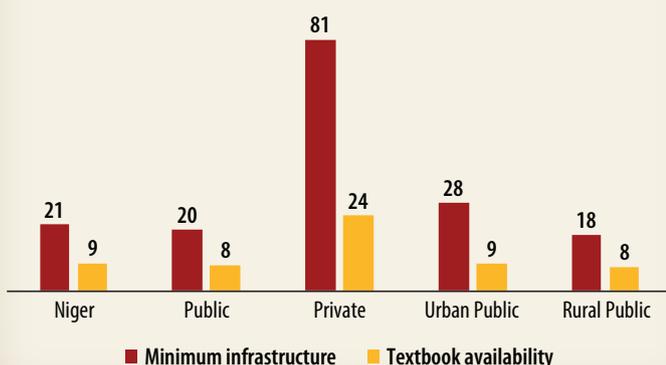
Teachers taught approximately three-quarters of the scheduled time. Private school teachers taught 95 percent of the time they were in class, which was fully 29 percent more than their public school counterparts. Accounting for teacher absence and use of classroom time, private school students received, on average, 26 percent more instruction per day than public school students, which represented an additional one hour and four minutes per day. Accumulated over an entire school year, that is an important difference.

Teacher ability: What providers know

Satisfactory mastery of primary school content knowledge among teachers in Niger was among the lowest recorded across all SDI countries as zero percent of teachers achieved a score of 80 percent or higher in the combined French and mathematics sections. Private school teachers did not achieve higher rates of minimum knowledge than public school teachers.

Teachers in Niger successfully completed roughly one-half of the French content on the evaluation, on an evaluation that was set at the primary level. Teachers

FIGURE 1. Availability of infrastructure and textbooks (percent)



correctly answered roughly one-quarter of mathematics evaluation and one-third of the evaluation set at the primary level. Mastery of pedagogy was limited; the average score was 21 percent (one point in five). Among public school teachers, those in urban areas performed better than those in rural areas in grammar, composition, and basic mathematics. Private school teachers outperformed public school teachers in grammar, sentence completion, composition, basic and advanced mathematics. In the pedagogy section, private-school teachers performed 25 percent better than those in public school, particularly in more advanced pedagogical skills and class preparation.

A broader look at teacher knowledge

Beyond just those teachers who had taught fourth grade the year of the survey and third grade the year before, the survey tested as many teachers and directors as possible, which gives another perspective on teaching. Overall, 0.4 percent of primary school teachers in Niger reach the proficiency standard, with 0.4 percent in public and 0.3 percent in private schools.

Using the large sample, the results show that teachers correctly answered approximately two in five (43 percent) questions in French, one in seven questions (14 percent) in math, one in four (28 percent) in primary-level math, and one in five (21 percent) in basic pedagogy. These are generally worse than the SDI sample of teachers. However, this is consistent with the finding that primary school teachers responsible for lower grades perform worse than those who teach higher grades. This effect is more pronounced in mathematics and pedagogy than in French, where teachers generally performed better. The gaps between public and private and rural and urban increased when considering all teachers.

Civil servants perform the best, followed by private school teachers, and contractual teachers (the majority of teachers), who perform 21 percent worse than civil servants. This gap is most pronounced in mathematics, where contractual teachers score nearly one-third lower than civil servants. Civil servant also performed best in the pedagogical evaluations, doing nearly twice as well as contractual teachers and one-fifth better than private school teachers. Comparing across positions, directors perform the best, followed by directors who still have teaching responsibilities, then teachers, and finally substitute teachers.

Teachers with more education, whether academic or professional, generally perform better. However, for a given teaching diploma, those who did not attend a teachers' training college sometimes outperform those who did attend. The demographic pressure of students since 2000 has created a pressure to hire more teachers and the average level of mastery of these new hires is decreasing over time.

Pupil performance

Rising fourth-grade pupils in Niger scored 22.6 percent on the evaluation. While this may seem encouraging, the details are sobering; one child in nine (11.2 percent)

FIGURE 2. Teacher activities during an unannounced visit (percent)

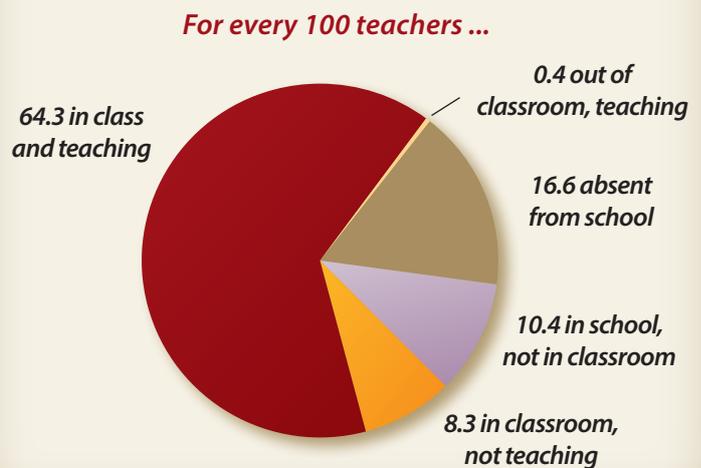
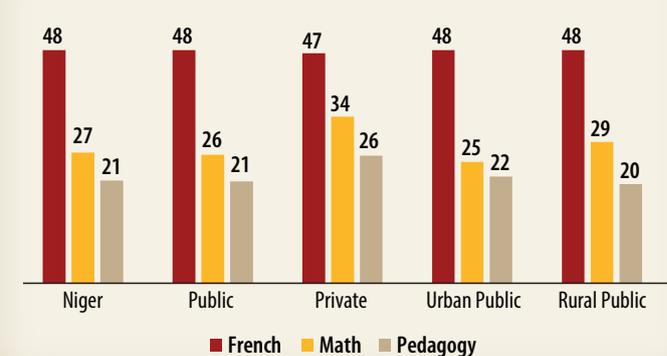


FIGURE 3. Teacher evaluation scores (percent)



could read a simple sentence, less than one child in two could do single-digit addition, two children out of five could do single-digit subtraction. Generally speaking, private school students do between twice and seven times as well as public school students in language and mathematics until division. Likewise, urban public school students do one-third to two-thirds better than rural public school students through single-digit multiplication. Students in Niamey generally perform far better than in other regions in both French and mathematics.

Even rising fifth graders do not perform well on the evaluation. Three children in five could recognize a letter (61.1 percent), one in five (24.1 percent) could read a simple sentence, three in five could do single-digit addition (57.1 percent), and one out of two could do single-digit subtraction (49.8 percent). According to the results, an extra grade of instruction reduced the language skills gap, but widened the mathematics skill gap.

Rural pupils, irrespective of gender, perform significantly worse than urban boys and even urban girls perform somewhat worse than their male classmates. However, the gender gap is smaller in rural than in urban. When comparing public with private, the overall gaps are

FIGURE 4. Pupil performance: average combined, French, and mathematics scores (percent)

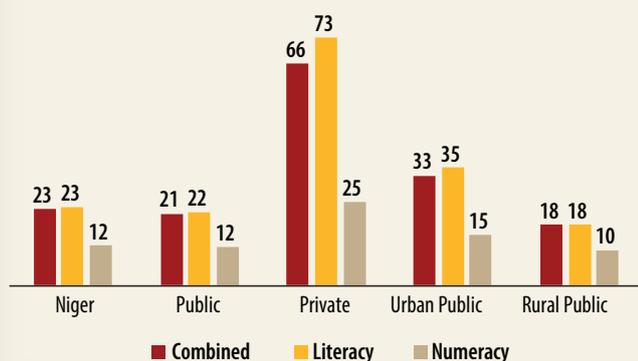
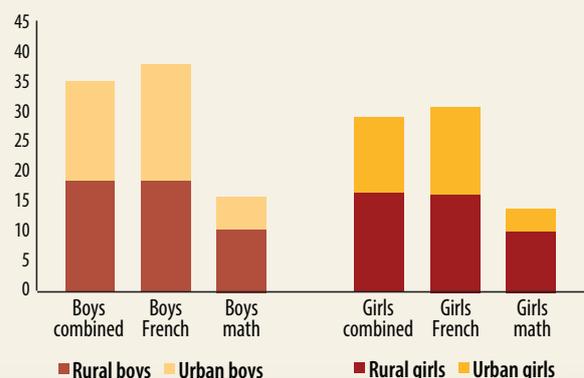


FIGURE 5. Public school pupil performance: average combined, French, and mathematics scores (percent)



more pronounced, with private school children scoring nearly three times more on any given learning evaluation module.

Clearly, there are differences between public and private school pupils. However, there are also differences within public school pupils. For both genders, urban pupils perform between one-quarter (math) to one-half (French and combined) better than their rural fourth-grade counterparts. This represents an important challenge for the educational system in a country where the student population was roughly 70 percent rural. Figure 4 also shows that rural boys and girls perform at similar levels and that there is a difference in performance between French and mathematics. The average student in Niger scores 23% in French; the average public school student scores 23% and the average private school student scores 66%.

How are schools managed and supervised?

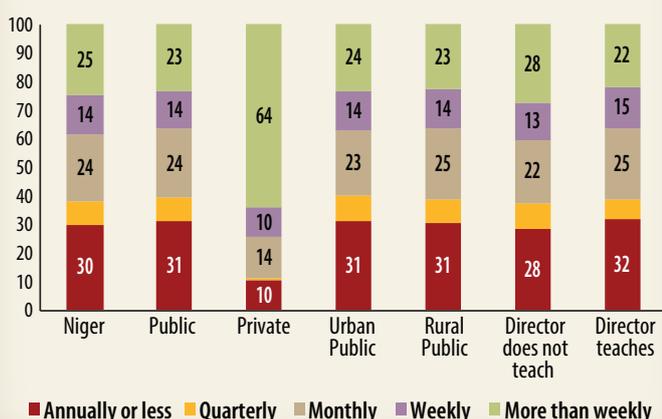
Nearly one-third of teachers in Niger report being supervised in class annually or never with public school teachers (31 percent) are three times as likely than

private school teachers to be in this situation. At the other extreme, 64 percent of private school teachers said they were supervised multiple times per week compared to 23 percent in public schools. Whether or not a director has teaching responsibilities did not appear to influence the supervision frequencies.

School directors reported that some of their most important challenges are infrastructure and teaching materials. Rural public school directors also highlighted equipment gaps.

Nationally, one in three directors reported holding individual performance evaluation meetings with teachers and one in five directors reported that supervision missions had such meetings. Both for meetings organized by the director and those organized by the external supervision, private schools emphasized more direct teacher observation, teacher absence rate, parent satisfaction, student learning, examination performance, and teacher willingness to improve. Among public schools, urban directors paid more attention to student performance, but rural external supervisions paid more attention to parent satisfaction than urban ones. Private school directors (75 percent) were 1.8 times as likely as their public counterparts to have received management training.

FIGURE 6. Frequency of teacher supervision by the school director (teacher-reported; percent)



Based upon simulations with directors, it appears that those in private school had more ability to take action and greater resources than their public counterparts. Rural public directors faced the greatest challenges, but were firm when dealing with absence, which is reflected in lower levels of absence among rural public school teachers than urban public school ones.

Private schools were half as likely to have a school management committee than public ones, but 1.5 times as likely to have an action plan and 1.7 times as likely to have an annual evaluation. The presence of a school management committee that is at least somewhat active appears to have a negative relationship with teacher absences.

How does Niger compare to other SDI countries?

The education system in Niger comes off badly when compared to other countries that have also done an SDI evaluation. Schools in Niger have the second-lowest textbook availability, the lowest availability of infrastructure and teaching equipment, and the lowest-performing teachers. One bright spot is that they have dedicated teachers; Niger has the best teaching

time per day, driven by the second-lowest classroom absence rate (behind Nigeria) and a school absence rate that ranks them among the better-performing countries (fourth). Rural public pupils generally study in the most difficult environments, although they benefit from smaller class sizes and a higher proportion of teachers who have minimum knowledge.

What does this mean for Niger?

The education system in Niger faces a number of challenges. A high population growth rate, low initial enrollment rates, and lack of retention are among the factors preventing Niger from achieving universal primary education coverage and completion. In particular, Niger faces challenges to increase access and completion among vulnerable groups including girls in rural areas, children in nomadic areas, and children with disabilities. Other key related issues are the poor quality of learning and management of the education

system. In addition to these structural issues, the country's vulnerability to frequent weather shocks has impacts on the education sector.

The challenge for Niger will be to increase access with quality in the face of these difficulties. Among possible responses are increasing textbook availability, improving directors' focus on key performance elements in teacher evaluation, improving teacher content and pedagogical levels, and further strengthening the role of school management committees.

At-a-Glance

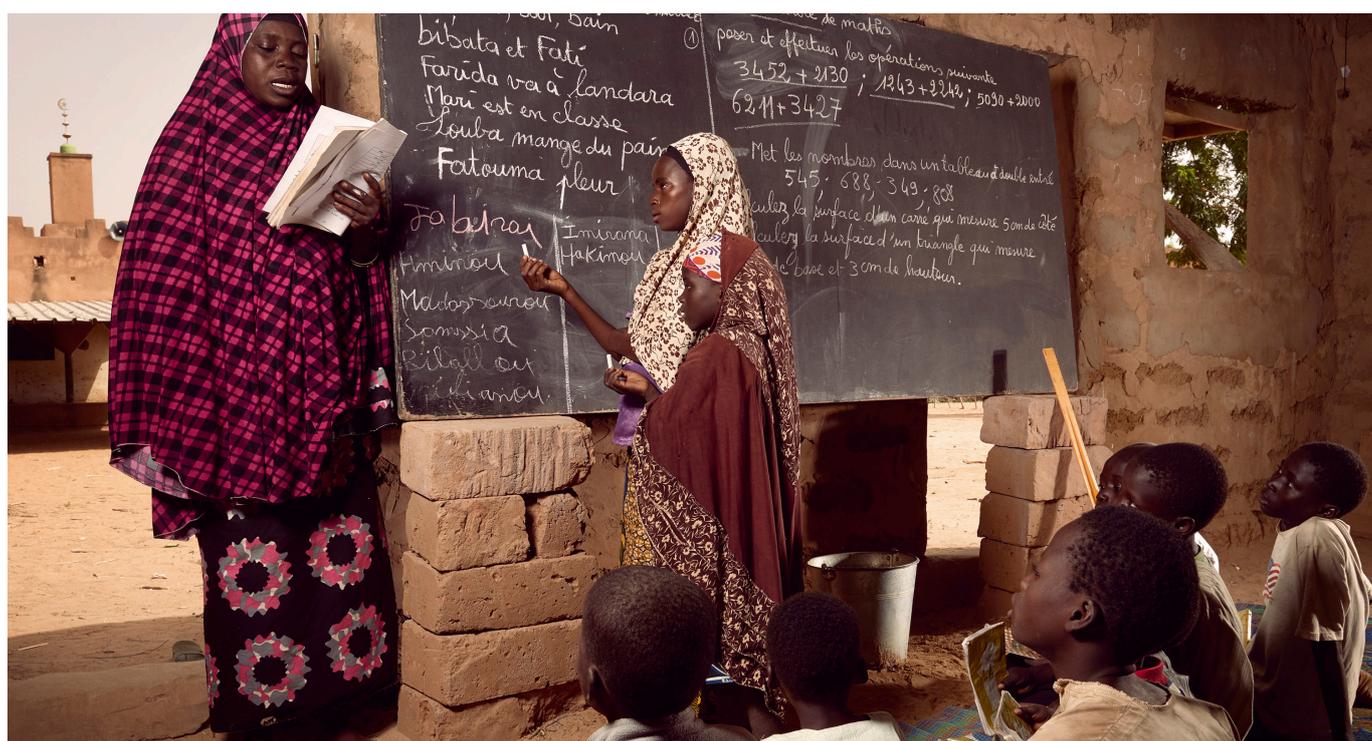
TABLE 1: Comparing SDI Education Results by Geographic Area Across Niger

Indicators	NIGER	Private	Public	Urban Public	Rural Public
PUPIL LEARNING					
Average Test Score (French and Mathematics) %	21.3	65.5	21.3	32.6	18
French	21.7	73.1	21.7	34.8	17.9
Mathematics	11.5	24.7	11.5	15	10.4
WHAT PROVIDERS KNOW (ABILITY)					
Teachers' minimum knowledge (French and mathematics)	0.0	0.0	0.0	0.0	0.0
Average test score (French, mathematics, and pedagogy)	33.3	37.5	33.3	32.6	34.5
WHAT PROVIDERS DO (EFFORT)					
School absence rate (% of teachers)	16.6	1.9	17.2	17.3	17.1
Classroom absence rate (% of teachers)	27.0	11.9	27.6	31.2	25.7
Classroom teaching time (Time on task)	4h 23m	5h 32m	4h 13m	4h 6m	4h 15m
<i>Scheduled teaching time</i>	<i>5h 40min</i>	<i>5h 17min</i>	<i>5h 41min</i>	<i>5h 41min</i>	<i>5h 42min</i>
WHAT PROVIDERS HAVE TO WORK WITH (INPUT AVAILABILITY)					
Observed pupil–teacher ratio	38.1	46.9	38.1	48.2	36
Share of pupils with textbooks	8.7	33.6	8.7	9.5	8.5
Minimum equipment availability	23.4	72.4	23.4	38.9	20.1
Minimum infrastructure availability	19.7	80.7	19.7	28.3	17.9

TABLE 2: Comparison of SDI Education Results Across Countries (public schools only)

	NIGER 2015	Madagascar 2016	Tanzania 2014	Kenya 2013	Senegal 2010	Tanzania 2010	Uganda 2013	Togo 2013	Nigeria** 2013	Mozambique* 2014
TEACHER ABILITY										
Minimum Knowledge	0.0	0.1	21.5	40.4	n/c	n/c	19.5	1.6	3.7	0.3
Test score (all areas)	33.3	33.2	48.3	57.1	n/c	n/c	45.3	35.6	32.9	26.9
School absence rate	16.6	30.6	14.4	14.1	18.0	23.0	26.0	20.5	13.7	44.8
Classroom absence rate	27.0	37.8	46.7	42.1	29.0	53.0	52.8	35.8	19.1	56.2
Scheduled teaching time	5h 40m	5h 12m	5h 54m	5h 37m	4h 36m	5h 12m	7h 18m	5h 29m	4h 53m	4h 17m
Time spent teaching per day	4h 23m	3h 09m	2h 46m	2h 49m	3h 26m	2h 04m	3h 18m	3h 29m	3h 26m	1h 41m
AVAILABILITY OF INPUTS										
Observed pupil-teacher ratio	38.1	17.6	43.5	35.2	27.2	52.0	47.9	29.7	21.6	21.4
Share of pupils with textbooks	8.7	10.3	25.3	48.0	18.0	19.7	5.0	68.5	38.2	68.1
Minimum equipment (% clinical cases)	12.0	65	60.5	78.8	n/c	n/c	80.6	26.4	54.8	76.8
Minimum infrastructure	19.7	20.2	40.4	59.5	n/c	n/c	53.7	22.3	18.5	29.1
Test Score language, and mathematics; %	21.3	50.6	40.1+*	72.0	n/c	n/c	48.6	45.7	32.2	20.8
Language test score	21.7	44.5	36.5+*	75.4	n/c	n/c	47.1	45.5	31.4	18.7
Mathematics test score	11.5	56.8	58.2	59.0	n/c	n/c	43.4	44.6	31.9	25.1

Note: (*) Because of the very low number of private schools, only public schools are included. (**) Values for Nigeria are the weighted average of the four states surveyed, namely Anambra, Bauchi, Ekiti, and Niger.



Annex. Definition of the Education Service Delivery Indicators

School absence rate

Share of a maximum of ten randomly selected teachers absent from school during an unannounced visit

Classroom absence rate

Share of teachers who are present in the classroom during scheduled teaching hours as observed during an unannounced visit. Teachers may be found teaching outside, and these are marked as present for the purposes of the indicator.

Time spent teaching per day (also known as Time on Task)

Amount of time a teacher spends teaching during a school day. This indicator combines data from the Staff Roster Module (used to measure absence rate), the Classroom Observation Module, and reported teaching hours. While inside the classroom distinction is made between teaching and non-teaching activities. Teaching is defined very broadly, including actively interacting with pupils, correcting or grading pupil's work, asking questions, testing, using the blackboard or having pupils working on a specific task, drilling or memorization.

Minimum knowledge among teachers

This indicator measures teacher's knowledge and is based on mathematics and language tests covering the primary curriculum administered to all mathematics or language teachers that taught grade three in the previous year or grade four in the year the survey was conducted. It is calculated as the percentage of teachers who score more than 80 percent on the language and mathematics portion of the test. Test score: This indicator measures teacher's knowledge and it is calculated as the overall score of a mathematics, language, and pedagogy tests covering the primary curriculum administered at the school level to all mathematics and language teachers that taught grade three in the previous year or grade four in the year the survey was conducted.

Infrastructure Availability

Unweighted average of the proportion of schools with the following available: functioning electricity and sanitation. Specifically: (i) functioning toilets operationalized as being clean, private, and accessible; and (ii) sufficient light to read the blackboard from the back of the classroom.

Teaching Equipment Availability

Unweighted average of the proportion of schools with the following available: functioning blackboard with chalk, pencils, and notebooks. Specifically: (i) functioning blackboard and chalk, (ii) the share of pupils with pens is equal to or above 90 percent, and (iii) the share of pupils with notebooks in that classroom is equal to or above 90 percent.

Share of pupils with textbooks

Number of mathematics and language books used in a randomly selected grade four classroom divided by the number of pupils present in the classroom

Pupil-teacher Ratio

Average number of grade four pupils per grade four teacher.
The indicator of teachers' availability is measured as the number of pupils per teacher in one randomly selected grade four class at the school based on the classroom observation module.

About the SDI surveys

The SDI survey was conducted between October and December 2015. The fieldwork involved collecting information from 256 primary schools, 1,748 teachers, and 3,661 grade four and five pupils. The results provide a representative snapshot of primary service delivery in Niger. The survey provides information on three dimensions of service delivery: measures of (i) provider's effort; (ii) provider's knowledge and ability; and (iii) the availability of key inputs, such as chalk, pencils, notebooks, or a blackboard, basic equipment and infrastructure (such as availability of toilet, clean water, etc.). SDI surveys are rapidly expanding and have been implemented in nine countries: Kenya, Madagascar, Mozambique, Nigeria, Senegal, Tanzania, Togo, and Uganda. Niger is the ninth country where SDI surveys have been implemented. This allows for comparison across countries and benchmarking of country performance.

The Service Delivery Indicators (SDI) Program

The SDI initiative is a partnership of the World Bank, the African Economic Research Consortium (AERC), and the African Development Bank to develop and institutionalize the collection of a set of indicators that would gauge the quality of service delivery within and across countries and over time. The ultimate goal is to sharply increase accountability for service delivery across Africa, by offering important advocacy tools for citizens, governments, and donors alike; to work toward the end goal of achieving rapid improvements in the responsiveness and effectiveness of service delivery.

More information on the SDI survey instruments and data, and more generally on the SDI initiative can be found at: www.SDIndicators.org and www.worldbank.org/SDI, or by contacting SDI@worldbank.org.

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