

Executive summary

PASEC2019  
QUALITY OF EDUCATION SYSTEMS  
IN FRENCH-SPEAKING  
SUB-SAHARAN AFRICA

TEACHING/LEARNING PERFORMANCE AND  
ENVIRONMENT IN PRIMARY EDUCATION



Conference of the Ministers of Education of French-Speaking Countries

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## Foreword

In 2020, the Conference of the Ministers of Education of French-Speaking Countries (CONFEMEN) celebrates its sixtieth anniversary. During these sixty years, CONFEMEN has placed improving the quality of education at the heart of its actions and its deliberations at meetings of its bodies (the ministerial conference, the working group of national correspondents, the administrative and financial committee) and at ad hoc events (panel discussions, thematic seminars, meetings of policy-makers, etc.). This has also been demonstrated through its use of the data and analyses that have been produced concerning the performance of education systems: since the setting up of CONFEMEN's Programme for the Analysis of Education Systems (PASEC) in 1991, a number of French-speaking countries in sub-Saharan Africa, the Indian Ocean, the Middle East and South-East Asia have taken advantage of the assessment of learning outcomes to define the direction of their education policies.

Following an initial period (1991–2012) during which national assessments, thematic assessments and cohort monitoring were organised in different countries, PASEC has, since 2012, focused its energies on implementing five-yearly cycles of comparative international assessments of learning outcomes at the start and end of primary education, using a methodology consistent with international standards. The aim of these assessments is to provide participating countries with robust comparable data on learning outcomes and the learning environment in order to support the management of their education systems.

With this goal in mind, in 2014 PASEC conducted its first standardised assessment in which ten sub-Saharan African countries took part: Benin, Burkina Faso, Burundi, Cameroon, Chad, Congo, Côte d'Ivoire, Niger, Senegal and Togo. The international report produced on this occasion highlighted the fact that most students had not acquired the necessary skills in language of instruction and mathematics. Ten contextualised national reports presenting the results of the assessment at country level were then prepared and published, with a number of proposals concerning lines of reflection and measures to steer national education policies. In addition, the data from this first assessment were used as an input for the indicators of SDG4 and for several international reports on education; they were also used to perform secondary analyses in research papers produced by partners, academics and others.

The present assessment, PASEC2019, is PASEC's second cycle of international assessments. The first point to note about this assessment is that the number of countries involved has increased to 14. To the ten countries assessed in 2014, four others have been added: Gabon, Guinea, Madagascar and the Democratic Republic of Congo. Another new departure in PASEC2019 is that it includes a survey of primary school teachers' subject knowledge and teaching skills in language of instruction and mathematics. The findings from this survey are presented in the hope that they will contribute to the development of suitable education and in-service training programmes for primary school teachers, ultimately with a view to improving the quality of learning outcomes.

For the ten countries that participated in PASEC2014, this report also presents an analysis of the trends observed between 2014 and 2019. For all PASEC2019 countries, comparative analyses of the data on learning outcomes in language of instruction and mathematics with contextual data on the learning environment provide information relevant to policy-making concerning quality of education. In the same way as for PASEC2014, this diagnosis is offered together with lines of reflection to guide the development of education policies or reforms, complementing the analyses and deliberations of CONFEMEN within the Observatory for the Quality of Education (OQE). All these analyses contribute to the overall improvement of educational provision and quality of learning.

Over the years, PASEC assessments have become a benchmark in the field of assessment of learning outcomes in French-speaking sub-Saharan Africa.

These assessments reflect the emphasis placed by the international community, through Sustainable Development Goal 4 (SDG 4), on quality of learning and equity. In order to measure progress and ensure proper monitoring of SDG 4, countries need precise data and indicators. PASEC's international assessments are therefore essential in this context.

It should be noted that the conduct of this important assessment was made possible by the technical and financial involvement of the governments of the 14 participating countries and the much appreciated financial support of two technical and financial partners: the French Development Agency (AFD) and the Swiss Agency for Development and Cooperation (DDC). The members of PASEC's steering committee and scientific committee were also key contributors to the success of this excellent undertaking. The outstanding work carried out by PASEC's coordinator and advisers and by all members of CONFEMEN's Permanent Technical Secretariat (STP) was another vital factor in the project's success.

We wish to thank everyone for their work on behalf of the education systems of French-speaking sub-Saharan African countries.

**Professor Abdel Rahamane BABA-MOUSSA**  
**Secretary-General of CONFEMEN**



## Assessment methodology

PASEC2019 was the second collective assessment carried out by CONFEMEN's Programme for the Analysis of Education Systems. It involved collecting data at randomly selected schools from students at the **start and end of primary education** through tests that also included context questionnaires. Data were also collected from teachers and school principals through context questionnaires relating to the management of the schools. In addition to the categories of data collected in PASEC's first collective assessment, PASEC2014, the PASEC2019 survey included data collected from teachers to measure their knowledge of subject content in reading comprehension and mathematics and teaching skills.

**The early primary tests were taken individually by students: 16 students were selected at random from a class and the test was overseen by specially recruited administrators who had received training in the survey's procedures. The test consisted of two parts** – language of instruction, lasting about 30 minutes, and mathematics – together with a questionnaire on students' characteristics, family environment and available educational resources.

**At the end of primary education**, 25 students were selected at random from a class and monitored by a specially recruited and trained administrator. The tests were presented in the form of multiple choice questions (MCQs) in a paper-and-pencil format, and were taken collectively and individually over three days. **Each test booklet contained a two-part test** in reading comprehension and mathematics and a questionnaire at the end on students' characteristics, family environment, educational resources and well-being at school.

For the **teachers**, the survey covered all teachers in the sampled schools. Each teacher was given a booklet consisting of five parts: (i) Reading comprehension, (ii) Teaching reading comprehension, (iii) Mathematics, (iv) Teaching mathematics, (v) Context questionnaire. The context questionnaire covered teachers' individual characteristics, professional experience and status, class characteristics, own educational background, collaboration with colleagues and working conditions.

For each school in the sample, a questionnaire was given to the **principal** to obtain information on: his/her individual characteristics, characteristics of the school, points covered in the school inspection, relations with parents and the local community, educational and managerial aspects, and school life.

All these data were then entered into the database, cleansed and processed in order to produce useful education policy indicators. On the basis of item response theory (IRT) analysis, scores were calculated for students and teachers, proficiency scales were defined and various indices were calculated in areas such as student socio-economic status, educational resources, classroom equipment and school infrastructure.

## I. Knowledge and skills of primary students

In addition to the information given by the average scores, the description of student performance levels makes it possible to understand the tasks that students are capable of completing correctly or carrying out at a given level of the proficiency scale. Thus, for each subject (reading and mathematics) various proficiency levels have been defined. These levels are defined in such a way that a student performing at a given level will also be able to complete tasks at lower levels correctly.

In other words, the tasks involved at lower levels of the scale for a subject are less complex than those at the higher levels.



Tables 1 and 2 show the PASEC2019 proficiency scales for language of instruction and mathematics at the start of primary education.

*Table 1: PASEC2019 language of instruction proficiency scale - Early primary*

Level	Score	Percentage of students at that level	Description of skills
<b>Level 4</b>	> 610 points	23.5%	<b>Intermediate reader: moving towards independent reading and understanding sentences and texts</b> Students at this level have achieved a level in the decoding of written text and in listening comprehension that enables them to understand explicit information in short sentences and texts. They are able to combine their decoding skills and their command of spoken language to piece together the literal meaning of a short text.
<b>Level 3</b>	Between 540 and 610 points	21.0%	<b>Learner reader: moving towards the perfecting of decoding skills, listening skills and understanding of written words</b> Students at this level have perfected their listening comprehension and decoding skills, enabling them to focus on understanding words. In listening comprehension, they are able to understand explicit information in a short text which uses familiar vocabulary. They are gradually developing links between spoken and written language and thus improving their decoding skills and expanding their vocabulary. In reading comprehension, students are able to identify the meaning of isolated words.
<b>Minimum proficiency level</b>			
<b>Level 2</b>	Between 540 and 610 points	21.0%	<b>Learner reader: moving towards the perfecting of decoding skills, listening skills and understanding of written words</b> Students at this level have perfected their listening comprehension and decoding skills, enabling them to focus on understanding words. In listening comprehension, they are able to understand explicit information in a short text which uses familiar vocabulary. They are gradually developing links between spoken and written language and thus improving their decoding skills and expanding their vocabulary. In reading comprehension, students are able to identify the meaning of isolated words.
<b>Level 1</b>	Between 399 and 469 points	18.3%	<b>Emergent reader: towards developing decoding skills and strengthening listening comprehension skills</b> Students are able to understand very short-spoken messages that use isolated words and refer to familiar objects. They have great difficulty with decoding the written word and with graphophonological identification (letters, syllables, graphemes and phonemes).
<b>Below Level 1</b>	< 399 points	8.7%	Students below Level 1 do not sufficiently demonstrate the skills measured by this test in the language of instruction. These students struggle with the knowledge and skills of Level 1.



Table 2 : PASEC2019 mathematics proficiency scale - Early primary

Level	Score <sup>1</sup>	Percentage of students at that level	Description of skills
Level 3	> 577 points	37.5%	Students are familiar with the verbal number sequence (they can count up to 60 in two minutes) and are able to read numbers, compare numbers, complete number series and perform operations (addition and subtraction) on numbers greater than 50. They can use reasoning in basic problems involving numbers less than 20.
Level 2	Between 489 and 577 points	33.7%	Students can read numbers, compare numbers, complete logical series and perform operations (addition and subtraction) on numbers less than 50. They can work with the concepts of location in space (e.g. in front of, on top of, etc.). They are beginning to develop reasoning skills in basic problems involving numbers less than 20. They can also identify most simple geometric shapes.
<b>Minimum proficiency level</b>			
Level 1	Between 400 and 489 points	21.5%	Students are gradually developing their knowledge of mathematical language: they are beginning to read the first numbers (less than 10) and have an initial understanding of quantity (counting, comparison) with numbers less than 20. They show awareness of the relative size of objects and are beginning to identify the first simple geometric shapes.
Below Level 1	< 400 points	7.3%	Students at this level do not sufficiently demonstrate the skills measured by this test in mathematics. These students struggle with the knowledge and skills of Level 1.

Tables 3 and 4 show the PASEC2019 proficiency scales for reading and mathematics at the end of primary education.

1. For each level of the scale, the scores for a level are presented as an interval. For example, for the level called "under level 1", students at this level have a score of less than 400 points.

Table 3: PASEC2019 reading proficiency scale - Late primary

Level	Score	Percentage of students at that level	Description of skills
Level 4	> 595 points	26.1%	Students can process narrative and informative texts and documents at a general level. They are able to combine and interpret multiple implicit ideas in such material, drawing on their own experience and knowledge. When reading literary texts, students are able to identify the author's intention and determine the implicit meaning of a story. When reading informative texts and documents, they are able to link pieces of information and compare data in order to make use of them.
Level 3	Between 518 and 595 points	21.8%	Students are able to combine two explicit pieces of information in a document or to make simple inferences in a narrative or informative text. They can extract implicit information from written material by giving meaning to implicit connectors, anaphoras and referents. Students are able to locate explicit information in long texts and documents with discontinuous text.
<b>Minimum proficiency level</b>			
Level 2	Between 441 and 518 points	25.1%	Students have improved their decoding skills so that they can understand isolated words derived from their daily life and isolated sentences. They are also able to locate explicit information in short and medium texts by taking cues from the text and the questions. Students are able to paraphrase explicit information from a text.
Level 1	Between 365 and 441 points	21.1%	Students have developed decoding skills and are able to use them to understand isolated words derived from their daily life or very short isolated sentences, but have difficulty understanding the meaning of short and simple texts.
Below Level 1	< 365 points	5.9%	Students at this level do not sufficiently demonstrate the skills in the language of instruction measured by this test. These students struggle with the knowledge and skills of Level 1.

Table 4: PASEC2019 mathematics proficiency scale - Late primary

Level	Scores	Percentage of students at that level	Description of skills
Level 3	> 609 points	12.5 %	Students are able to solve problems in which a situation, usually presented in the form of a short text of 2 to 3 lines, needs to be analysed in order to identify the procedure(s) to be used. In the area of numbers and operations, they can solve direct proportionality problems and problems involving fractions or decimals. Their understanding of fractions is still growing (they understand the comparison of fractions and the relationship between fractions and decimals). In the field of quantities and measures, they can solve various problems involving calculations of area or perimeter, presented without visuals and sometimes requiring two stages of reasoning (e.g. finding the area of a square once its perimeter is known, or carrying out conversions involving data provided in ares or hectares). They can also perform calculations and conversions involving hours, minutes or seconds.
Level 2	Between 521 and 609 points	25.6 %	Students are able to answer short questions using the three assessed processes: knowledge, application and problem-solving. While most questions require factual knowledge or a specific procedure, some require analysis of the situation to determine the appropriate approach. In the area of numbers and operations, students perform operations with decimals; they have an increasing understanding of fractions (they can identify them in less typical situations and have started to be able to use them to perform simple operations) and are familiar with the concept of percentage. They have also begun to solve simple problems, usually involving a single operation. In the area of quantities and measures, students are able to read the time and can convert units of measurement with or without a conversion table. They are also able to solve initial simple problems involving calculations of perimeters and area, usually accompanied by a visual. In the field of solids and figures, they are able to use their basic knowledge to solve problems that require situation analysis (e.g. locating $\times$ triangles in a set of figures or identifying parallel lines in a bundle of lines).
<b>Minimum proficiency level</b>			
Level 1	Between 433 and 521 points	35.7 %	Students can answer very short questions that require factual knowledge or a specific procedure. In the area of numbers and operations, they are able to perform the four basic operations with whole numbers, including those requiring a written calculation with regrouping. They have also begun to develop an initial understanding of fractions and can identify them when they are presented in a conventional way (e.g. a pie divided into $x$ parts). In the field of quantities and measures, they can identify the usual conventional units (e.g. m, $m^2$ , $m^3$ and kg). In the field of solids and figures, they have some basic knowledge of various geometrical objects (e.g. identifying a disc or a cylinder, locating a right angle or parallel lines).
Below Level 1	< 433 points	26.1 %	Students at this level do not sufficiently demonstrate the skills measured by this test. These students struggle with the knowledge and skills of Level 1.

Apart from in mathematics at the start of their schooling, most students lacked the skills expected in primary education. The situation was particularly acute in some countries.

Most of the PASEC2019 countries had significant proportions of students performing at an insufficient level to continue their primary education properly. In some countries these students were even more numerous and experiencing even greater difficulties at school.

At the start of primary education, more than 55% of students had not reached the baseline level in language of instruction, and more than 28.8% had not done so in mathematics. At the end of primary education, more than 52% and nearly 62% of students were below this level in reading and mathematics respectively.

In early primary education, there were persistent challenges in language of instruction and a need to consolidate knowledge in mathematics.

On average across the countries, more than 55% of students at the early primary stage had not reached the baseline level on the language of instruction proficiency scale. Such students experienced relatively significant learning difficulties in decoding writing and understanding short words, sentences and texts, as well as oral messages.

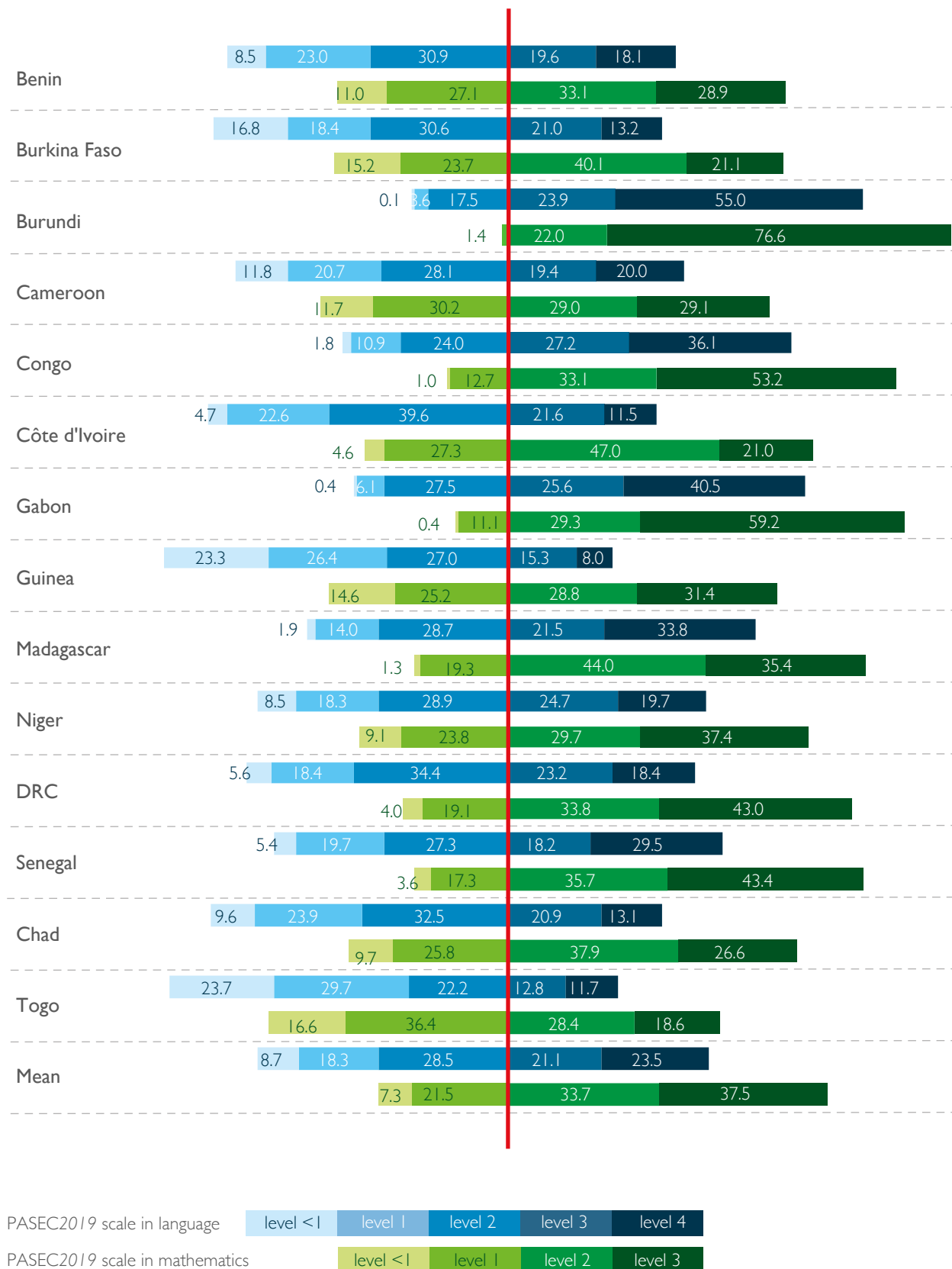
By contrast, in mathematics, student achievement was significant, but in need of consolidation. On average, more than 71% of students had reached the baseline level in mathematics, including more than 37% who could recognise numbers up to 100, complete logical series, compare numbers, perform operations (addition and subtraction) on numbers less than 50 and use reasoning in basic problems. However, a significant portion of these students (28.8%) had difficulty handling concepts of location in space (below / above / beside) and recognising simple geometrical forms.

**In four countries, most students were above the minimum proficiency level in language of instruction:** Burundi (78.9%), Gabon (66.1%), Congo (63.3%) and Madagascar (55.3%).

Across these four countries, most students who had reached the baseline were at the highest level of the scale. The percentage of students above the baseline was even more remarkable in Burundi, where more than half (55.0%) of the students assessed were at the highest level on the proficiency scale.

By contrast, very large proportions of students in Guinea (76.7%), Togo (75.6%), Ivory Coast (66.9%), Chad (66%), Burkina Faso (65.8%), Benin (62.4%) and Cameroon (60.6%) lacked the skills that would allow them to continue their schooling without difficulty.

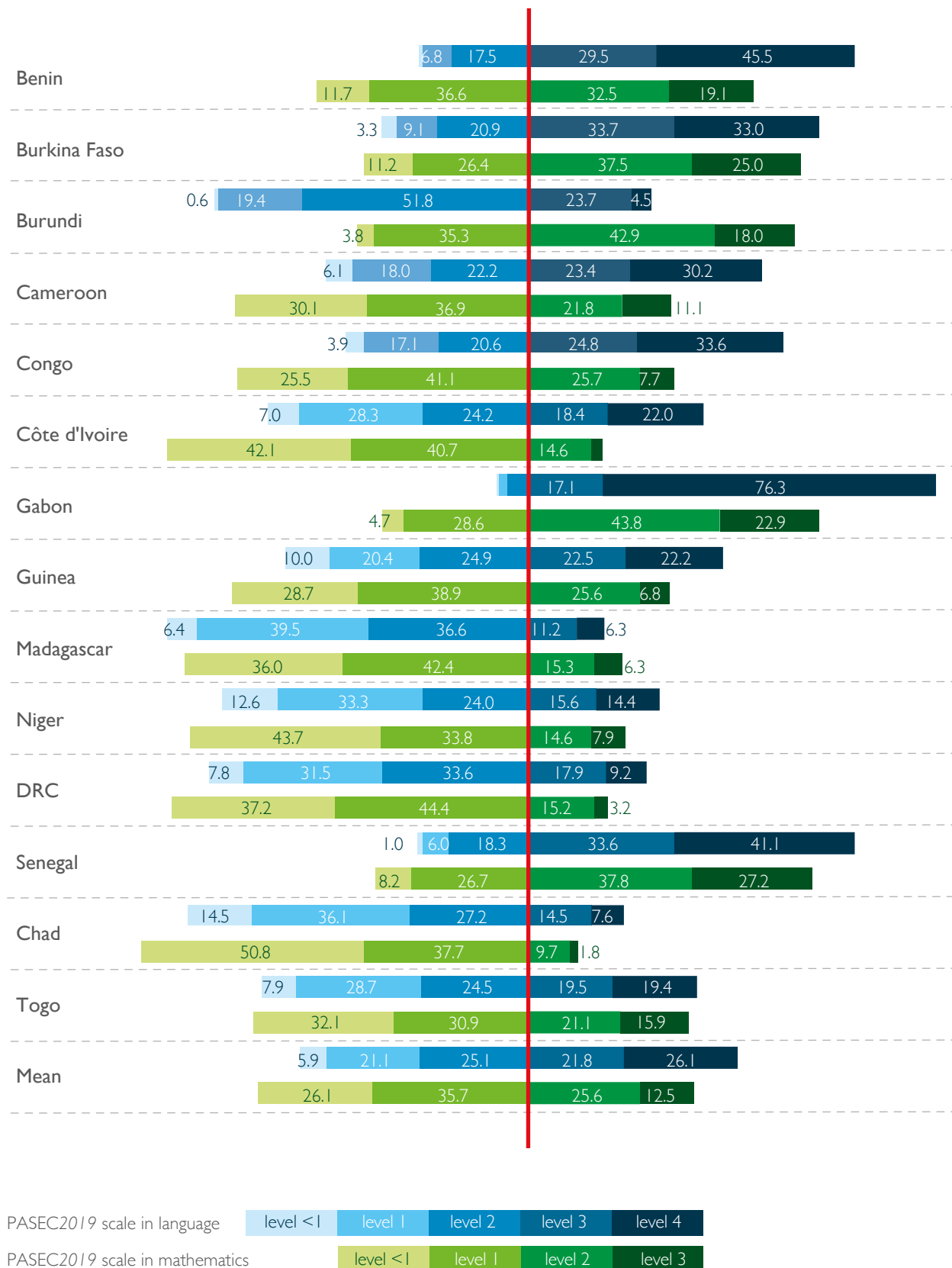
Figure 1: Percentage of students by proficiency level in language of instruction and mathematics - Early primary



Performance at the end of primary education remained unsatisfactory.



Figure 2: Percentage of students by proficiency level in reading and mathematics - Late primary



At the end of primary education, the average performance across the participating countries was estimated at 519.7 and 498.4 points in reading and mathematics respectively. As at the start of primary education, these averages varied between countries and within countries.

In reading, more than half of students (52.1%) were below the baseline level, and therefore had difficulty learning to read. At this level of education, such students had difficulty in understanding isolated words derived from their daily life and isolated sentences, as well as in locating explicit information in short and medium texts by taking cues from the text and the questions. Some of them (5.9%) were routinely unable to apply the most basic knowledge and skills that the PASEC survey seeks to measure, even though they were about to enter lower secondary education.

Among the countries whose students were positively distributed on the reading proficiency scale (Gabon, Benin, Senegal, Burkina Faso, Congo, Cameroon), Gabon stood out, with more than 93% of its students above the baseline level.

By contrast, Madagascar (82.5%), Chad (77.8%), DRC (72.9%), Burundi (71.8%), Niger (69.9%), Togo (61.1%), Ivory Coast (59.5%) and Guinea (55.3%) had the highest proportions of students who did not demonstrate adequate reading skills in the PASEC2019 assessment.

In mathematics, more than 60% of students at the end of primary school were below the baseline. These students found it difficult to answer short questions relating to the three cognitive processes covered by the mathematics test in the PASEC2019 assessment: 1) knowing, 2) applying and 3) solving problems. In addition, they found it very hard to perform elementary operations with decimals.

Gabon (66.7%), Senegal (65%), Burkina Faso (62.5%) and Burundi (60.9%) were the only countries to have raised a large majority of their students above the minimum proficiency level in mathematics. By contrast, around a third of students in many countries were below Level I on the scale, and thus had serious difficulties in mathematics that put them at risk of dropping out of school: Chad (50.8%), Niger (43.7%), Ivory Coast (42.1%), DRC (37.2%), Madagascar (36%), Togo (32.1%) and Cameroon (30.1%).



## 2. Teachers' knowledge, skills, characteristics and perceptions

Teachers had an acceptable level of knowledge and skills in the subjects they taught, but lacked teaching skills in these subjects.

*Table 5: PASEC2019 teachers' proficiency scale for reading comprehension*

Level	Score	Percentage of teachers at that level	Description of teachers' skills
Level 3	497 or more	52.0%	At this level, teachers are able to take a step back and engage in general processing of all types of texts. They make complex inferences and are able to combine and interpret multiple implicit ideas, drawing on their own experience and knowledge. They are capable of detaching themselves from the literal meaning of a text to identify the author's intention and perceive the humorous dimension of a text (even when this is subtle). They can take the content of a text into account to formulate a new idea that is relevant to the information they have read.
Level 2	Between 394 and 496	32.2%	Teachers display the ability to use paraphrased information. They are able to make simple inferences in any type of text. They are also able to perceive the anaphoric system of pro-nouns, synonyms and other substitutes used in a literary text. They can combine information from different parts of a text.
Level 1	Between 290 and 393	14.2%	Teachers are able to locate explicit information in medium-length or long texts using cues from the text and the questions. They can use this skill on narrative and informative texts. They are able to locate some elementary para-phrases in a text.
Below Level 1	Less than 290	1.6%	Teachers below Level 1 do not sufficiently demonstrate the skills measured by this test in reading comprehension. They struggle with the knowledge and skills of Level 1.

Table 6: PASEC2019 teachers' proficiency scale for mathematics

Level	Score	Percentage of teachers at that level	Description of teachers' skills
Level 3	547 or more	32.3%	Teachers at this level demonstrate the ability to solve complex problems in several stages, requiring the use of reasoning based on an in-depth analysis of the situation and possibly involving manipulating unknowns (for example in unequal sharing problems). To solve most tasks at this level, cognitive alertness is needed in order to avoid common mistakes and mis-conceptions (e.g. thinking that area and perimeter vary in the same way). Expertise at this level also involves an in-depth understanding of the concepts (for example, understanding the relativity of the whole in connection with the concept of a fraction).
Level 2	Between 456 and 546	32.6%	Teachers at this level can solve many direct proportionality problems, as well as some complex problems that have to be solved in several stages and require the use of an organised and sequential approach. Several tasks at this level involve unit conversions, which may or may not be integrated into problem situations. Some tasks call for factual knowledge relating to various mathematical objects (for example, formulae for calculating the area of a solid, a property of triangles, the name of a particular triangle, etc.).
Level 1	Between 365 and 455	26.6%	Teachers at this level demonstrate factual knowledge and mastery of the basic procedures, which they use in tasks requiring their direct application. Their skills are mainly in the areas of numbers (for example, knowledge about writing decimals, comparing fractions, the notion of percentage, etc.) and operations (the ability to solve operations involving whole numbers, decimals and fractions). They also show some knowledge in the area of solids and figures (for example, identifying some figures or solids, locating a diagonal or an axis of symmetry, etc.) as well as in quantities and measures (e.g. calculating the perimeter of a triangle). There are few problem-solving tasks at this level.
Below Level 1	Less than 365	8.5%	Teachers below Level 1 do not sufficiently demonstrate the knowledge and skills measured by this test. They struggle with the knowledge and skills of Level 1.

Across the participating countries as a whole, the results of the PASEC2019 survey showed that most teachers had a relatively satisfactory command of the subject content (reading comprehension and mathematics) taught at primary level. However, considerable proportions of teachers were at Level 1 or below on the proficiency scales for reading comprehension (over 15%) and mathematics (over 35%).

By contrast, teaching knowledge in reading comprehension and mathematics was much less sound. In other words, although teachers tended to have a good knowledge of the subject content they taught, they were much more likely to experience difficulties in analysing their educational approaches, choosing situations suited to the learning objectives, spotting common errors and identifying their causes so as to help students to progress.

Figure 3: Percentage of teachers across the different levels of the reading proficiency scale by country

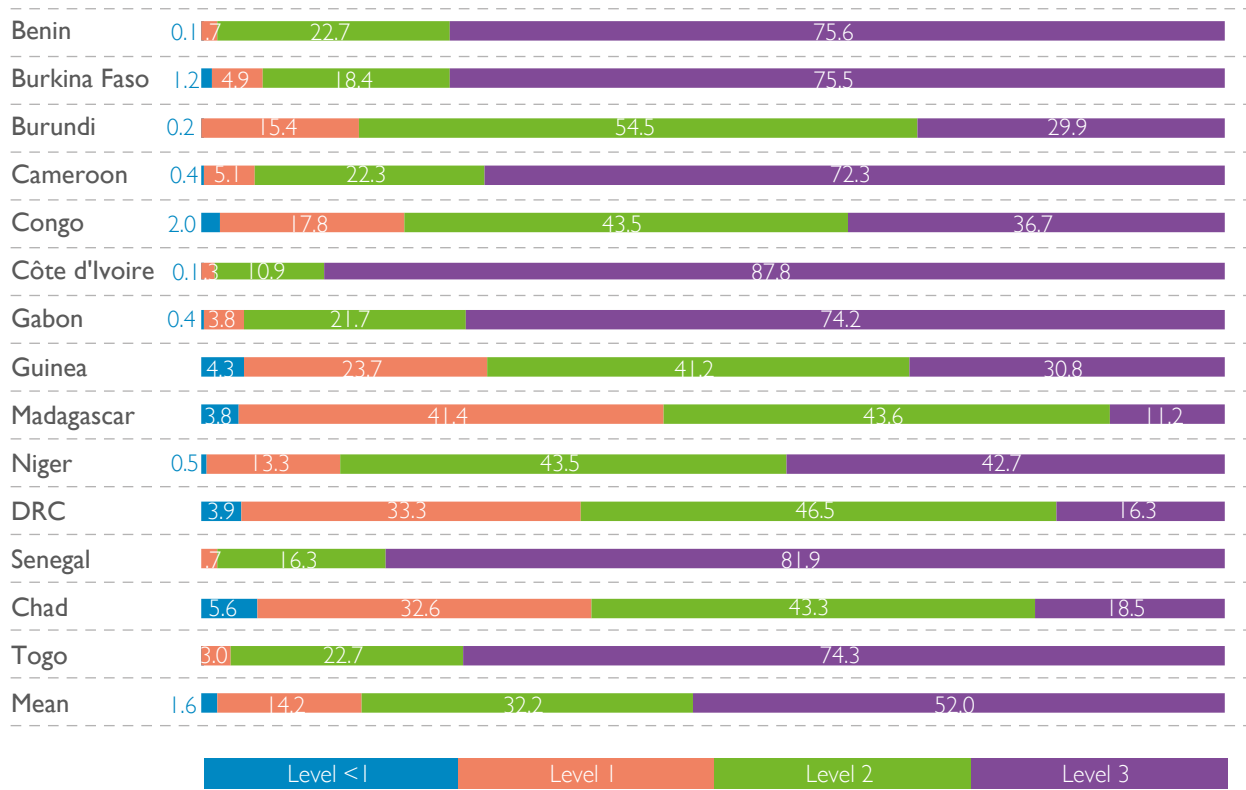
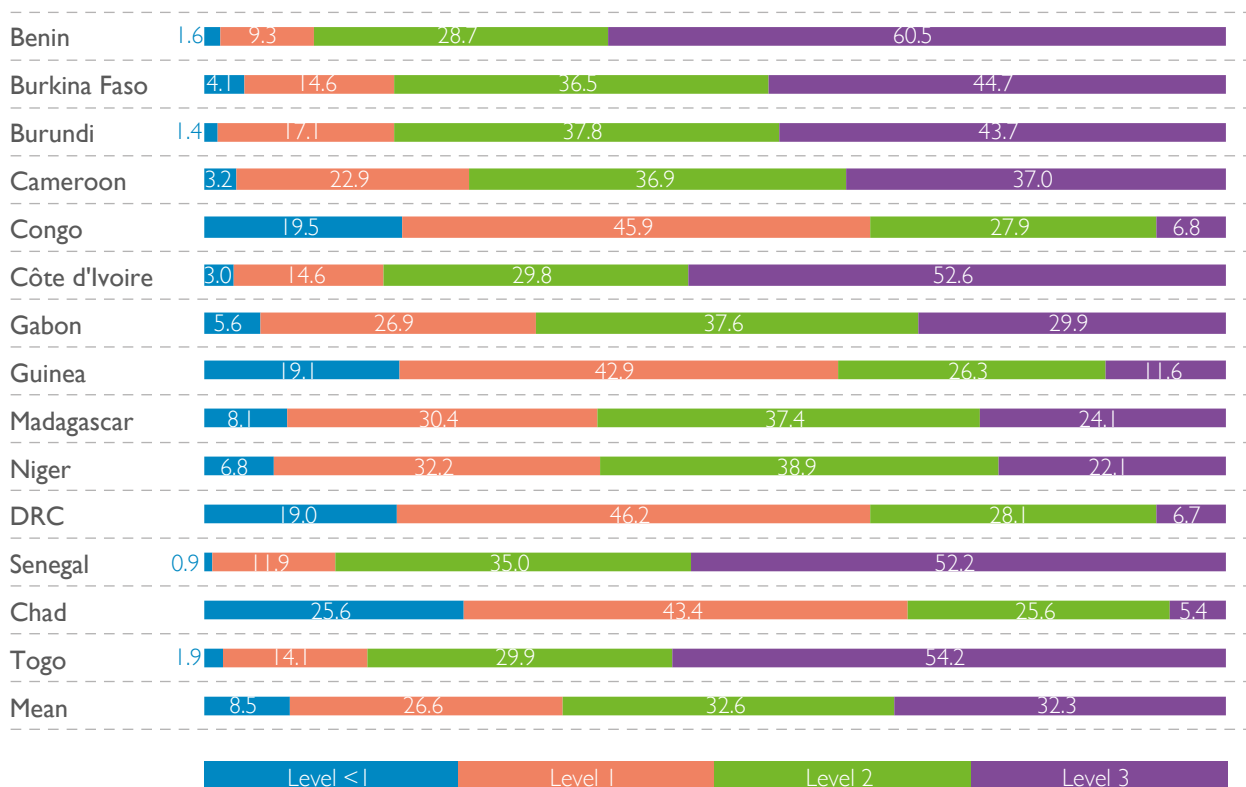


Figure 4: Percentage of teachers across the different levels of the mathematics proficiency scale by country



## Academic level and professional experience are linked with higher subject content scores.

The most striking results of the analysis of teachers' characteristics, knowledge and skills relate to their scores as a function of their length of service, level of academic education and receipt of in-service training. They confirm that, first, teachers educated to university level outperformed those educated to secondary level in the survey tests, and second, teachers who reported long teaching experience (between 11 and 20 years) outperformed their less experienced colleagues (at most 5 years).

## Teachers were happy with the management and social environment of their schools, but had unfavourable views of their working conditions.

In terms of working conditions, teachers generally regarded school curricula as satisfactory. However, their view of the quality of buildings and the availability of school supplies was negative in most countries.

In almost all countries, most teachers expressed a favourable opinion on the management of their school, and also reported that they had good relations with their colleagues and the community<sup>2</sup>.

The vast majority of teachers across the countries as a whole were less happy about their salary conditions. The same was true of their training and career opportunities.

2. School-level data collection methods cannot exclude a social desirability bias.

### 3. Trends in education system efficiency and equity

The two cycles (2014 and 2019) of the PASEC survey made it possible to analyse developments in the efficiency and equity of the education systems of the ten sub-Saharan African countries involved in both cycles.

#### Start of primary education

Across the ten countries that participated in both assessments, the average performance in language of instruction improved considerably, from 500.0 to 532.5 points. This improvement was particularly marked in Niger (+76.9), Benin (+66.5), Congo (+59.7) and Senegal (+55.3).

However, the gains associated with the higher average performance in language of instruction in several countries were offset by the increased inequity in most education systems.

Across all countries combined, the improvement observed in language of instruction also occurred in mathematics, with the international average rising from 500.0 to 537.5 points. The countries showing substantial rises in the average level of performance included Benin (+70.4), Congo (+50.7), Niger (+89.2) and Senegal (+42.1), as was the case for language of instruction, but also Ivory Coast (+56.6) and Chad (+31.2). In the four remaining countries (Burkina Faso, Burundi, Togo and Cameroon), the difference between the two cycles was not significant.



## End of primary education

In reading, several countries stood out for their substantial improvement in average performance, namely Benin (+62.3) and Niger (+67.5), and to a lesser extent Congo (+38.6) and Senegal (+ 27.5). Burkina Faso and Chad showed an increase of nearly 20 points. Two countries' performance showed a significant downward trend: Burundi (-35.5) and Ivory Coast (-14.2).

In mathematics, Burundi's average performance decreased by nearly 50 points between 2014 and 2019. The same was true in Togo and Ivory Coast, with decreases of 24.8 points and 21.7 points respectively. Only two countries saw their average performance rise substantially: Benin (+ 36.9 points) and Niger (+ 56 points).

At least six main findings emerge from this analysis of trends in efficiency and equity. (i) Although inequalities in terms of skills in the different countries were found between students, they were present to a far greater extent between schools; (ii) the increase in differences between the lowest- and highest-performing students was primarily accompanied by an increase in differences between schools; (iii) the extent of inequalities in performance among students varied from country to country; (iv) improvements in performance were more pronounced among the top performers, and thus associated with an amplification of the variation in performance; (v) performance differences increased between the lowest and highest performers; (vi) performance differences by gender had persisted and changed in the assessed subjects.



## 4. Factors in educational success

Differences in performance at the start and end of primary education generally reflected socio-economic inequalities and students' different educational careers (grade repetition, pre-school education).

Most of the PASEC2019 countries are characterised by a lack of access to pre-school education, which is confined to around a third of students. However, the assessment results show that pre-primary education plays an important part in the development of children's basic skills, being positively linked to student learning outcomes.

In addition, the educational careers of more than half of students across the different countries included at least one repeated grade in the course of their primary education. This finding is concerning and raises questions about the internal efficiency of the participating countries' education systems. In addition, grade repetition appears to make it impossible for students to catch up with peers who have not repeated a grade.

Further, parental literacy tended to have a positive influence on students' performance in reading and mathematics across the countries. Students with at least one parent who could read scored higher in both subjects than those with no literate parents, in all countries except for Burkina Faso, Gabon, DRC and Chad.

Across all countries, the average performance at the end of primary education in reading and mathematics was also significantly higher among students who had books at home. The same was true of each individual country in both subjects except for Chad for mathematics.

Schools' different characteristics and resources further explained the variation in students' academic performance.

More than 50% of the variance in language scores was explained by differences between schools in all countries except for Burundi and Gabon. The same result was observed in mathematics, apart from Burundi, Gabon, Madagascar, DRC and Senegal. At both the beginning and the end of primary education, the variance of scores between schools was greater than that within schools in most countries.

Schools' location (urban or rural) and type (public, private), and whether they had adequate learning materials were other factors explaining the differences in performance.

The comparison of student performance by school location shows that students at schools in urban areas outperformed those at schools in rural areas in all but two countries (Burkina Faso, DRC) in language of instruction and in all but three countries (Burkina Faso, Senegal, Chad) in mathematics.

The analysis also showed that students attending private schools outperformed those in public schools in language of instruction and mathematics. These results confirming the higher performance of privately educated students are consistent with the findings of previous assessments and of studies comparing the performance of privately and publicly educated students in Africa.

Better levels of school infrastructure and classroom equipment were also positively associated with student performance.

## 5. Lines of reflection

### 1. Continuing with policies to develop pre-school education.

Countries should continue to strengthen policies to develop pre-school education, and if possible build on the recommendations given by CONFEMEN in its Reflection and Orientation Document for the 58th ministerial session: 'Promoting early childhood development and ensuring access to equitable and quality pre-school education: a foundation for successful learning'<sup>3</sup>. The provision of pre-school education is especially important given that mastery of the language of instruction is the key to other school learning, in particular for mathematics at early primary level. The low rate of pre-school enrolment means that countries need to redouble their efforts to promote pre-school as a priority. Without a concerted effort, it will be difficult to achieve the goal of the 2030 Agenda of offering all children at least one year of pre-primary education.

### 2. Pursuing national initiatives in smoothing the transition from first language to language of instruction at the start of primary education.

The results suggest that it would make sense to go further with experiments in smoothing the transition from first language to language of instruction. These initiatives may play a decisive role in the student performance, particularly at the start of primary school.

### 3. Introducing or reinforcing measures and/or activities to help struggling students adapt to school.

The findings relating to student performance and the ineffectiveness of grade repetition suggest the need to introduce or reinforce measures and/or activities promoting adaptation to school in order to help struggling students in terms of instruction, socialisation and qualification<sup>4</sup>. There is very little sign of such measures in the education sector plans of the countries participating in the PASEC2019 assessment<sup>5</sup>. Involving various stakeholders (teachers, school principals, psychologists, social workers, parents of students, the local community, etc.) in helping struggling students could improve the performance of the participating countries' education systems.

3. <https://www.confemen.org/wp-content/uploads/2019/06/DRO-2018-Version-finale.pdf>

4. <http://www.icem.ca/icem/adaptation.asp?titre=51>

5. According to the results of a survey conducted by CONFEMEN's Observatory for the Quality of Education (OQE) on the basis of a questionnaire sent to the heads of national PASEC teams. The report on this survey, including both the responses to the questionnaire and an analysis of the education sector plans of these countries, will be published in early 2021.



#### 4. Improving the quality, availability and allocation of school equipment and educational resources.

Countries should reinforce policies on the allocation of educational resources according to the needs of different locations, schools and specific groups. Shortcomings in the quantity and quality of school infrastructure (classrooms, toilets, infirmary, library, canteen, etc.) and in human resources ('chalk in hand' teachers<sup>6</sup>, social workers, psychologists, etc.) need to be addressed. Particular attention should also be paid to improving the governance of education systems. Decentralisation/deconcentration measures could, if designed and implemented judiciously in the field of education, promote effective management of differences between schools and thus make a positive contribution to student outcomes.

#### 5. Introducing measures to raise the performance of girls in mathematics and improving knowledge of the related contextual factors.

Regarding gender gaps in learning outcomes, it would be advisable for countries to consider differentiated measures to increase the time and opportunities for reading among boys and to develop initiatives to improve girls' performance in mathematics. Additional studies of socio-cultural, socio-economic and other factors outside school which may explain this difference could also be considered.

#### 6. Performing an assessment of national experiments with or systems of in-service training and focusing national policies and strategies for pre-service education and in-service training on teachers' needs and profiles.

The results show that a survey of the situation in this area and an assessment of the in-service training provided to principals and teachers are essential. This would involve examining the contents and methods of this training (situation analysis, reflective practices, etc.). Consideration should also be given to the pre-service education of school principals and teachers.

All the findings relating to the knowledge and skills of teachers in general indicate a need for pre-service education and/or in-service training extending beyond mastery of subject content and placing emphasis on the teaching of that content. Such education and training must reflect teachers' needs. There is a clear and urgent need for specific training measures for teachers with an inadequate command of subject content.

Teachers' lack of teaching knowledge and skills and the low scores in subject content of less experienced teachers and those who had received in-service training raise questions about the quality of such training. These findings suggest that policy-makers and teachers should review the content and implementation of in-service training for teachers, and point to the need for particular attention to be paid to less experienced teachers in this context. They also indicate the need to make more use of the expertise of the most experienced teachers in pre-service education and in-service training. These important points should find their way into national policies on in-service training.

6. A literal translation of a common expression used in French-speaking sub-Saharan Africa to refer to teachers actually in the classroom.

## 7. Taking appropriate measures to promote the professionalisation of the teaching profession.

In light of all these results, there seems to be a need to promote an understanding of teaching as a profession requiring not just in-depth subject knowledge, but also specific professional skills (teaching skills, psychopedagogical skills, etc.) acquired and maintained through education, training and practice.

In this context, providing teachers with the necessary educational and teaching resources (books, digital tools, in particular computer hardware, software, access to digital platforms), so that they can improve their general level of culture and their professional qualifications, is one possible direction worth exploring. The provision of these opportunities should be accompanied by encouragement and motivation of teachers to get involved in enhancing their knowledge and skills, so as to derive maximum benefit from them. This could improve student outcomes.

These results concerning teachers' perceptions of their working conditions support the view that national strategies need to be introduced for the professionalisation of teaching, including the provision of a decent physical working environment and of training and career opportunities for all. Salary conditions need to be improved in order to boost teachers' motivation and make the profession more attractive.

More specifically, the introduction of an effective national strategy for appropriate in-service training, referred to above, is vital for the professionalisation of teaching. This must enable teachers to improve their qualifications, modify or extend the scope of their activities, seek promotion, and stay informed about the latest developments in both content and methods in their subject areas and in the teaching profession.

An improvement in teachers' status is desirable, in line with the needs and challenges of national education contexts, in order to promote the effectiveness of teaching and so that teachers are able to devote themselves fully to their work because their remuneration ensures a reasonable standard of living for themselves and their families.

These various policy approaches relating to teachers should help to consolidate the positive school conditions which can already be perceived in the different countries from teachers' upbeat assessment of school management and curricula, and of their relations within the teaching workforce and with the community.





Since its creation in 1960, the Conference of the Ministers of Education of French-Speaking Countries (CONFEMEN) has worked to promote education and vocational and technical training. It represents a forum for shared values, expertise and active solidarity, which today has 44 member states and governments.

The CONFEMEN Programme for the Analysis of Education Systems (PASEC) is a tool for steering the education systems of CONFEMEN's member states and governments with a view to improving the quality of education. Created in 1991, it aims to provide information on the changing performance of education systems, as an aid to the development and monitoring of education policy.

The PASEC2019 international assessment had 14 participating countries: Benin, Burkina Faso, Burundi, Cameroon, Chad, Congo, the Democratic Republic of Congo, Gabon, Guinea, Ivory Coast, Madagascar, Niger, Senegal and Togo. The assessment measured students' proficiency level in the language of instruction and in mathematics at the start and end of primary schooling. Teachers' command of subject content and teaching methods in reading comprehension and mathematics was also analysed, as were relationships between the performance of the education systems in the countries assessed and certain contextual factors relating to students, teachers and school principals. Finally, changes in the efficiency and equity of the education systems of the ten countries that participated in the 2014 and 2019 cycles were also analysed.

This report presents the main results of the PASEC2019 assessment. In-depth analyses will be conducted in secondary reports.