

Policy Paper 07

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This paper, jointly released by the Education for All Global Monitoring Report and the UNESCO Institute for Statistics, shows that progress in reducing the number of children out of school has come to a virtual standstill just as international aid to basic education falls for the first time since 2002.

Addressing the crisis in early grade teaching

Teachers' knowledge and abilities are at the heart of children's learning in school. Yet, all too often, teachers are insufficiently prepared to teach. This is leading to a crisis in learning, with many children completing early grades of primary school unable to read a single word. In total, at least 250 million primary-school aged children have not learnt the basics, whether they are in school or not.

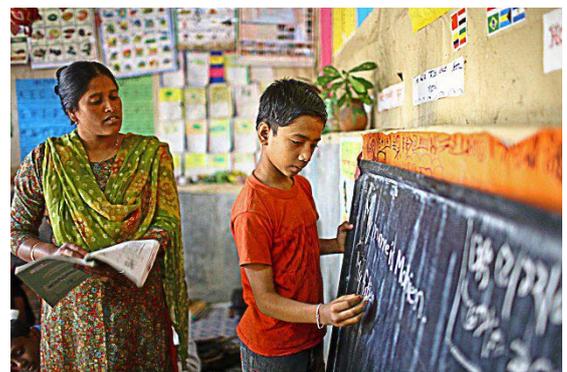
The expansion of primary enrolment in many countries has led to chronic shortages of teachers. This is a key concern given that an estimated 1.7 million additional teachers are needed by 2015 according to the UNESCO Institute for Statistics. But it is not the only one. Low levels of education and poor training are leaving teachers without the core subject knowledge and pedagogical skills they need to ensure that children develop strong foundations in basic literacy and numeracy. Nowhere is this more of a concern than in the initial years of primary school. If children are unable to learn the basics early on, their chances of acquiring other skills in later grades are slim. Evidence is increasing that early grade education is failing children, especially in poor countries.

The learning crisis is leading policy-makers to turn their attention to the role of teachers in early grades and the contributions made by pre-service and in-service training. This policy paper identifies challenges in teacher training and explores effective solutions.

Assessments in the early grades highlight a chronic learning problem

Very poor levels of learning at lower grades of primary school are resulting in millions of children leaving education before acquiring basic skills. Children who have not learned to read a text or do basic calculations have little chance of benefiting from higher primary school grades. Moreover, their commitment to education is likely to diminish and they are more likely to drop out.

Early grade reading assessments in several countries have shown that many children spend two or three years in school without learning to read a single word. In Mali, for instance, 94% of second graders could not read a single word in French and at least eight out of ten could not read a single word in four national languages, despite the fact that Mali is the most advanced among West African francophone countries in using national languages in education.



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In Bauchi and Sokoto, two states of northern Nigeria, 4,000 grade 3 students were assessed in Hausa, which is the language of instruction and the lingua franca as well as the mother tongue for the vast majority of students. Just 29% of students in Bauchi and 18% in Sokoto could read full words. These students were given a reading comprehension test: less than one-fifth of them achieved a score of 80% – accounting for only 6% of all students in Bauchi and 3% in Sokoto.

These shocking results have turned the spotlight on how teachers are trained, and the support they receive once they are in the classroom.

Well-trained teachers are key to improving children's early learning

Children cannot benefit fully from school if they live in poverty, are malnourished, suffer from ill health or live in conflict zones. Yet teachers who are effectively trained and have strong subject knowledge can make a huge difference in the educational fortunes of children from disadvantaged backgrounds, especially in the early years of schooling.

Children are more likely to develop reading and writing skills when their families encourage them by providing learning materials such as books at home. In poor countries, where many children are first-generation learners, there may be no adults in their families to provide crucial support, for example by reading them stories. Pre-school can help disadvantaged children benefit from primary school, but early childhood services are underdeveloped in areas where they are needed most. This means

that it is even more crucial to prepare early grade teachers well to teach basic skills in poor countries, and to pay particular attention to children from disadvantaged backgrounds.

Teachers themselves may lack the necessary subject knowledge and the ability to turn it into effective approaches to instruction. In a 2010 survey of primary schools in Kenya, teachers and their students in grade 6 were given a mathematics test. The average score for the teachers was 60%. Not surprisingly, students also received low scores, around 47%. Some teachers scored as low as 17% on the standardized mathematics test, which was set from the primary school syllabus. Researchers concluded that no teacher in the sample had complete mastery of the subject. In Kano state of northern Nigeria, a test of some 1,200 basic education teachers found that around 78% had 'limited' knowledge in English after an assessment in which they were asked to take a reading comprehension test and correct sentences written by a 10-year-old child for form, content and punctuation.

Teachers' poor scores reveal their own low levels of educational attainment. Where education systems have expanded rapidly, teachers have sometimes been recruited with few qualifications. Trainees tend to enter teacher training colleges in Kenya, Uganda and the United Republic of Tanzania, for example, having completed only basic education.

More broadly, there is a need to attract the best people into the teaching profession. Brazil has managed to make teacher recruitment more selective by introducing a national entry exam and competitive recruitment of newly qualified teachers. It also funds places for teachers at universities, especially in subjects where they are most needed, and has created a high-speed career track for top-performing teachers. But attracting teacher candidates with strong subject content backgrounds is difficult in many poor countries because teaching has low status and the pay is poor. In Ghana, for example, teachers see primary school teaching as a stepping stone to jobs with higher status or better pay.

Ensuring that children achieve the basic foundations in the early grades is a vital way of overcoming early disadvantage, so the best teachers should be deployed to the early grades. Unfortunately, the opposite is often

true, with less experienced teachers assigned to lower classes, where the number of students can be extremely large. The pattern holds even more often in areas that are less likely to attract experienced teachers, such as slums or remote rural districts, where working and living conditions are poor. This translates into low achievement. Data collected in Malawi in 2010 show that the number of words grade 4 students could read correctly in a minute varied from 26 in classes with 75 students to just 13 in classes with 175 students.

Effective teacher education needs to combine subject knowledge with pedagogical skills

Most teachers learn to teach reading and basic mathematics during pre-service and in-service training. Where teacher trainees have inadequate subject knowledge in core subjects, teacher training colleges need to emphasize remedial measures, while paying attention to pedagogical training.

Pre-service training often does not prepare teachers adequately for early grades

For pre-service training to be effective, teachers should already have a sufficient knowledge of their subjects so that training can develop their skills in teaching children in the early grades. Too often this is not the case.

Just receiving training is not enough – the content and quality of training are crucial. Children in many East Asian countries have achieved impressive literacy results mainly because their teachers have strong backgrounds in the subjects they teach and have received effective initial training and professional support in schools. This achievement shows what is possible, although lack of resources and institutional capacity makes it difficult to replicate in poorer countries.

In low income countries, teachers can spend from six months to four years in pre-service training programmes. Whatever the duration, these programmes can be costly. In Ghana,

for example, governments pay around forty-five times as much on training a teacher as on teaching a primary school student. Given this significant public investment, it is vital to ensure that trainees learn how to teach. In many developing countries, a large part of training is devoted to repeating the secondary school curriculum to improve trainees' subject knowledge. While this is necessary when trainees have left school without core knowledge, it leaves too little time for developing teaching skills.

The problem is reinforced by the limited experience of some of those who train. In anglophone African countries, instructors in many primary school teacher preparation courses tend to be former secondary school teachers with little knowledge or experience of teaching at primary level: in the Gambia, 77% of instructors had never taught primary school themselves.

In some West African countries, contract teachers have been recruited to reduce the strain on education budgets while ensuring that there are sufficient teachers in the classroom. In Guinea, for example, only contract teachers have been recruited since 1998. By 2003 they accounted for half the teaching force. The duration of teacher preparation has been reduced to between fifteen and eighteen months, compared with a total of three years previously. This has helped reduce large pupil/teacher ratios. Evaluations suggest that the new teachers are as able as the previous ones to teach basic skills.

While this helps to alleviate the immediate pressures, in other contexts there is a risk that shorter training periods offered to contract teachers do not allow trainees to develop sufficient basic teaching skills and to improve their subject knowledge where it is weak. In Mali, for instance, civil servant teachers receive more than a year of training while 73% of contract teachers receive only a three-month course.

In addition to the length of training, attention is also needed to ensure teachers receive training that prepares them to teach in the early grades.

A study covering Ghana, Kenya, Mali, Senegal, Uganda and the United Republic of Tanzania found that trainees received only a very basic introduction to teaching early grade reading.

The teaching of reading was often not seen as needing special attention but was treated alongside other topics in the language or literature course. In Senegal and the United Republic of Tanzania, for example, teaching reading is not a separate topic. The study also found that initial teacher education did not prepare trainee teachers for the multilingual classroom. In the francophone countries, training was given only in French, and just 8% of new teachers surveyed in Senegal and 2% in Mali expressed any confidence in teaching reading in local languages. In the anglophone countries, there was provision for teaching in local languages but 68% of new teachers in Uganda, 74% in Kenya and 79% in Ghana expressed confidence in teaching reading only in English.

Providing trainees with more practical experience is important. To be effective, this classroom time needs to be accompanied by adequate supervision and support. But time spent in the classroom as part of training programmes is often too short, and separate from what is taught in the training college. It usually offers no opportunity to learn how to teach over many lessons. Thus many new teachers start without any experience of the challenges of teaching children to read or do basic sums. Only in Ghana, Kenya and Senegal were trainees expected to teach the three early grades. In Ghana, trainees were paired and, with the support of experienced mentors, taught for stretches of time in lower grades. The rationale was to give trainees the opportunity to support each other in teaching and discuss with mentors challenges they faced.

In summary, pre-service teacher training needs to pay attention to the particular challenges of teaching in early grades,



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and ensure that all trainees have some experience of teaching at this level before becoming qualified.

In-service training can help teachers teach in early grades

Properly designed and adequately supported in-service training can make a significant difference to teachers' classroom performance and hence to children's learning.

Many new primary school teachers have not had the opportunity for training, particularly in poor countries that have recruited untrained teachers. This is often because of acute shortages of trained teachers willing to serve in remote and poor rural communities. Some countries are responding by investing in special training programmes.

For example, in Ghana teacher training has not been able to supply enough trained teachers willing to serve in rural areas, a situation that has led to significant growth in numbers of untrained teachers. The government decided to invest in training specifically geared for untrained teachers who are on one-year renewable contracts and serving in some of the poorest districts. A distance learning programme begun in 2007 had trained about 25,000 teachers by 2010. An evaluation revealed striking improvements in the teachers' performance compared with an untrained control group. The trained teachers engaged pupils more actively in the development of ideas, used teaching and learning aids more effectively to demonstrate concepts and principles, and showed greater flexibility in their teaching approaches in response to pupils' learning needs.

Professional development programmes can help teachers develop their skills in teaching reading and mathematics. They have been used to great effect in East Asian school systems. In many low income countries, however, some teachers teach for long periods without receiving any in-service training. In the fifteen national school systems of the Southern and Eastern Africa Consortium for Monitoring Educational Quality in 2007, only 53% of grade 6 students were taught reading by teachers who had received in-service training over the past three years (ranging from 32% in Lesotho to 79% in South Africa). Since 2000, the share had declined in four countries and improved in only seven.

Good quality textbooks and other supplementary reading materials are needed to teach and generate interest in learning, but in many developing countries they tend to be in short supply, not relevant to real life situations, pitched at an inappropriate level of difficulty or characterized by poor illustrations and printing. In such situations, teachers have a key role in ensuring that limited resources are used effectively. Room to Read, an NGO that sets up and equips libraries in ten countries and supports local-language publishing industries, recognizing that teacher capacities need to be strengthened, has developed support programmes. These include teacher in-service training focusing on child-centred, interactive teaching methods coupled with one-on-one support provided regularly during the school year by literacy facilitators who help teachers use the new methods.

The way in-service training is delivered makes a difference. Short-term workshops can be ineffective. Recommended approaches include engaging trainees in researching their own teaching practice, preparing teaching portfolios or using book clubs. In Kenya, two Ministry of Education programmes address some of these issues. The school-based teacher development programme guides teachers to use a more problem-solving approach. It has been found that trainees are more likely to use effective mixed-ability group work, to spend time enabling children to practise reading and to encourage the use of library books. Their lessons tend to move through content more quickly and keep all pupils engaged. Reading to Learn, a pilot project introduced in 2010 in two low income districts of the Coast province with support from the Aga Khan Foundation,

focuses training on how to write stories and to use them in teaching.

Recognizing the particular challenges of teaching early grades, some countries have set up centres to improve teachers' effectiveness. Between 2002 and 2009, as part of a USAID project covering the Andean countries, Central America, the Dominican Republic and the English-speaking Caribbean, Centers for Excellence in Teacher Training were introduced to provide professional development to early grade teachers. In the Dominican Republic, a course consisted of three eight-hour sessions of face-to-face teacher preparation on teaching practices, eight three-hour meetings of teachers, forty hours of independent study of teachers' own practices and a monthly visit to each teacher at school. Teachers were trained to improve their teaching of reading and writing, their ability to develop curriculum and their classroom management. Children had more opportunities to read and write, interact with different types of texts and develop advanced reading skills, beyond memorization. About 3,400 teachers in grades 1 to 4 participated.

An evaluation of the overall programme in eight countries found that trainees had adopted a wide range of effective teaching behaviours involving grouping and feedback, classroom management and use of physical space. The trainees' knowledge did not deepen, however. This reflects weaknesses in initial teacher training and illustrates the critical need for continuous professional development.

Experience from in-service teacher training in rich countries shows that it works better when it supports the introduction of broader interventions, including ones targeting children who fall behind or ones aimed at improving the system overall. Under the United Kingdom's broader National Literacy Strategy, which aimed to raise literacy standards among primary school children aged 5 to 11, a daily 'literacy hour' was introduced in 1998. It consisted of sessions of whole-class reading or writing, whole-class work on words and sentences, directed group activities and reviewing the objectives of the lesson. Teachers were trained to implement the programme: an initial day on class management for literacy was followed by a week of training on the activities expected in the literacy hour. An evaluation found that the programme

significantly helped improve reading skills and overall achievement in English, especially for boys. At the national level, the share of children meeting targets in reading by the end of primary education rose from 67% to 80% during the first six years of implementation.

NGO interventions provide positive experience, but often do not reach most teachers

Many non-governmental organizations have recently implemented literacy projects, which tend to support teachers in targeting disadvantaged populations. Teacher training is often combined with other measures to improve learning. Governments need to monitor these efforts so that they can learn from, adopt and expand initiatives that provide useful lessons and have the potential to be scaled up. NGOs, for their part, need to consider whether their projects can be replicated and collaborate with governments to strengthen systems and sustain any gains.

In South Africa, a project providing reading materials, together with training to help teachers use them effectively, has improved learning outcomes. Learning for Living, a project initiated by the READ Educational Trust, is aimed at enhancing the learning of English as a second language in primary schools by providing teachers with books and in-service training, combined with visits to monitor results. Training covered the teaching of phonics and spelling, the use of stories for language development, and more advanced use of written material, including non-fiction books, along with reading and writing for real-life situations. The project reached almost 1,000 schools – most of them rural – and more than 13,000 teachers over five years. An evaluation comparing project and non-project schools found significant improvements in teaching practices. There was more use of teacher-made materials and an increase in lesson time spent reading. These results translated into improvements in reading and writing.

An NGO programme in India also illustrates how in-service teacher training can be combined with other interventions to improve learning outcomes. The NGO, Pratham, has successfully implemented a large programme

providing inservice training for government school teachers in the teaching of reading. The programme includes training to help teachers articulate clear learning goals and use appropriate teaching-learning activities and materials.

Initial results of a randomized experiment conducted in 2008/09 and 2009/10 in rural areas of Bihar and Uttarakhand states showed that teacher training was effective only when complemented with other interventions. In schools that received teacher training, monitoring and support, combined with supplementary learning materials for children and after-school support by Pratham volunteers for students who were lagging behind, the achievement of all children, as measured by speed of accurate reading and writing in Hindi, improved significantly. But there was no such impact in schools that received teacher training only. The impact was limited by low teacher and child attendance, a curriculum unrelated to children's initial level, and wide diversity of learning needs in the classroom.

The biggest challenge is scaling up such innovations so they can be institutionalized as part of regular teacher development, especially in poor countries. Unfortunately, the vast majority of teachers in poor countries have few opportunities for in-service training.

Conclusion

Governments could solve the learning crisis by taking active steps to strengthen teaching in early grades. Teacher education systems need to be reinvigorated to assure the success of such interventions. Pre-service training programmes should pay closer attention to the teaching of reading. In the future, courses must increase the emphasis on effective classroom techniques. In-service training programmes that engage teachers in an interactive way should ensure that knowledge is converted into better classroom practice. Improved learning is likely to be most noticeable where quality training is combined with other interventions, such as improved instructional materials.

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Notes

All references to the evidence presented in this paper can be found in the 2012 EFA Global Monitoring Report.