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Education for All:

Teacher Demand and Supply in Africa

by Paula Nilsson

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1. Introduction

By 2015, all children should have access to, and complete, free and compulsory primary education of good quality according to the *Dakar Framework for Action*[1] and the *Millennium Development Goals* [2]. The challenge of governments and education stakeholders, such as the teacher unions, to attract youngsters to enter the teaching profession, to give them the adequate education and to retain qualified teachers in the profession is one key to the possibility to achieve universal primary education of good quality. The shortage of teachers in many countries will be one of the difficulties to overcome if *Education for all* (EFA) is to become a reality by 2015.

In this working paper, the objective is to analyse the demand for teachers on the African continent, and especially some countries in sub-Saharan Africa. Country reports from most of the countries in the world were prepared prior to the World Education Forum in Dakar in 2000. The reports from Botswana, Mozambique, Uganda, Tanzania (Mainland), Zambia and Zimbabwe are analysed in part three, four and five.

The first part of this working paper presents a background to *Education for all* and discusses the quality aspects of education; in particular qualified teachers' impact on education's quality. Part two deals with the shortage of teachers in Africa as an obstacle to achieve the goal of universal primary education.

In part three, the view on teachers' education in the country reports and in accordance to the emphasis on the quality in the EFA-goals are discussed. Part four is about the conditions; like teacher salaries, working conditions and the view on teachers as it appears in the country reports, as ways to attract and retain teachers. In the fifth part, different strategies found in the reports on how to attract, educate and retain qualified teachers are presented. The final comments can be found in the part six.

1.1 Education for All

Education for all was not achieved by year 2000 as prospected at the World Conference of Education in Jomtien 1990. When the World Education Forum in Dakar adopted the *Dakar Framework for Action* in 2000, the vision on EFA, from Jomtien was reaffirmed. In Dakar, the participants did again collectively commit themselves to ensure that all children by 2015 should have access to, and complete, free and compulsory primary education of good quality:

We hereby collectively commit ourselves to the attainment of the following goals:
ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality (Dakar Framework for Action 2000, Article 7ii)

Moreover, the international community assured support concerning the necessary financing:

no countries seriously committed to education for all will be thwarted in their achievement of this goal by lack of resources (Dakar Framework for Action, 2000, Article 10)

[1] Document adopted by the World Education Forum in Dakar in the year 2000.
[2] The eight goals agreed upon by the United Nations member states in the year 2000 are: to Eradicate extreme poverty and hunger, Achieve universal primary education, Promote gender equality and empower women, Reduce child mortality, Improve maternal health, Combat HIV/AIDS, malaria and other diseases, Ensure environmental sustainability and to Develop a global partnership for development by the year 2015.

Furthermore, education is recognised as an important strategy to eradicate poverty. Two of the goals from Dakar: to achieve universal primary education and to eliminate gender disparity in primary and secondary education, are also part of the eight *Millennium Development Goals* adopted by all 191 United Nations Member States (UN, 2003a).

Even if education was declared to be a human right in 1948, when the United Nations adopted the *Universal Declaration of Human Rights* (UN, 2003b), 115 million children of schooling age are still not enrolled in school. A majority comes from developing countries and most of them are girls (The World Bank, 2003a). According to an EFA Global Monitoring Report Team's (2002) analyses on three of the Dakar goals: enrolment in primary school, adult literacy and gender equality, 28 countries are in a serious risk of not achieving any of these three goals. Another 43 countries have made progress in the 1990s but at least one goal is likely to be missed within the timeframe. 83 countries have already achieved the three goals or have a good chance of doing so by 2015 (p.15).

To achieve the challenge of EFA by 2015, tremendous efforts have to take place, both in the developing countries that have not yet accomplished the goals, and in the donor countries to assure that they fulfil their part of the responsibility. The countries at serious risk of not achieving the goals are foremost from sub-Saharan Africa, North Africa and the Arab states.

The World Bank has invited 23 countries to join EFA's Fast Track Initiative (FTI). The initiative aims to support policy change at country level and to improve possibilities to learn from each other and have a positive impact on the donors' co-ordination. The World Bank's criteria to be granted FTI funds have resulted in an indicative framework including the total government spending on education and primary education, teachers' salaries (about 3.5 times gross domestic product (GDP) per capita for low-income countries), the teacher-pupil ratio, non-teacher salary spending and the repetition rate (The World Bank, 2003a).

1.1.1 School enrolment

There is a large variety of the gross enrolment between, as well as within, the countries and there are different ways of measuring school enrolment. The gross enrolment ratio indicates the number of pupils, regardless of age, at a given level of schooling as a proportion of the total number of children in the relevant age group. For example, if a country has 100 children of primary schooling age and 90 of them are enrolled in school, the gross enrolment ratio is 90 percent. But in many countries in Africa it is common that students are older, or younger, than the prescribed age for the grade. The net enrolment ratio therefore excludes children, older or younger than the official school age, from the total number of children enrolled. To continue with the example above, if ten of those 90 pupils that are enrolled in school are older than the official school age group, the net enrolment ratio is 80 percent (EI 2003, p. 12f). The net enrolment ratio better shows the actual number of participants in the relevant age group in education.

According to the MINEDAF VIII documents (2002a) prepared prior to the Education Ministers of African States (MINEDAF) last meeting in 2002[3], with the persistent enrolment trend, only 15 out of the 45 countries with data available will reach universal primary education by 2015. The average gross enrolment is estimated to 81 percent in sub-Saharan Africa, but it varies between less than 40 percent to 100 percent. Urban boys are the ones most likely to attend school, while

[3] The theme for MINEDAF VIII, was *Taking up the challenges of education in Africa, from commitments to actions* (MINEDAF, 2002c).

girls, rural children, orphans and disabled children in a lesser extent have access to formal education.

Even if a country has a high gross enrolment ratio, it does not say anything about how many children actually complete primary education. The access rates to grade 6, is the ratio between the number of new entrants (non-repeaters) to grade 6 and the population of the official age for grade 6, expressed in percentage. In the countries where primary level lasts 5 years, this indicator is replaced with the access rate to grade 5 (p.51). The access rate corresponds for many African countries to the primary completion rate: the number of students among 100 that complete primary education. It is not always the countries with the highest gross enrolment ratios that have the best access rates to grade 6. For example in Benin, the gross enrolment ratio is 89 percent but only 6 out of 10 children complete primary education because many children do not start school at all, or drop out before they reach grade 6.

The access rate varies between 20 percent to 100 percent in the sub-Saharan African countries. Countries like Algeria, Botswana, Cape Verde, Egypt, Gabon, Mauritius, South Africa, Swaziland, Namibia, Tunisia, Uganda and Zimbabwe are on a good way to achieve universal primary education since 1990, with access rate to grade 6 higher than 80 percent. On the other hand in countries like Benin, Burkina Faso, Central African Republic, Djibouti, Eritrea, Ethiopia, Guinea-Bissau, Mali and Niger less than 40 percent of the children in school age have access to grade 6 (Table 1.1, p.13). On an average only 56 percent of the schooling age children in the African countries have access to grade 6, which leaves half of the children without the prospect of completing primary education. One quarter of the sub-Saharan African countries had even lower access rates in 2000 than in 1990.[4] Moreover, the children that currently complete primary education are foremost the children that are the ones easiest to reach. Rural children, girls and children with disabilities are going to school to a less extent.

In 1985, there were 70 million children in the African primary schools, and the number of children in primary schools in Africa has increased to 100 million in year 2000. But to be able to achieve the EFA-goals of universal primary education, estimations indicate that at least 180 million children are going to be enrolled in primary schools in the African countries by 2015, which is 1.8 times more than the last decade:

one African child out of two complete six years of schooling. And that is the essential step to ensure sustainable literacy at the adult age. Quantitatively, Africa will have to enrol at school 180 million children in 2015 while only 100 million are currently enrolled (MINEDAF VIII, 2002a: *Universal primary education, goal for all*).

The Francophone countries in Africa have to enrol 71 million children in 2015. This can be compared to the enrolment rates in 1985 and in 2000, when 23 million respectively 34 million children were enrolled in school in the Francophone countries.

Furthermore, only one of ten children in sub-Saharan Africa attends pre-primary education. It is a big difference between regions and within countries, for example double as many children in the Anglophone countries as in the Francophone are enrolled in pre-primary education. Concerning secondary education, 26.2 percent of the school age children were enrolled in 1999/2000 in sub-Saharan Africa. There are varieties between the countries, as well as within, and a mere 5 percent of the secondary school age children attended secondary education in Ethiopia compared to 107.3 percent in Mauritius. Even if more people are literate today than in 1990 (50 percent were literate in 1990 and 60 percent in 2000) the number of illiterate people has increased due

[4] According to the MINEDAF documents[4], Burundi, Cameron, Central Africa Republic, Congo, Ivory coast, Democratic republic of Congo, Kenya, Lesotho, Madagascar, Nigeria, Zambia and Zimbabwe have lower access rate in 2000 than in 1990.

to the population growth. There are big differences between the countries, for instance in Niger and Burkina Faso, are only 20 percent literate (MINEDAF VIII, 2002a).

1.2 Quality education

The Dakar goals clearly emphasised the quality aspects of education:

We hereby collectively commit ourselves to: improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills (Dakar Framework for Action, 2000; Article 7vi).

The quality aspect of education is one of the most discussed goals from Dakar. It is difficult to find variables to measure and to compare quality education and to find a mutual definition.

The allocation and spending on education in general and on primary education in particular, are important factors for the pupil's learning. But even if the needed finances are provided, it is not always the country that spends the most money on education that has the best results. The way the money is used has significant influence on the results. As long as the pupils do not learn anything in school, more money alone will not help (MINEDAF VIII, 2002a).

Also, the allocated money does not always reach its destination due to corruption and mismanagement and budget allocation alone makes a poor indicator of the quality and quantity of the educational sector. As an example, findings in a case study, in Uganda, tracking public expenditures in primary education, indicates that less than 30 percent of the allocated money actually reached the schools on an average at the end of 1995 (The World Bank, 2001). Another case study from Ghana indicates that 50 percent of the non-salary public expenditure reached the schools. The major leakage in Ghana occurred, according to the study, between the central authorities and the district level (Xiao & Sudharshan, 2002).

It is difficult to find measurable data on the quality of education that can be compared between different countries and regions. In the *EFA Global Monitoring Report 2002*, quality education is discussed in the economic terms of inputs, process and outcomes. The inputs are factors influencing the schools possibilities such as the curriculum, the teachers' qualifications and the support from the local society. The students' characteristics are another important input as well as the community and household characteristics. The inputs influence the teaching/learning process and the school climate. The process is a factor that influences the school's climate and the teaching/learning.

The outcomes are the gains of education. Three different categories of outcome are highlighted in the model:

- Achievement: What the students learn
- Attainment: The number of students that pass examinations
- Standards: What society wants from education (Table 2.14)

Components that are able to give a hint of the quality of education are, according to the *EFA Global Monitoring Report* (2002), the teacher to student ratio and the frequency of repetition of the latter. Many of the least developed countries have a teacher to student ratio of 1 to 100, which is at least three times more than in developed countries. The repetition rate range between 0 and 34 percent, and the average repetition rate is 16 percent in the African countries (MINEDAF VIII, 2002a).

For the last MINEDAF conference (MINEDAF VIII), in Dar es Salaam in December 2002, few repeaters, no dropouts and high marks in national examinations were identified as measurable variables for a quality education. The way education prepares the pupils for life is more difficult to measure. According to MINEDAF VIII, quality education is one that enriches the lives of learners and it requires among other things:

(1) healthy, well-nourished and motivated students;
(2) well-trained teachers and active learning techniques;
(3) adequate facilities and learning materials;
(4) a relevant curriculum that can be taught and learned in a local language and builds upon the knowledge and experience of the teachers and learners (MINEDAF VIII 2002b, part V: *Mobilizing and managing resources to achieve EFA*)

According to the EFA Global Monitoring Report (2002), other factors that are important to the results of education are parental income and background, which influences the achievement of the students in all countries. The availability of school materials, school infrastructure and health issues have a larger effect on the students' learning achievements in developing countries than in wealthier ones. There is a discrepancy between the prescribed hours of teaching and the actual numbers of teaching hours carried out. The pupils in richer countries get more hours of teaching than pupils in low-income countries get; this is even more significant in the lower grades. Taking all grades together, high-income countries allocate 400 more teaching hours per year in primary school than the poorest countries do.

There is also a big discrepancy between what the students should learn according to the curriculum and what they actually learn. The meaning of education for most people is to proceed in the educational hierarchy, and therefore the focus is teaching/learning for the national examinations, which is the gateway to a higher grade. Many teachers in the African schools have insufficient qualifications and are therefore dependent on the very detailed curriculum and teachers' manuals. Furthermore, the curriculum is often insensitive to the local community and includes too many subjects. If an improved curriculum will have any effect on the teaching and the students' results, alterations have to be followed by an extensive in-service training for the teachers (MINEDAF, 2002a).

There is no clear definition of quality education in the EFA documents, but quality education is often equal to the students' learning achievements. They are often measured by national standardised examinations. There are also efforts to monitor and compare the educational quality in the African countries. For example, the Education Systems Analysis Programme (PASEC) within the conferences of ministers of education (CONFEMEN) monitors the educational achievements in African countries using the French language (CONFEMEN, 2003). Another network of research teams is the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ), where education ministries from some African countries[5], together with the International Institute for Educational Planning (IIEP), undertake large-scale national studies of the quality of education. The surveys will provide the means to make comparisons of the students' learning achievements and the conditions of schooling between the countries (SACMEQ, 2003).

The SACMEQ survey of educational quality (UNESCO, 2002) carried in 15 countries in southern, eastern and central Africa in 1999, were based on data covering 46,560 sixth grade students from 2,493 schools. According to results, two thirds or more of sixth grade students in Lesotho, Namibia, South Africa and Uganda had not reached the minimum reading level required to *barely survive at the next stage of schooling* (UNESCO 2002). By comparing the results of students

[5] 15 ministries of education from Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania (Mainland), Tanzania (Zanzibar), Uganda, Zambia, and Zimbabwe are members of SACMEQ.

within each country, the survey also revealed great disparities and inequalities in individual school performances. Besides the pupils' learning achievements the survey showed that almost half of all pupils were in schools without electricity and 15 percent were without water. Nearly half of the pupils were in schools where the head-teachers felt they required major repairs or needed to be completely rebuilt. In Kenya and Uganda, less than one quarter of pupils had their own reading and maths textbooks. In Tanzania, only six percent of the surveyed children had schoolbooks.

1.3 Factors Influencing Students' Results

Since the 1960s, there have been studies on the correlation between pedagogical results and economic input. Until the 1990s, the dominated conclusion made by educational economics has been that economic investments on education did not have any effect on the students' results. Now, there is a more diverse discussion in what way the money in the educational budget is spent. Even if some researchers question the results there is a fair agreement on the beneficial effects of smaller class sizes and teacher to student ratios on the students' learning achievements. But the single most influential factor for the students' results is the teachers' qualifications (Gustafsson & Myrberg, 2002).

1.3.1 The Class Size Influence on Students' Results

According to Gustafsson & Myrberg (2002), the class size and the teacher to student ratio are two variables that are used to measure the effects on economic investments in education. Because of the different ways of interpreting the terms, international comparisons can be misleading. Class size is usually defined as the number of student that is enrolled in the same teaching group for a longer period. The class size is changeable; pupils move and are sometimes taught in more flexible groups for some subjects. The teacher to student ratio is defined as the average number of full time study students per full time working teacher. It can be troublesome to measure the number of students and their attendance in class for a longer period and to define which teachers whose prime assignment is to teach. In some cases other staff, as school nurse and school direction, are counted as teachers.

One often cited study on the class size effect on the pedagogical results, is the STAR-project (Tennessee Student/Teacher Achievement Ratio). It is a very ambitious study about importance of the class size for the pupils' learning achievements, which began in 1985 in Tennessee, USA. 11 600 pupils in approximately 80 schools participated in the study. The students and the teachers were randomly divided into three types of classes; small class size with 13-17 pupils, normal class size with between 22 and 25 students and normal class size with an assistant teacher besides the ordinary teacher (Word et al., 1990). Since then, several studies to follow up the results have been accomplished.

According to the STAR-project, the pupils in the smaller classes had, compared to the students in the normal size classes, better reading and Mathematics skills but there were no significant signs of a better result concerning the pupils' motivation and self-esteem. The effects were most obvious in first grade and among pupils from minority groups and disadvantageous groups (Finn & Achilles, 1990). The results in the normal sized classes with an assistant teacher were not better than in the normal sized classes with just the ordinary teacher, indicating that the teachers' methods is a determining factor for the pupils' learning achievement. The assistant teacher followed the ordinary teacher and did not bring anything new into the classroom. In the smaller sized classes, the teacher individualised more and used the instructional material in a more flexible way (Word et al., 1990). The positive effects of being taught in a small sized class

during the first years in school lasted during the compulsory school period according to several follow-up studies (Finn, 1998) (Nye & Hedges & Konstantopoulus, 1999). After that, it is difficult to measure the long-time effects due to statistical falling off.

1.3.2 Qualified Teachers Influence on Students' Results

Teacher's competence is a combination of academic knowledge and methodology, the academic skills are not enough to have a positive influence on the students' results, and a broader teaching competence is also necessary. The academic knowledge is important to a certain level, but beyond that (master certificate) the methodology has an increased importance on the pupils' learning achievements. In addition, studies about the significance of education show a clear relation between teachers with a complete teacher education and good results. For example, studies in the USA show that teachers without a complete teachers' education had lower results, were less satisfied with their work and more likely to leave the profession than teachers with a complete teacher education. In those states where teachers' salaries were increased together with an investment on the teachers' qualifications as a way to improve education's quality, achieved better students' results. On the contrary, the states that focused on a detailed curriculum and standardised tests of the students did not improve the students' results (Darling-Hammond, referred to in Gustafsson & Myrberg, 2002).

Even if the results from the USA can be difficult to generalise as to be valid for developing countries, the results of the importance of the teacher's qualification for the students' results are more general. The EFA Global Monitoring Report Team (2002) states that the teacher's qualifications are essential to the learning outcome of education, and it is even more important in developing countries than in industrialised.

In addition, the PISA (Programme for International Student Assessment) survey from 2000 also identifies qualified teachers to be among the school's most valuable resources. Also, schools with specialist teachers, high teacher's moral and commitment and good relations between teacher and students had a positive influence on the students' learning achievements. The PISA surveys the knowledge and skills of 15-year-olds in the principal industrialised countries and will be conducted every third year. It is accomplished in collaboration between the countries participating in the survey and the Organisation for Economic Co-operation and Development (OECD). In the first survey in 2000, 265,000 students from 32 countries (28 OECD Member countries plus Brazil, Latvia, Liechtenstein and Russian Federation) participated.

Finland had very good results in the PISA 2000 survey, and possessed the top position in reading literacy. Finland was ranked as the third best country in scientific literacy and the fourth in mathematics literacy. A report from Finland with the attempt to explain the good results emphasise their highly qualified teachers in all schools as one of the factors behind the fine results. According to the report, it is a necessity to have highly qualified teachers in all schools. Furthermore, the teacher profession is one of the most important professions in Finland. The teachers are viewed as the pedagogical experts with a considerable degree of decision making authority to organise the pedagogical work within the frames of the curriculum (Välijärvi et al, 2002).

Studies in for example Botswana also shows a relationship between the number of trained teachers in a primary school, and students' achievement (Botswana country report, 2000: Government of Botswana, 1977). Furthermore, the quality of instruction and the interaction between teachers and students have an effect on the overall quality of education and the effectiveness of the school (Botswana country report 2000: Chilisa, 1995).

1.4 Objectives

To be able to achieve universal primary education of good quality it is crucial to attract, educate and retain qualified teachers. The purpose of this working paper is to discuss the shortage of primary teachers in African countries as an obstacle to achieve *Education for all* by 2015. The quality of the education is indispensable if the students are to complete primary education with literacy, numeracy and essential life skills; and the teacher's qualification is the most important factor for the students' results.

The teaching profession has to be an attractive choice in order to be able to attract qualified primary teachers. In this context it is interesting to analyse the view on teachers and the strategies on how to attract, educate and retain qualified teachers, as it appears at the national level in the country reports[6] prepared prior to the Dakar conference. According to the reports, there is a large variety between the countries' progress towards the EFA goals. The country reports from Botswana, Mozambique, Uganda, Tanzania (Mainland), Zambia and Zimbabwe are analysed in this working paper in part 3, 4 and 5. These countries are chosen because of their different progress towards the EFA-goals and also for the reason that these country reports are written in English. The country reports from some of the countries with the largest shortage of teachers, like Ethiopia, Burkina Faso, Chad, Djibouti and Niger, were not available (EFA, 2000).

2. The Shortage of Teachers

A collective commitment from Dakar was to achieve a primary education of good quality by 2015. Not only does it involve an immense increase of the number of children that attend school; it also implies the recruitment of new teachers.

2.1 Teachers required by 2015

According to the *World Education Report 2000*, there were approximately 59 million teachers on the pre-primary, primary, secondary and tertiary level in the world in 1997. Almost 25 million of them were primary teachers. In sub-Saharan Africa, the total number of teachers was over 3 million, of which 2 million were primary school teachers. 43 percent of the primary teachers and 31 percent of the secondary teachers in sub-Saharan Africa were female. Two thirds of the world's teachers live and work in the developing countries. Siniscalco (2002) states that even if the number of primary teachers has increased with 9 percent on average between 1990 and 1997, the growth is overshadowed by the population growth. The primary school age population also increased with 9 percent on an average between 1990 and 1995, ranging from 3.5 percent in Latin America and the Caribbean to more than 16 percent in sub-Saharan Africa.

There have been a number of studies on the class size effects on the students' results as referred in part 1.3. Even if there in some cases are contradictory results there is a common view that smaller classes are advantageous for the students learning achievement, especially for disadvantageous children and for younger students. Even if a comparison between countries' teacher to student ratio can be misinterpreted they can give a hint of the varying situation in countries. In many African countries, class sizes as big as 100 pupils to one teacher are not uncommon. For example in Benin, Central Africa Republic, Chad, Congo, Gabon, Malawi, Mali, Mozambique and Senegal, the average teacher to student ratio is usually 1 to 50 or 1 to 70,

[6] The country reports evaluate the progress as well as the shortcomings towards the *Education for all*-goal since 1990 in each country and were part of the background documents to the conference and to the *Dakar Framework for Action 2000* (EFA, 2000).

which can be compared to Denmark with a teacher student ratio of 1 to 10.6 or Italy 1 to 11.3 (Siniscalco, 2002).

To achieve universal primary education, 180 million children in Africa will be enrolled in primary school by 2015 and more than 3 million public primary teachers are needed in Africa without any improvement in quality and with the persisting teacher to student ratio as exists today (MINEDAF VIII, 2002b). In 2000, there were 2.49 million of public primary teachers in African primary schools and to meet the goal there should be 3.85 million in 2015. The required number of new teachers are actually larger than the difference between 3.85 and 2.49 due to retirement of old teachers and death of HIV infected teachers (Brossard, 2003).

Since 1985, the average growth rate of public teachers in Africa has increased by 2 percent per year, but to meet the demands there has to be an annual increase of 3 percent. The distribution of qualified teachers varies significantly within as well as between the countries. The Francophone countries have to increase their number of teachers the most, from today's 825 000 public primary teachers to 1.5 million by 2015. To reach that number there has to be an annual increase rate of public primary teachers of 4.1 percent, which can be compared to an annual increase of 2.1 percent since 1985 (MINEDAF VIII, 2002a).

The simulations of public teachers in table 1 and 2 are based partly on the World Bank's analytical work to the Fast Track Initiative and partly on further calculations from education sector policy analysts at UNESCO/BREDA (UNESCO Regional Office in Dakar) in partnership with the UNESCO Institute for Statistics and the World Bank. Table 1 shows a simulation of the estimated percentage of public primary teachers needed in Africa by 2015. It shows the estimated required increase of public primary teachers between the academic year of 1999/2000 (or the latest year available) and 2015 in order to accomplish universal primary education. The simulations of the required teachers are made with the following assumptions: 100 percent of access rate to grade 6, the teacher to pupil ratio is assumed to be 1 to 40, 10 percent on an average of the pupils are believed to repeat a grade and an estimated 10 percent of the schools are assumed to be private (MINEDAF VIII, 2002a).

Table 1: Simulation of the percentage of primary public teachers needed to achieve universal primary education by 2015[7]

Country	**Estimated Required Increase of Teachers between 1999/2000 and 2015**
Angola	18%
Benin **	58%
Burkina Faso **	77%
Burundi ****	66%
Cameroon ***	62%
Chad	76%
Comoro ***	28%
Congo (Dem.Rep.)	65%
Ivory coast **	49%
Djibouti *	75%
Equatorial Guinea ******	45%

[7] The percentages are estimations from the graphs in the MINEDAF's statistical documents. No data were available from the following countries: Algeria, Botswana, Cape Verde, Central African Republic, Congo (Republic), Egypt, Kenya, Mali, Mauritius, Morocco, Namibia, South Africa, Swaziland, Tunisia, Ghana, Libyan Arab Jamahirya, Sao Tome e Principe, Seychelles, Somalia, Tanzania (Zanzibar) and Zimbabwe. ".." indicates that no data was available. The asterisks show latest year from which data were available: * year 01/02, ** year 00/01, *** year 98/99, **** year 97/98, ***** year 94/95, ****** year 92/93

Eritrea	61%
Ethiopia ***	74%
Gabon *****	25%
Gambia	36%
Guinea **	65%
Guinea Bissau	43%
Lesotho	20%
Liberia	59%
Madagascar ****	32%
Malawi ***	84%
Mauritania ***	36%
Mozambique *	51%
Niger *	81%
Nigeria	35%
Rwanda *	42%
Senegal **	46%
Sierra Leone	46%
Sudan	36%
Tanzania (Mainland) **	63%
Togo	49%
Uganda	24%
Zambia	62%

Source: MINEDAF VIII, 2002a, Part V, VI: *Country profiles*

Most of the countries have under-dimensioned programs for educating teachers and educate far too few teachers each year to have a chance to reach the estimated required number of teachers. For example, Burkina Faso estimated requirement increase is 77 percent for the next 15 years. Chad, Ethiopia, Niger, Malawi and Djibouti are also countries there the required increase of public primary teachers are estimated to be over 70 percent by 2015, in order to have the teachers required to achieve universal primary education. Moreover, an increase of more than 50 percent of public teachers are required in Burundi, Cameroon, Democratic Republic of Congo, Eritrea, Guinea, Liberia, Mozambique, Tanzania and Zambia.

Table 2 presents the number of primary teachers in 1985, 1999 and 2000 as well as an estimation on the number of public primary teacher required by 2105 to achieve universal primary education. The last column in table 2 shows the difference between the number of teachers in 1999 or 2000 and the estimated number of teachers required in 2015.

The data on the actual number of teachers is mainly from the MINEDAF documents and so is the simulation. The data from the MINEDAF statistical documents is supplemented with data from the UNESCO yearbook from 1985 and 1999 in those case data was missing or data of more recent date could be found in the UNESCO database. For a few countries there were different information on the number of teachers in the countries in the MINEDAF documents and the UNESCO yearbooks. In those cases there were contradictory information, both figures were applied in the table. The UNESCO data refer to both full-time and part-time primary teachers. The great differences among countries in the proportions of part-time teachers may affect the comparability of data. The bold figures are from the UNESCO yearbooks.

Table 2: Simulation of the number of public teachers needed to achieve universal primary education by 2015[8]

Country	Number of Public Primary Teachers in 1985	Primary School Teachers in 1999	Number of Public Primary Teachers in 1999/2000[9]	Estimated Required Number of Public Primary Teachers in 2015	The Difference between the Number of Teachers in the Latest Available Year and the Estimated Required Number in 2015
Algeria	125034	..	169519	129883	39636
Angola	**31161**	**36450**	..	80636	-36450
Benin	**13452**	**17710**	..	36036	-18326
Botswana	6515/**6980**	**11950**	9522	6276	3246
Burkina Faso	**6091**[10]	**17435**	..	64004	-46659
Burundi	**6866**	**12511**	..	36284	-23773
Cameron	**33598**	**32246**	..	83804	-51558
Cape Verde ***	1493[11]	..	3190	1908	1282
Centr. African Rep	4718	..	3274	16979	-13705
Chad	**4779**	**13313**	..	49698	-36385
Comoros	1901	**1536**	..	2698	-1162
Congo (Dem.Rep.)	..	..	..	324200	..
Congo (Republic)	7745/**6923**	..	5819	17746	-11927
Ivory coast	**33500**[12]	..	..	71280	..
Djibouti	**585**	**1192**	..	3366	-2174
Egypt ***	184635	..	290688	175839	114849
Equatorial Guinea	..	**1691**	..	1980	-289
Eritrea	..	**6229**	..	18513	-12284
Ethiopia	**50922**	..	..	351772	..
Gabon	**4008**	..	..	5965	..
Gambia	**2979**[13]	**4188**	..	6435	-2247
Guinea	**7605**	**17340**	..	37521	-20181
Guinea Bissau	..	**3405**	..	5816	-2411
Kenya	138374	..	149030	14812	4218
Lesotho	**5663**	**8225**	..	9232	-1007
Liberia	..	**12966**	..	18266	-5300
Madagascar ****	32641	**46051**	27521	72617	-45096
Malawi	**15440**	**45812**	..	61009	-15197
Mali	**8593**	**8350**	..	69968	-61618
Mauritania	**2785**	**7909**	..	14182	-6273
Mauritius **	6450	**5107**	3996	2743	-1253
Morocco ***	79300	..	116638	96228	-20410
Mozambique	**20286**	**34293**	..	69523	-35230
Namibia *	10912	**12062**	9835	8217	-1618

[8] The data from the UNESCO yearbook in 1985 are in all cases except for Botswana, Lesotho, Mauritius, Seychelles, Swaziland, Zambia and Zimbabwe for the academic and not the calendar year. ".." indicates that no data was available.
[9] The asterisks in column 4 show latest year from which data were available: * year 96/97, ** year 00/01, *** year 98/99, **** year 97/98. No asterisk indicates that the data is from the academic year of 1999/2000.
[10] Including administrative staff
[11] Grade 1-4
[12] Including pre-primary education
[13] Do not include "Action aid" schools

Niger	**7383**	**14240**	..	73384	-59144
Nigeria	**308072**	..	..	697909	..
Rwanda	**14896**	**26499**	..	48856	-22357
Senegal	**12559**	**21755**	..	54252	-32497
Sierra Leone	**10837**	**14924**	..	25379	-23885
South Africa	182654	**226577**	187371	131971	55400
Sudan	**50089**	**96050**	..	148327	-52277
Swaziland	4107	**6425**	5694	4876	818
Tanzania (Mainland)	**92586**	**103731**	..	162623	-58892
Togo	**10049**	**24424**	..	26483	-2059
Tunisia ***	40703	..	60051	28081	31970
Uganda	**61424**[14]	**110366**	..	127231	-16865
Zambia	**27302**	**32866**	..	47695	-14829

Source: MINEDAF VIII, 2002a, Part V, VI: *Country profiles*, UNESCO 1985, UNESCO 1999; The bold figures are from the UNESCO yearbooks

A large majority of African countries will, according to the estimations, have a shortage and in some cases a severe shortage of teachers in 2015. Many countries will not, with the current increase of the number of teachers, achieve universal primary education, due to the shortage of teachers. These countries will have other obstacles to overcome as well.

Some countries; like Algeria, Botswana, Cap Verde, Egypt, South Africa, Swaziland and Tunisia, will according to the simulations have a surplus of teacher in 2015. These countries are also the countries that already have, or are on a good way of achieving, universal primary education. There are different explanations for the lesser number of public primary school teachers required in 2015 than the current number.

For example in Algeria, there was 169 519 public primary schools teachers in 2000, but only 129 863 public primary schools teachers estimated to be needed in 2015 (with the assumptions of 100 percent of access rate to grade 6, a pupil to teacher ratio of 40 and 10 percent of pupils in private schools). One explanation for the estimated surplus of teachers can be that Algeria is already very close to the goal of universal primary education with an access rate to grade 6 equal 91 percent. Also, in the following years, the increase of primary school age population will slow down. In the assumption used for the simulations, the teacher to student ratio is 1 to 40, and Algeria has now an average teacher to student ratio of 28 pupils per teacher. Another assumption used is that 10 percent of the pupils attend private schools, while there are no private schools currently in Algeria (Brossard, 2003).

The statistics do not clarify if the teachers are qualified to teach according to the national requirements or not. So even if the shortage of teachers in African countries is a strong indicator for the education's quality, it does not reveal the present teachers' qualifications, which certainly also have an impact on the quality.

2.2 The Effects of HIV/AIDS

Education is a sector depending on its human resources. The effects of HIV/AIDS have therefore severe consequences for education, the pupils are often in the age group most affected and the teachers are in the age group where most of the deaths occur. By the end of 2001, over 40

[14] Public and aided education only.

million people were living with HIV/AIDS worldwide, of them were 2.7 million children below 15 years. A majority of the 40 million infected people, 69 percent, live in sub-Saharan Africa (The World Bank, 2002). Today there are 11 million orphans in Africa, 33 million are projected to be orphans in 2010 (MINEDAF VIII, 2002a).

According to the EFA Global Monitoring Report (2002) most HIV-infected persons remain clinically healthy for several years after their infection but their immune system will gradually be destroyed leading to periods of illness, followed by periods of relatively good health. Infected teachers are often able to teach during the periods of good health but are absent during the illness periods, which tend to come more often and last longer towards the end of the disease. According to estimations from the World Bank, an infected teacher is likely to be unable to teach for a total of 260 days before dying of AIDS. Also, the time spent to care for sick relatives and to attend funerals have consequences on teachers' attendance in schools.

The EFA Global Monitoring Report (2002) states that in a situation where the shortage of qualified and experienced teachers is a major obstacle to succeed and reach the EFA-goals, HIV/AIDS have serious effects on the situation in the schools. A study in Zambia estimates teacher absenteeism due to AIDS to cost 12 450 teachers years, or 20 million teachers hours between 1999 and 2010, leaving 498 000 children without classroom education for a year. The number of primary school teachers that died in 2000 in Zambia, is equivalent to 45 percent of all teachers that were educated during that year. Without AIDS, the numbers of teachers would increase in Zambia from 37 000 in 1999 to 59 550 in 2010, but with the existing situation the number of teachers will probably not be higher than 50 000.

Another example is Malawi where 30 percent of the teachers are infected (The World Bank, 2002). A report from South-Africa from 2002, indicates that without available drug prevention, more than 20 000 teachers need to be educated each year by the end of the decade instead of the 3000 teachers that now are educated yearly in the country (EFA Global Monitoring Report, 2002).

Many of the teachers that are infected are unable to continue teaching. Usually, there are few possibilities to replace an infected teacher and many school children are left without instruction. The situation is often worse in those countries farthest away from achieving the EFA-goals. A study in West Africa showed that teacher death caused by AIDS left 119 000 schoolchildren without an education in 1997/98. Alone in Central African Republic, 107 primary schools closed when replacements of infected teachers could not take place. The situation is similar at the teachers' colleges, but there the replacements often take even longer and are more costly due the teachers' higher qualifications (EFA Global Monitoring Report, 2002).

3. Qualified Teachers

Qualified teachers are important to ensure a quality education and each country chooses the required minimum qualifications to teach. The cost of a qualified teacher will have to compete within a limited budget frame with the infrastructure of education, school material and from the governments' point of the view, the lower costs of employing a person without a teacher's education.

Also, the MINEDAF conference identified teachers as one of the key factors in improving the quality of education. But the limited budget- and timeframe put a lot of strain on the educational system in many countries. The acute question while producing the EFA plans is "what quality education – at what price?"

What strategies do countries apply to provide well-trained teachers, at a cost that education budgets can bear and under satisfactory conditions that will gain social acceptance? (MINEDAF 2002a, Part III: *Achieving universal primary education of quality by 2015: a huge challenge*)

In the following parts (three, four and five) the country reports prepared prior to the Dakar conference from Botswana, Mozambique, Uganda, Tanzania (Mainland), Zambia and Zimbabwe are analysed from different perspectives.

3.1 Required Qualifications to Teach

Irrespective of the achievements in the EFA-process, the problem of a high proportion of unqualified teachers is a common feature in the plans. There is also an agreement on the relation between the teacher's education and the education's quality in the country reports.

The primary school teachers in Botswana have had lower qualifications compared to other developing countries that have made similar achievements in providing basic education. But according to Botswana's country report (2000), the number of qualified teachers has increased, which *holds the greatest a promise in enhancing quality*.

The strategy to improve the quality of education has been to raise the primary school teachers' academic and professional qualifications to a Senior Secondary School Certificate in 1994, but only 17.1 percent of the primary school teachers had that certificate in 1997. The previous minimum requirement was a Junior Certificate (9 or 10 years of total education). Parallel to the increase of the minimum requirements unqualified teachers, referred to as Tirelo Sechaba Participants – TSPs, were needed to cope with the shortage of teachers:

In most urban schools TSPs were not solely responsible for a class. Instead they were paired with an experienced teacher or teamed up with other TSPs, where they shared teaching duties among themselves. Even though they provided an invaluable service, and indeed provide the necessary relief where shortages exist, TSPs were not necessarily part of the teaching establishment (Botswana country report, 2000).

The country report from Tanzania (2000) also sees an upgrading of all teachers to the minimum required qualifications as a strategic goal. In 1995, the minimum qualifications to teach were improved to a Grade A certificate. But even if an upgrading of the teaching force took part during the 1990s, less than 50 percent of the teachers in all regions, expect in Dar es Salaam and Arusha, had the required qualifications in 1998. The goal is to upgrade all primary school teachers by 2003/04. According to the Tanzania country report 2000, *untrainable* teachers will be encouraged to retire (Tanzania country report, 2000:*7.2.7 Percentage of primary school teachers having the required academic qualifications*). Tanzania has identified the low morale among voluntary teachers and the insufficient supply of permanent teachers among the major factors that contributed to the government's failure to achieve education for all.

According to Mozambique's country report (2000), there is a rapid growth of school age children in the country that will require recruitment and training of a large number of teachers together with the construction of a large number of classrooms and schools. The pre-service training and continuous upgrading of teachers is seen as strategic in the plan to improve the quality of education.

The required qualification in Mozambique is to complete Grade 7 plus three years of teacher training. The ambition is to gradually replace the requirements to a minimum of ten completed years of schooling plus one year of intensive pre-service with focus on mastery of curriculum

content and classroom "survival skills". An additional year of supervised practice accompanied by in-service training with focus on pedagogical practice and how to work with parents and the local community is planned. There is also a desire to develop bachelors or masters course for the educators of primary school teachers.

There has been a necessity to contract unqualified teachers in order to respond to the need of expanding school system in Mozambique and now there has to be a rapid expansion in capacity for in-service training to upgrade them. Accelerated training programs with a twelve months pre-service training will be introduced to quickly be able to assume teaching positions. There are also plans to support an in-service program for untrained teachers with six years of schooling plus one year of professional training through a distance education teacher training. Also, it is important to recruit more female teachers, as the lack of female teachers has been identified as one of the main causes of low enrolment among girls.

In Zimbabwe, the teachers' academic qualifications vary greatly among serving primary-school teachers. The official minimum qualification to teach in primary education is a total of 13 or 14 years of education; six years of primary education, four years of secondary education, plus a teacher certificate obtained after three or four years of teacher education. As soon as qualified teachers are available they will replace all the unqualified teachers. In 1990, almost half of the primary school teachers were untrained. The situation has improved since then and 77 percent of the primary school teachers and about 89 percent of secondary school teachers were trained in 1997. Parallel to the regular teacher's education an *innovative approach to the training of primary school teachers* was adopted, which combined short residential training (one year) with extended teaching practice in the schools (three years) (Zimbabwe country report, 2000).

Uganda states in the country report (2000) that: *There is no doubt that improvement in learning achievement and the quality of education in the primary schools is a function of the quality of teachers therein.* In spite of the statement in the report of the importance of qualified teachers, nearly 60 percent of the Ugandan teachers were unqualified in 1990, which according to the report had serious implications for the quality of primary education. The situation has improved, 75 percent of the primary school teachers were qualified in 1997. An in-service system of training teachers has been introduced together with the regular pre-service training.

3.2 Teachers' Qualifications in the EFA-Process

The country reports from Botswana, Mozambique, Tanzania and Uganda all identify the teacher's qualifications as crucial for a quality education. As a consequence several countries, namely Botswana, Tanzania and Mozambique, have raised the minimum qualifications to teach in primary school. But in most cases there are very low requirements to teach compared to the industrialised countries' and even so, many teachers have far lower teaching qualifications.

All countries struggle with a very high proportion of unqualified teachers. Even if the countries have improved the teaching force's qualifications through extensive in-service training during the 1990s, the number of unqualified teachers is still very high. The population growth and the ambition to achieve the EFA goals, makes it impossible to, with current capacity of the teacher training institutions, be able to the replace unqualified teachers with qualified ones. It will only be achieved in a long term, for example in Tanzania half of the teachers are unqualified.

In-service training is an important complement to the regular teacher's education and there are high ambitions in all the plans to improve the quality and make it more accessible for the unqualified teachers.

Botswana also recognised that:

It is envisaged that teachers with a sound minimum academic qualification would benefit more from in-service programmes that are routinely conducted when new innovations are introduced (Botswana country report, 2000).

Some countries have parallel systems to educate teachers. For example, Botswana requires relatively high qualifications to teach, but at the same time allows TSPs that are placed into the different government sectors, including the education sector, without a teacher education. Other countries also have to rely on unqualified teachers (sometimes they are referred to as voluntary, contractual or community teachers) as a part of the teaching force and they are seen as an unwanted yet necessary measure. In the country report from Tanzania the low morale of the voluntary teachers is identified as a major factor for the government's failure to achieve EFA.

Countries such as Zambia and Zimbabwe are trying to develop innovative ways in which to educate teachers, but they do not discuss the long-term consequences of a shorter teacher's training. Uganda develops distance education as a way to have a more open and flexible education for teachers and in Mozambique, the teacher training centres are resource centres for distance learning.

There is a need in many countries to recruit more female teachers, as well as more women in other positions in the educational system. Female teachers are positive role models for girls and are identified as a way to enrol more girls in school and to encourage them to complete their education. For example in Mozambique, there are districts with no female teachers employed at all. The male teachers are the majority in most regions and for example in Tanzania, the male teachers are often better qualified than the female teachers are.

There are large efforts in many countries to have qualified teachers and to raise the minimum requirements for the teaching profession. But, there are very little discussions of the content in the teachers' education and what necessary restructures that have to take place in order to achieve a quality education in each country.

4. Attract and Retain Qualified Teachers

Already in 1966, UNESCO and ILO adopted a recommendation concerning the status of teachers. According to the recommendation, teachers should be ensured to enjoy a status in accordance to their essential role in educational advancements.

In the report from the UNESCO/ILO joint committee of experts in 2000, the tremendous expansion of teachers, but also its effect on creating an environment *unattractive to potential recruits and to teachers currently in service*, is recognised. It is also claimed that teachers and their organisations are excluded from key discussions on educational issues, and instead a top-down management is favoured.

4.1 Teachers' Salaries and Working Conditions

To be able to attract and retain teachers, there has to exist an environment where teachers are able to perform their obligations, with the necessary qualifications and working conditions. An attractive salary and good working conditions are two ways to achieve this as showed in a report from Voluntary Services Overseas:

Poor absolute value of the teachers' salaries was a significant factor influencing their motivation (Voluntary Services Overseas, 2002)

Also, the ILO (International Labour Organisation) states in a report, which surveys employment conditions, that:

The general impression which emerges from these comparison is that, in the wage hierarchy, teachers do not occupy the place to which their qualifications and responsibilities should entitled them (ILO 1991, p.96)

The dilemma of too low salaries can be exemplified with an article from Tanzania. Tanzania has, like many other countries, a shortage of qualified teachers. Many secondary teachers leave public schools for private schools where the salaries sometimes are almost twice as high:

/../ *the Government was aware of the shortage of qualified teachers in public schools, and was reviewing their wages in an effort not only to retain those that are already there, but to also attract those outside it, as well as new ones, to the sector* (Business Times, Dar es Salaam, 2003).

So far, few countries have been able to increase the number of teachers required to achieve universal primary education. The World Bank sees high teachers' salaries as a factor diminishing the chances to reach the EFA goals. According to the indicative framework, the World Bank's criteria to be granted FTI funds, teachers' salaries should be about 3.5 times GDP per capita for low-income countries (The World Bank, 2003).

This indicative framework has been criticised and especially the criteria about the teachers' salaries have been controversial. There are several problems if the indicators in the indicative framework should be interpreted as a support for the governments preparing national EFA-plans, or as a conditionally to join the FTI. If the indicators are a condition, the World Bank could, according to Education International (EI), interfere in the national salary negotiations in direct contradiction of the ILO conventions (EI, 2003). Also, the Global Campaign for Education (GCE) has criticised the World Bank for providing a ceiling for teacher's salary at the global level, not acknowledging the teacher's rights for collective bargaining recognised by the ILO convention n° 98. Further, the criticisms include the lack of transparency in the process, diminishing civil society possibilities to be involved in the process (GCE, 2002).

The country report from Mozambique recognised the need to make the teaching profession more attractive and saw the low teacher's salaries and bad working conditions as areas important to improve:

The Government recognizes that the current salaries and conditions of work of public sector employees are not conducive to high morale or effective performance, and is therefore working with its international partners in the Consultative Group to develop a strategy to improve their wages, benefits, and working conditions. The Ministry of Education strongly supports this effort, which will benefit teachers as well as other public sector workers. At the same time, the Ministry will seek to provide teachers with access to alternative forms of compensation (e.g., opportunities for promotion, housing, community support) so as to restrain growth in the wage bill.

Improvements in teachers' conditions of service is essential in order to attract better-qualified teachers, increase their time for class preparation and teaching, and reduce their dependence on second jobs and "unofficial" sources of additional income. In addition, of course, improving

teachers' conditions of services makes the teaching profession more attractive relative to alternative employment, and so may help to reduce the rate of attrition among current teachers. Improvements in the compensation of teachers will be closely linked to improvements in their qualifications and performance as teachers are provided with increased opportunities for in-service training (Mozambique Country Report, 2000: *Incentives for teachers*).

Despite the indicative framework's role as a recommendation, the World Bank interfered when Mozambique identified the low teachers' salaries as crucial to be able to attract more teachers:

Policy gains in Mozambique; The government has recently proposed a major increase in teacher's salaries (to 7.4 times per capita GDP), which analyses showed to be unsustainable. After discussion of the FTI proposal in relation to the EFA benchmark (3.5 times per capita) the increase is being renegotiated on the basis of finding a solution that is fair to teachers, while ensuring progress on the quality front (The World Bank, 2003b, p.11, Box 3).

4.2 The View on Teachers

There is a positive view on teachers in most of the plans. Teachers are seen as *the single, most important component in the Zimbabwean education system* (Zimbabwe country report, 2000) and are *among the most important resources in the education of children* (Botswana country report, 2000).

In addition, the MINEDAF VIII conference describes the teaching profession as developing profession. Even if the teaching methods in formal teaching usually is a "face to face" method, many teachers are developing new ways of teaching as co-operative education and working in-groups that are new methods in the African context.

Teachers are becoming aware of gender issues and of potential differences among pupils due to many factors, social, economic, and cultural and others. All of these imply that teaching is changing quite considerably with implications for both pre- and in-service teacher education. |..| Teachers are seen as the *main agents of change in teaching/learning processes, they are at present, in some situations, demoralized and lacking in motivation because their pay is inadequate and sometimes does not arrive at all, and conditions are deplorable* (MINEDAF 2002a, Part III: *Achieving universal primary education of quality by 2015: a huge challenge*).

There are problems of low quality with many repeaters and dropouts among the students and a very teacher centred teaching method approach. Therefore, teacher's education has been singled out as an area in need of improvement in many of the country reports. The causes for the low quality are most often seen as a result or a symptom for the situation with many unqualified teachers and inadequate means for teaching. In the report from Uganda (2000) is the persisting high teacher to student ratio believed to put too much pressure on teachers and obstructs the quality of education.

For example in Mozambique's report (2000) teachers are said to follow the teachers' manual rigidly, taking no consideration of the pupils socio-cultural backgrounds. There is, according to the report, a great urgency to improve teacher training on this issue. More than 50 percent of the teachers in Mozambique have never had access to in-service training programmes and about 30 percent had access to in-service training only occasionally. The report identifies that the high repetition and drop out rates are caused by the teachers' low qualifications and lack of access to in-service training.

Teacher attrition in Zambia's public schools is increasingly becoming a source of concern. According to the Zambia country report (2000), those who remain are *underpaid, poorly housed, demoralised, poorly deployed, provided with little support in the field and given little instructional time.* The low levels of learning are explained by low teacher moral, too many untrained teachers, short instructional time, the use of a foreign language as a language of instruction and inadequate supply of educational materials and poverty.

In Mozambique (2000), experienced teachers are seen as a resource to write and to revise books. And if the objectives of the curriculum are to be attained, a need for a decentralisation with greater responsibilities to teachers in the preparation of materials and in assessing pupils is identified.

Few governments identify teachers and their organisations as important stakeholders in the EFA-process. According to the six analysed country reports, only Tanzania and Zimbabwe have teacher's trade unions represented in the committee working with the national EFA plans. In Uganda, teachers are members in the EFA committee and monitoring groups responsible for the implementation of the strategies.

5. Strategies to Attract, Educate and Retain Teachers

The country reports include different strategies on how to attract, educate and retain a sufficient number of qualified teachers such as to increase the number of pupils per teacher, introduce double or triple shifts, improve the teachers' working conditions or direct teachers to work in areas where the shortage of teachers is biggest. Another strategy is to develop parallel education systems for teachers where relatively high qualifications are required to teach at the same time as unqualified teachers are an important part of the teaching force. In the plans there is no analysis of the long-term consequences of the different strategies.

Some countries, like Mozambique, identify the shortage of teachers as a main obstacle to achieve EFA. There is also recognition that the present system for teacher's education will not be able to educate the required number of teachers:

The main constraint on the expansion of primary school enrolments is the supply of teachers. Universal primary education will require far larger numbers of new teachers, which is clearly beyond the capacity of the teacher training system as it is now organised (Mozambique Country Report, 2000).

Even if there are increased required qualifications to teach in many countries, there will be a parallel system for uneducated teachers, with lower salaries, as an option for the governments. For example in Mozambique, teachers with as little as four years of primary education were recruited during the rapid expansion of primary education enrolments after the independence. The country report from Mozambique states:

The Ministry is unwilling to accept further deterioration in educational quality as the price of increased enrolments, but significant gains in enrolments are clearly not attainable without a major expansion in the capacity of the teacher training system and the introduction of innovative instructional strategies in primary schools (Mozambique country report, 2000).

In Mozambique (2000), the recruitment of candidates with seven years of schooling will continue. The aim is to provide them with an extensive pre-service training program, and to shift a greater share of their preparation to in-service work at the school. The recruitment of new teachers with ten years of schooling and no professional education will also continue, and they will receive

some brief professional orientation and in-service training. Even if the political will is to ensure that all teachers in primary schools have at least 10 years of schooling and full professional training, it is clear that this goal will be achieved only in the very long term. The classes will continue to be big but the in-service training programs for teachers will provide the teachers with skills and techniques that will enable them to work effectively with large classes. There are also suggestions in Mozambique's country report, to introduce alternative organisational models, such as multigrade classrooms and private initiatives. According to the report, double (and sometimes triple) shifts will *unfortunately* continue in most primary schools and so will high pupil/teacher ratios.

Likewise other countries, as Tanzania, believe they can solve the shortage of educated teachers by making the system more effective. The main strategy in the Tanzanian plan (2000) is *rationalization of the primary school teaching force with the aim of realizing efficiency gains in teacher utilization and deployment*. The strategy includes an increase of the teacher to student ratio at primary education in order to generate some savings to finance other sub-sectors. Also, double shifts will be introduced in the crowded urban schools and multi-grade teaching will be used in the rural schools with few students. In the plan, there is no analysis of the quality aspects of the strategy. Beside these attempts to use *cost effective ways of utilizing resources*, the strategy is to construct teachers' houses and supply schools with teaching-learning materials to facilitate teacher training and classroom teaching.

To be able to attract more teachers most countries, like Botswana, Uganda, Zambia and Mozambique, focus on the teachers' working conditions. There are high ambitions in the country reports but the budget constrains are forcing the countries to choose between an expansion of the educational sector and improving the quality. Large shares of the educational budgets are the teachers' salaries, but even so are the higher teachers' salaries - paid on time, identified as crucial as a mean to get a quality education for example in Uganda's country report (2000). Uganda's report also emphasises the improvement in teacher training programmes and instructional materials, the construction of teachers' houses as strategies to guarantee the quality of the teaching and learning and reduced repetitions and drop outs rates.

Also in Mozambique's report (2000) the strategy is to increase motivation and morale of the teachers by improving the teachers' living and working conditions and revise the wages in accordance with the evolution of the economy. A career "ladder" with possibilities for a up-grading closely associated with the teachers' day to day work will improve the status for the profession. In addition, Zambia (2000) plans to improve the salaries, especially in the rural areas. Other strategies to be able attract and retain teachers in more remote areas in Zambia is, alongside with high entry salaries for rural teachers, to introduce a rural hardship allowance and at the same time freeze posting to urban areas and decentralise the payments.

Many countries plan to intensify the education of teachers at teacher training institutions and at the same time increase the provision of in-service training and instructional support services for new teachers. In the country reports, there are strategies to find new innovative ways to educate teachers, for example through distance education and other more flexible teacher education. However, even with these efforts many countries will not be able in the short-term, according to country reports from for example Mozambique and Tanzania, to educate enough new teachers to meet the estimated increase in enrolments.

6. Final Comments

If universal primary education shall be a reality, 180 million children in Africa will be enrolled in primary school by 2015. To meet the demand, there has to be a large increase in the number of teachers. In some of the African countries the teaching force has to increase by over 70 percent and in many other it has to be doubled within a little more than a decade. The situation varies between and within the countries, the classrooms are overcrowded in many urban areas, as in the rural areas few students attend schools.

Even in the countries where all children in the school age start first grade, many do not complete primary education and repetition and drop out rates continue to be high due to the low quality. Many teachers do not have enough academic and methodology skills to teach the students essential literacy, numeracy and life skills. Unqualified teachers are believed to have a low morale and are identified as a reason for not sending children to school, according to the country reports.

All the country reports discuss the quality aspect of education. But the reports are very abstract and there are no definition of "quality" other than perhaps the student's results, which are not properly defined either. If the countries are not certain of what they mean with quality education, it will be very difficult to discuss what qualifications the teachers need to be able to fulfil the country's educational goals. Discussions on the content in the teachers' education are often left out.

There are high ambitions in the country reports to raise the minimum required qualifications to teach in primary education and to improve teachers' pre-service education and in-service training as means to improve the students' learning achievements. Even if the teacher training institutes intensify the teacher education and an extensive in-service upgrading of unqualified teachers develops alongside with new innovative ways to educate teachers, there will still continue to be many unqualified teachers in the schools in the foreseeable future as the teacher educators do not have the capacity to educate the required number of qualified teachers.

Parallel systems for teachers' education has developed in many countries. On one hand there is a formal education that educates teachers in accordance with the minimum required qualifications to teach. Parallel to that, unqualified teachers are recruited and receive only a short in-service training or a brief orientation of the profession. Other strategies suggested by the government to solve the shortage of teachers, are to introduce multigrade classes and double or triple shifts or to increase the teacher to student ratio.

The contradiction between the massive requirements of teachers and the necessity to have qualified teachers will be difficult to solve for many countries within the limited budget frames. Qualified teachers are essential in order to receive a quality education but are unreachable for many countries in a short period of time. There are no in-depth analyses of the different strategies and the consequences on the enrolment and completion rates or the students learning in the long-term.

The teaching profession has to be an attractive choice in order to recruit new and retain experienced teachers in the profession. Teachers' low wages and poor working conditions are identified as strategic areas in need of improvement to achieve this. To be able to do a good job teachers need possibilities, with good working conditions and a competitive salary, which makes it possible to perform well in their profession.

Many countries can be forced to choose between a school with quality education for few and education for all but with an education of low quality. What shall be given the priority? There

should not have to be a choice. Children have the right both to go to school and to go to a school of high quality where there are positive conditions to learn. International co-operation is important to make this possible. All countries have a responsibility to make quality education for all a reality in accordance to the commitments from Dakar, when the industrial countries committed themselves to mobilise the necessary financial resources to achieve a quality education for all. Moreover, teachers need to be recognised as an important partner in the EFA-process with valuable knowledge on education at the classroom level and as key actors in the delivery of EFA.

To have the possibility to go to school, regardless of gender, ethnicity or disabilities is a human right. The commitments from Dakar and the *Millennium Development Goals* ensure that by 2015 all children should have access to and complete free and compulsory primary education of good quality. To be able to achieve this, besides the necessary finances, in-depth analyses on country-level of the long-term consequences of different EFA-strategies are needed.

Acronyms

BREDA	UNESCO Regional Office in Dakar (Bureau régional de l'UNESCO pour l'education en Afrique)
EFA	Education for All
EI	Education International
FTI	Fast Track Initiative
GCE	Global Campaign for Education
GDP	Gross Domestic Product
CONFEMEN	Conferences of Ministers of Education using the French language (La Conférence des ministres francophones de l'Education)
IIEP	International Institute for Educational Planning (a part of UNESCO)
ILO	International Labour Organisation
MINEDAF	Ministres de l'Education des Etats Membres d'Afrique (Ministers of Education of African Member States)
OECD	Organisation for Economic Co-operation and Development
PASEC	Education Systems Analysis Programme (Le Programme d'analyse des systèmes éducatifs)
PISA	Programme for Interantional Student Assessments
UNESCO	United Nations Educational, Scientific and Cultural Organisation
SACMEQ	Southern Africa Consortium for Monitoring Educational Quality
STAR	Tennessee Student/Teacher Achievement Ratio
TSP	National Service participants (Tirelo Sechaba Participants)

References

Botswana Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

Brossard, M. (2003). Personal communication: Education sector policy analysts, UNESCO/BREDA

Business Times (Dar es Salaam) Lula Mgomba, Posted to the web May 9, 2003, http://allafrica.com/stories/200305090756.html (accessed 2003-05-27)

CONFEMEN (2003). www.confemen.org/pasec (accessed 2003-06-17)

Dakar Framework for Action (2000). *Education For All: Meeting Our Collective Commitments*, World Education Forum in Dakar April 26-28, 2000

EFA (2000) Assessment, Country reports:http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

EFA Global Monitoring Report (2002). *Education for All: Is the world on track?* (UNESCO Publishing, Paris)

EI (2003). *Education for All; Is Commitment Enough?,* Report no 1 (EI, Brussels)

Finn, J.D., & Achilles, C.M. (1990). *Answers and questions about class size. A statewide experiment.* American Educational Research Journal 28 pp. 557-577

Finn, J.D. (1998). *From At-Risk to Excellence, National Institute on the Education of At-Risk Students: Class Size and Students at Risk What is Known? What Is Next?* A Commissioned Paper, National Institute on the Education of At-Risk Students, Office of Educational Research and Improvement (U.S. Department of Education)

Global Campaign for Education (GCE) position on World Bank Fast Track Initiative discussed at the GCE Board in Nairobi, June 29-30, 2002

Gustafsson, J.-E. & Myrberg, E. (2002). *Ekonomiska resursers betydelse för pedagogiska resultat – en kunskapsöversikt* (Skolverket, Kalmar)

ILO (1991). *Teachers in developing countries: A survey of employment conditions* (ILO, Geneva)

MINEDAF VIII (2002a). Statistical document, Prepared by the UNESCO Regional Office for Education in Africa (BREDA-team), the World Bank and the UNESCO Institute for Statistics (UIS) for the eighth conference of ministers of education of the African member states (Dar es Salaam)

MINEDAF VIII (2002b). Working documents, Conference of the Ministries of Education of African Member States, 2-6 December 2002 (Dar es Salaam)

MINEDAF (2002c). About MINEDAF VIII,

http://portal.unesco.org/education/ev.php?URL_ID=4193&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1026825751 (accessed 2003-01-09)

Mozambique Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

Nye, B. & Hedges, L.V. & Konstantopoulus, S. (1999). *The long-term effects of small classes: A five-year follow-up of the Tennessee class size experiment*, Educational Education and Policy Analysis 21(2), pp. 127-142

PISA (2000). *Knowledge and Skills for Life* (OECD)

SACMEQ (2003). http://www.unesco.org/iiep/eng/networks/sacmeq/activities.htm (accessed 2003-06-16)

Siniscalco, M. T. (2002). *A statistical profile of the teaching profession* (ILO/UNESCO)

Tanzania (Mainland) Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

Uganda Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

UN (2003a). http://www.un.org/millenniumgoals/index.html (accessed 2003-03-05)

UN (2003b). http://www.un.org/Overview/rights.html (accessed 2003-03-18)

UNESCO *Annual Statistical Yearbook 1985*: http://qesdb.cdie.org/ged/index.html (accessed 2003-06-18)

UNESCO/ILO (1966). *Recommendation concerning the Status of Teachers*, adopted by the special intergovernmental conference o the status of teachers (Paris)

Report, Joint UNESCO/ILO Committee of Experts on the Application of the Recommendations concerning the Status of Teaching Personnel**,** Seventh Session, and (Geneva September 11-15, 2000)

UNESCO *Annual Statistical Yearbook 1999*: http://qesdb.cdie.org/ged/index.html (accessed 2003-06-18)

UNESCO (2002). Release No.2002-98, *Survey shows that Seychelles, Mauritius and Kenya top regional Maths and reading scores*, http://www.unesco.org/bpi/eng/unescopress/2002/02-102e.shtml (accessed 2003-06-16)

Voluntary Services Overseas (2002). *What makes teachers tick?* A policy research report on teachers' motivation in developing countries (London)

Välijärvi, J., Linnakylä, P., Kupari, P., Reinikainen, P., Arffman, I. (2002). *The Finnish Success in PISA – and some reasons behind it* (University of Jyväskylä)

Word, E., et al. (1990) *Student/Teacher Achievement Ratio (STAR) Final Report 1985-1990* (Nashville: Tennessee Department of Education)

World Bank (2001). *Action learning program on participatory processes for poverty reduction strategies, Case study 5: Uganda: Tracking Public Expenditure in Primary Education*, The Participatory Group Social Development Department (Washington D.C.)

World Bank (2002). *Education and HIV/AIDS: A Window of Hope,* Executive summary (Washington D.C.)

World Bank (2003a). *Accelerating Progress Towards Education for All (EFA) The Fast Track Initiative*, Presentation by Ruth Kagia March 18, 2003 to the Committee on Development and Co-operation, European Parliament, Brussels

World Bank (2003b). Progress report and critical next steps in scaling up: Education for All, Health, HIV/AIDS, Water and Sanitation: *Accelerating Progress Towards Education for All*, Background paper for the World Bank's spring meeting, April 3, 2003

World Education Report (2000). *The right to education: towards education for all throughout life*, UNESCO (UNESCO Publishing)

Zambia Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

Zimbabwe Country Report (2000). http://www2.unesco.org/wef/countryreports/home.html (accessed 2003-05-27)

Xiao, Y. & Sudharshan, C. (2000). *Efficiency of Public Expenditure Distribution and Beyond: A Report on Ghana's 2000 Public Expenditure Tracking Survey of Primary Health and Education*, Africa Region Working Paper Series no. 31