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List of abbreviations

CONFEMEN	Conference of Ministers of Education in countries sharing the French language
CSR	Country status report
EFA	Education for all
ENS	Ecole normale supérieure
HRM	Human resources management
IIEP	International Institute for Educational Planning
MEMP	Ministère de l'enseignement maternel et primaire/ <i>Ministry of pre-primary and primary education</i>
PASEC	Programme d'analyse des systèmes d'éducation des pays membres du CONFEMEN – CONFEMEN Programme for the analysis of education systems
PTR	Pupil-teacher ratio
TTISSA	UNESCO's Teacher training initiative for sub-Saharan Africa
UIS	UNESCO Institute for Statistics
UPE	Universal primary education
UNESCO	United Nations Educational, Scientific and Cultural Organization

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Module 1. Teacher management - current challenges

..... MODULE 1

Effective teacher management is crucial to the success of any education system. Yet, the great majority of governments, particularly in low-income countries, are faced with sizeable challenges for the rational management of civil servants, and especially of teachers, who account for a significant share of civil service staff.

Module 1 will begin by giving an overall view of the importance of teacher management before taking a look at the major concerns faced by governments. These include the increasing staff numbers and their financing, teacher recruitment and teacher training, equitable allocation, as well as quality imperatives.

Part 1 briefly explains why all education systems need effective teacher management.

Part 2 tackles the current challenges of teacher management.



Objective of the module:

The aim of Module 1 is to present the current major challenges in terms of teacher management. It serves as a general introduction for you to become familiar with these challenges and to compare them with the issues encountered in your respective countries. Subsequent modules will handle in more depth the different topics looked at in this module.



Content of the module:

- The importance of the rational management of education sector staff, especially teachers;
- The major challenges of teacher management today.



Expected learning outcomes:

By the end of Module 1, participants should be able to:

- Explain the importance of good teacher management in achieving national education objectives;
- Analyse the principal current challenges of teacher management, particularly in low-income countries;
- Compare these challenges in relation to their national context.



Questions for individual consideration:

In this module, you will be invited to answer some questions for individual consideration related to the content of Part 2. These questions will enable you to reflect on the content of this part to ensure a better comprehension. They will provide you with a more active and beneficial learning experience.



Reading (optional):

In addition to this document related to Module 1, we strongly recommend that you read the following documents. They are available on the course's electronic learning platform.

Pôle de Dakar. 2009. *Universal primary education in Africa: the teacher challenge*. Dakar, UNESCO BRED. Chapters 2, 3 and 4.

Pôle de Dakar. 2011. *La question enseignante au Bénin: Un diagnostic holistique pour la construction d'une politique enseignante consensuelle, soutenable et durable*. Dakar: UNESCO BRED.

UNESCO. 2005. *EFA global monitoring report 2005 – the quality imperative*. Paris, UNESCO. Chapter 4.

UNESCO. 2014. *EFA global monitoring report 2013/2014 – teaching and learning*. Paris, UNESCO. Chapters 4, 5 and 6.

UNESCO-UIS. 2012. 'The global demand for primary teachers: 2012 update. Projections to reach universal primary education by 2015'. *UIS information bulletin*, n°10. Montreal: UNESCO-ISU.

UNESCO-UIS. 2013. 'A teacher for every child: Projecting global teacher needs from 2015 to 2030'. *UIS fact sheet*, n°27. Montreal: UNESCO-UIS.

UNESCO. 2010. *Methodological guide for the analysis of teacher issues. Teacher training initiative for sub-Saharan Africa (TTISSA). Teacher policy development guide*. Paris, UNESCO. Chapter 1.

UNESCO. 2009. *Secondary Teacher Policy Research in Asia: Teacher Numbers, Teacher Quality: Lessons from Secondary Education in Asia*. Bangkok: UNESCO.

Part 1. The issue

1.1 Teacher management: a priority

Teachers represent half, or more than half, of civil service staff, and their salary expenditure often amounts to three quarters of the Ministry of Education's operating budget. Moreover, in many developing countries, the commitment to Education For All (EFA) has spurred governments to significantly increase school enrolments and recruit new teachers on a massive scale. Additional teacher needs have also been felt in a great many countries at post-primary levels, where expansion has been explosive, especially in countries where EFA has just been reached.¹

As a result, rational teacher management has become a priority: it is about finding the required human resources with a view to increasing school enrolments in the different levels of education at limited extra cost.

The cost and effectiveness of education systems in general depends, to a large extent, on human resources management. It is a fact that the objectives of a *quantitative* development of education (in the framework of EFA, for example) can be achieved more effectively and efficiently if the necessary human resources, especially teachers, are carefully planned, allocated, utilised and managed.

However, **teacher management cannot be purely about quantities and procedures** since effective education is linked to *qualitative* aspects such as teachers' skills and motivation (and those of other school players, like the head teachers, pedagogical or career advisors and inspectors, but also the personnel in the different ministry divisions).

The challenges of expanding educational provision at the different levels, as well as the means to address the situation by recruiting and training teachers, **considerably vary depending on the general context and the specific state of education** in each country. All the same, almost all countries throughout the world are currently faced with problems of equity in teacher allocation (between the different geographical regions and/or types of schools) and suboptimal teacher utilisation. So, teacher absenteeism, poor teacher utilisation, and low morale as well as lack of dedication on the part of teachers, are commonly observed phenomena, which do not only incur a waste of means but also ultimately affect the quality and outcomes of the learning processes.

The many challenges range therefore from the recruitment of teachers to their professional development, and from optimal teacher allocation and utilisation to an incentive-based career and reward system. **Consequently, adequate teacher management is a complex matter.** Moreover, it must not only deal with the present but also foresee the consequences of policy choices concerning teachers on the supply and quality of education.

Optimal teacher management must therefore fulfil several imperatives, and more particularly:

- Ensure a sufficient and equitable supply of personnel;
- Recruit trained teachers or provide training after recruitment;
- Optimally assign and utilise teachers;
- Motivate them and those who are to support, manage and supervise them;
- Pay teachers while controlling and curbing salary costs.

¹ It should be noted that some countries opt for a generalization of basic education at the lower secondary level. This implies an in-depth reflection on the career change of existing teaching staff and on the profile and quality of the teaching staff to be recruited to meet these new requirements.

Routine day-to-day management of teaching staff is therefore not enough. Teacher management must take place in the framework and the direction of true Human Resources Management, such as presented in Module 2.

1.2 Focus on quality

It is important here to position teacher management in the framework of international debates on education.

In order to achieve EFA goals, many countries have adopted measures to offer free basic education to all children. The most significant efforts have thus been placed on the quantitative aspects of EFA, and particularly Goal 2 aimed at universal primary education; these efforts have indeed enabled a considerable increase in enrolment rates in the vast majority of countries.

However, the success of the efforts to increase access to basic education has sometimes been accompanied by a fall in the quality of education. Expanding access in contexts where educational quality was already poor has, in some cases, contributed to further deterioration (Lewin, 2007). The concern about poor quality education has been confirmed by longitudinal studies measuring the cognitive performances of pupils in the last grade of primary education in seven sub-Saharan African countries, which show that the level of reading and mathematics skills tended to deteriorate between 1996 and 2001 (Postlethwaite, 2004).

In response, debates over the last few years have refocused on the quality of education and thereby on the quality of teachers, their motivation and working conditions. It is indeed widely acknowledged that teachers are the main factor influencing the quality of education at school level (see Box 1.1). Teachers are at the heart of the learning process. They represent the most important resource of any education system, given that teaching activities are essentially to do with human factors. The functions connected to their management have an influence on the quality of teaching and of learning.² In management terms, even more than before, this means ensuring a sufficient number of teachers without compromising on quality.

Box 1.1: Ensuring quality education: the key role of teachers

What happens in the classroom, and the impact of the teacher and teaching, have been identified in many studies as the crucial variable for improving learning outcomes. The way teachers teach is of critical concern in any reform designed to improve quality. In an influential study, Coleman et al. (1996, cited in Gauthier and Dembélé, 2004, p. 2-4) identified the teacher variable as having the most pronounced effect on school achievement among pupils from modest backgrounds and ethnic minorities. More recent meta-analysis designed to assess the factors that are most likely to help children learn has confirmed the significance of the teacher effect. In a rigorous study of 28 such factors, the two most prominent were found to be directly related to the teacher (Wang et al., 1994). A synthesis of 134 meta-analyses (Hattie, 1992; cited in Dembélé and Bé-Rammaj, 2003) reached similar conclusions, indicating that even when there are significant differences in learners' backgrounds, teachers can exert a powerful influence, raising levels of achievement (Crahay, 2000).

Source: Extract from the EFA global monitoring report 2004/2005 (UNESCO 2005), p. 152.

² Results from the PASEC studies show that in many sub-Saharan countries, students in public schools with more qualified teachers succeed less than pupils in private schools with relatively less qualified teachers. Management, particularly in proximity, would be one of the explanations of this phenomenon.

However, while teachers are the key to improving educational quality, ministries of education are faced with a number of challenges. Many countries still needing to greatly expand coverage are faced with a shortage of teachers, a situation often made worse by inequalities in teacher deployment across and within regions. Moreover, the quality of teachers is still low in many developing countries. Teachers are often confronted with overcrowded classrooms, which are not conducive to quality education. Besides, a number of reports have highlighted the negative effect of the deterioration in working conditions on teacher motivation and absenteeism and on attracting and retaining teachers in their posts, especially in rural regions.

1.3 Ingredients of 'good' management

Studies conducted by IIEP³ and other entities have demonstrated that "good" human resources management – i.e. management that contributes both to the effective operation of the education system and to the satisfaction of teaching and non-teaching staff – depends crucially on the following factors:

- *Adequate planning of staff requirements*: no EFA plan or educational development plan in general can be effectively implemented without careful projection of the staff required to reach set schooling objectives; however, it is often difficult to plan real additional needs, especially in teachers, due particularly to weaknesses in the existing information and management system which does not provide accurate data on actual teacher attrition, availability and utilisation.
- *Valid recruitment, compensation, deployment and career policies*: in all education systems, decision makers must make 'considered choices' which, on the one hand, address (additional) recruitment needs –or possibly better compensation- which are hoped to have positive repercussions on the expansion and quality of the system; and which, on the other hand, take into account the constraints related to the availability of financial resources (and sometimes human resources) for financing additional expenditure. Assignment policies and practices, as well as career progression systems, have a role to play in cost-effective human resources management and personnel satisfaction.
- *An adequate monitoring and information system for integrated human resources management in the education sector*: In many contexts, serious weaknesses are observed in the monitoring tools and information systems available for personnel management, especially for teachers and their posts; this makes precise teacher planning and allocation, as well as fair and transparent management decisions very difficult.
- *Appropriate rules, structures and organisational procedures*: it is not unusual for incoherent or lacking regulations, over-centralised management, and complicated or insufficiently transparent procedures to result in, or worsen, delays in administrative operations, and create frustration and other problems at personnel management level. In other words, consistent and up-to-date regulations and procedures as well as consensual Codes of Conduct can significantly facilitate personnel management actions and their acceptance by those concerned.

The above factors will be examined in more detail in this series of modules devoted to teacher planning and management.

³ Traore, A. 1966. La gestion du personnel enseignant en Afrique francophone. UNESCO: International Institute for Educational Planning, Paris.

Göttelmann-Duret, G. (ed.) 1998. La gestion des enseignants de premier cycle au Bénin, Burkina Faso, Mali et Sénégal. UNESCO: International Institute for Educational Planning, Paris.

Part 2. Teacher management - facing the challenges

In practice, many countries are faced with sizeable problems and challenges insofar as the imperatives of good teacher management mentioned above are concerned.

In Part 2, we shall look at these challenges and also at different possible ways of addressing them.

2.1 Ensuring a sufficient supply of teachers

In most countries throughout the world, with the exception of those characterised by low demographic growth and an already high level of secondary enrolment, additional teacher requirements are going to be felt in the coming years. The following factors can explain the increase in teacher needs:

- A growing school-age population, the expansion of schooling to post-primary levels (and, in some countries, to primary education too);
- The necessity of replacing outgoing teachers (because they have reached retirement age or for other reasons). Depending on the specific context, these needs vary, as do the available means and possible strategies to address them.

This section outlines the evolution and expected challenges with regard to teacher supply in the near future and will look at some possible solutions, considering more particularly the case of sub-Saharan African countries.

2.1.1 Evolution of teacher needs and projections

Over the past few decades, all regions of the globe have faced significant challenges for recruiting new teachers, as indicated by the estimated primary teacher needs in Table 2.1 below. These figures also demonstrate that, everywhere, recruiting new teachers was mainly necessary to replace outgoing teachers (“attrition”). However, it must be noted that in sub-Saharan Africa the expansion in schooling (projected for the reference period) accounts for a very high number and share of additional teacher needs.

Table 2.1: Increase in the number of primary school teachers required to reach the UPE by 2015 (Estimated need for teachers between 2010 and 2015 in thousands)

No. of countries	Region	Stock in 2010	Teachers needed in 2015	Total recruitment needed	of which:	
					New posts	Replacement for attrition
20	Arab States	1,954	2,170	725	248	477
21	Central and Eastern Europe	1,113	1,187	360	91	269
9	Central Asia	323	346	106	24	82
34	East Asia and the Pacific	10,399	8,971	1,026	62	964
42	Latin America and the Caribbean	3,046	2,881	580	10	570
28	North America and Western Europe	3,742	3,870	1,076	174	902
9	South and West Asia	4,853	4,756	1,106	114	992
45	Sub-Saharan Africa	3,103	4,062	1,824	993	830
208	World	28,532	28,242	6,801	1,717	5,085

Source: UIS information bulletin, n°10. 2012

Table 2.2 below gives a fairly meaningful indicator of the scale of the challenge in several Francophone African countries at the end of the 1990's/first half of the 2000's, i.e. the rate of intensity of teacher shortages. It indicates for the countries listed the number of pupils that each teacher in service at the time would have had to supervise if all school-age children had

indeed been enrolled in primary education.⁴ This ratio would, for example, have been 72.2 pupils per teacher in Benin (in 1997) and 168 in Mali (in 1998). In some countries (Burkina, Cameroon, Chad), shortages became less acute in the following years whereas they got worse for others (such as Central African Republic).

Table 2.2: Intensity of teacher shortage in some African countries

Countries	Year considered	Indicator
Benin (BN)	1997	72.2
Burkina Faso (BF)	1999	111.7
Burkina Faso (BF)	2001	104.3
Cameroon (CM)	1999	58.2
Cameroon (CM)	2003	51.6
Central African Republic (CA)	1999	116.0
Central African Republic (CA)	2005	132.0
Chad (CH)	1999	106.8
Chad (CH)	2003	94.7
Ivory Coast (IC)	1999	57.1
Ivory Coast (IC)	2005	63.6
Guinea (GN)	1998	89.7
Mali (ML)	1998	168.2
Niger (NG)	1998	135.8
Senegal (SN)	1995	105.3
Togo (TG)	1991	62.2

Source: Nkengne Nkengne (2009)

Source: Nkengne Nkengne (2009), cited in UNESCO, 2010.

Most of the countries have made considerable efforts and recruited a large number of teachers in a short time. Even so, there are still serious shortages at present. In many sub-Saharan African countries, the rhythm of teacher recruitment has been slower than the increase in enrolments, and pupil-teacher ratios have stagnated, or have even deteriorated, in some places. Thus, 23 countries in the region currently have pupil-teacher ratios of over 40:1 in primary education (EFA global monitoring report 2013/14).

Based on recent projections, the UNESCO Institute for Statistics (UIS fact sheet, October, 2013, N° 27) considers that many countries will continue facing a significant rise in teacher needs in coming years.

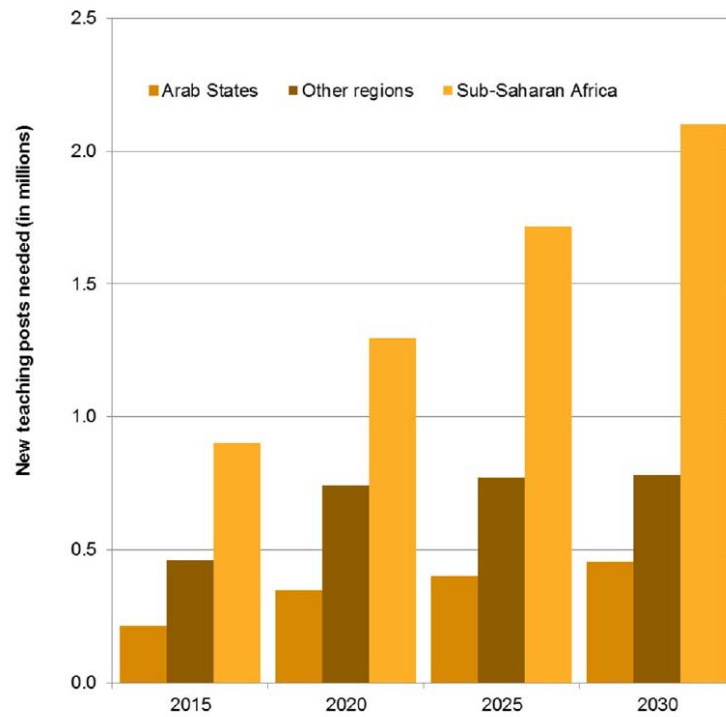
« In total, the world will need an extra 3.3 million primary teachers and 5.1 million lower secondary teachers in classrooms by 2030 to provide all children with basic education ».

⁴ In order to have a more precise view of the needs of teachers in the context of the objective of universal primary education, a different indicator can be used than the ESP on the basis of the principle of universal primary education. Instead of relating the number of pupils to the number of teachers, the number of children of primary school age can be related to the number of teachers. An indicator of the intensity of the shortage of teachers can thus be obtained in the context of universal primary education (UNESCO, 2010).

Sub-Saharan African countries will be particularly affected by the rise in teacher needs, due above all to a significant increase in school-age population (an increase estimated at over 40% between 2011 and 2030), and to the necessary replacement of teachers leaving.

Sub-Saharan Africa should create 2.1 million new teaching posts between 2013 and 2030 and replace an additional 2.6 million teachers who are to leave the system (according to attrition rates registered in the recent past).

Figure 2.1: Teacher gap by region, 2015 to 2030



Source: UNESCO-UIS, 2013. Calculations based on the UNESCO Institute for Statistics database.

Table 2.3: Number of new teaching positions needed to achieve universal lower secondary education, 2015-2030

Regions	Number of lower secondary teachers in 2011 (in thousands)	New teaching posts needed to achieve ULSE (in thousands)			
		by 2015	by 2020	by 2025	by 2030
Arab States	1,198	341	449	529	583
Central and Eastern Europe	1,570	109	272	374	331
Central Asia	406	8	39	71	67
East Asia and the Pacific	5,833	282	308	274	230
Latin America and the Caribbean	2,160	167	109	118	122
North America and Western Europe	2,555	38	127	162	170
South and West Asia	2,460	991	1,065	1,081	1,040
Sub-Saharan Africa	1,096	1,575	1,893	2,214	2,541
World	17,280	3,512	4,263	4,823	5,086

Note: These figures do not include the number of teachers needed to offset attrition.

Source: Calculations based on the UNESCO Institute for Statistics database.

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Source: UNESCO-UIS (2013).

In this part of the world, extra teachers will be needed more particularly in primary and lower secondary education. It is estimated that, between 2011 and 2030, the needs for extra teachers in sub-Saharan Africa will represent over 60% of global primary needs and 50% of global lower secondary needs.

Moreover, according to UIS projections, some countries in the region will be unable to make up for the current teacher deficit by 2030 if recruitment trends continue at the on-going rate.

Addressing current teacher deficits and ensuring a supply of teachers to enable the provision of the desired educational services is indeed not an easy task, especially in the context characterising most African countries.

The following section will explain that, in order to address this issue in an 'appropriate' and sustainable manner, it is essential to consider the factors liable to limit the recruitment of additional teachers while, at the same time, exploring the leeway and the different possible ways of reaching a satisfactory supply of teachers.

2.1.2 Constraints

Financing constraints

An initial major constraint for increasing the number of teachers is of course that of the resources available for financing a growing payroll. In sub-Saharan Africa where the needs for additional teachers are very high, many countries have a low level of income and therefore serious budget constraints, all the more so since many of these countries have significantly increased the share of national expenditure on education in general and on teacher salaries in particular.

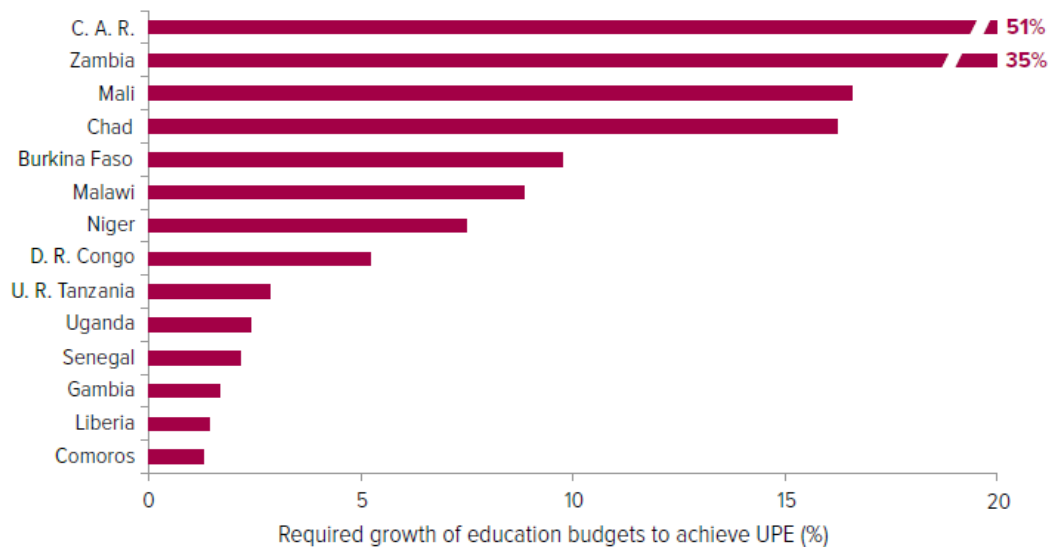
In order to mobilise additional resources, parents have been called upon, especially to finance community or supply teachers. The viability of this strategy is however questionable, and questioned, in contexts where a significant share of the population is still poor or economically fragile, thereby putting at stake the continuity and sustainability of such financing.

In any case, financing a sufficient supply of teachers represents a serious challenge for African countries. It should however be noted that the economies of most African countries have recorded substantial growth rates. This will enable an increase of income and, consequently, of government spending (and that of some families), on education. A recent Development Finance International and OXFAM study published in 2013 estimates that the financial resources for additional primary teacher needs in these countries can be mobilised by 2020 as long as their

economies enjoy growth in line with projections and they devote a large share of their GDP to education, within the framework of 3% allocated to primary education⁵. On average, sub-Saharan African countries should increase the share of their budget allocated to education from 12% to 14% in 2011 in order to make up for the teacher deficit by 2020 (Development Finance International and Oxfam, 2013, cited in: EFA global monitoring report 2013/14).

Figure 2.2: Increase in costs to pay additional teachers

Some countries need to increase their education budget by at least 20% to cover the cost of additional primary school teachers. Increase in education budget, beyond what is expected from economic growth, required to pay salaries of extra primary teachers needed to achieve universal primary education by 2020.

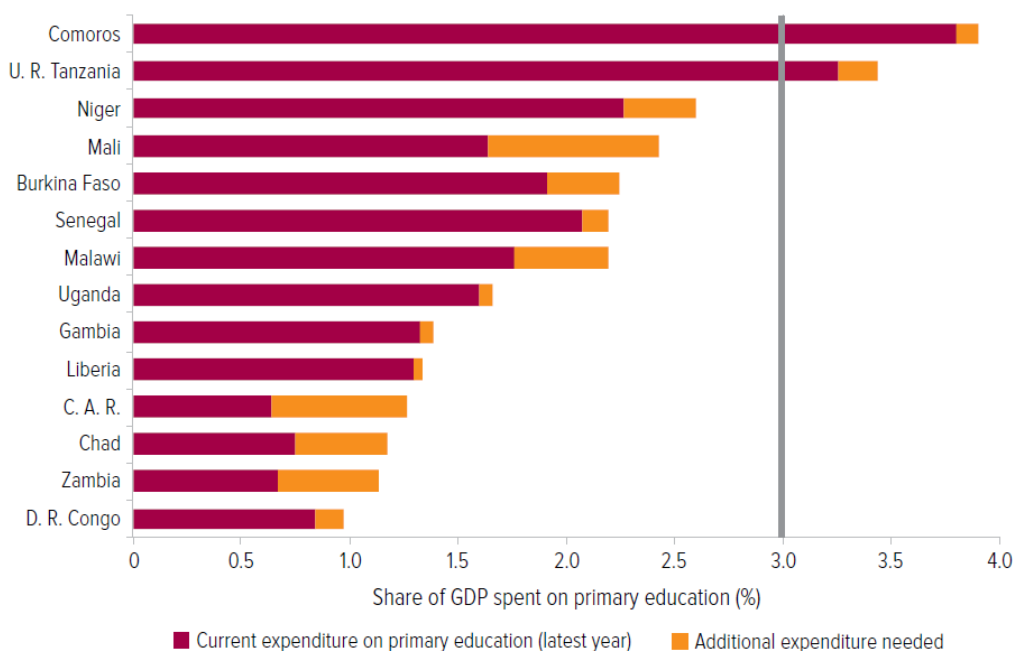


Source: UIS (2013).

Source: UIS. 2012 in UNESCO 2014 (Report GMR 2013/2014)

⁵ It is recommended at the international level that states allocate between 15 and 20% of their national budgets and between 4 and 6 % of their GDP to education.

Figure 2.3: Costs of additional teachers in relation to GDP



Note: For Comoros, Liberia, the United Republic of Tanzania and Zambia, there is no information for current expenditure on primary education as a share of GDP. For these countries it has been assumed that 50% of total current expenditure on education as a share of GDP is allocated to primary education.

Source: UIS (2012) in UNESCO 2014 (Report GMR 2013/2014)

Constraints in the supply of graduates

Another sizeable constraint is that of the number of young secondary school leavers (completion of secondary education being considered as the minimum required level to be a trainee primary teacher) likely to head for the teaching profession. In low-income countries, especially in West Africa, only a limited number of young people graduate from secondary school, one of the reasons being a persistently high dropout rate in primary and secondary education.

By way of example, the latest EFA global monitoring report 2013/14 refers to the case of Niger which “would need to direct almost a quarter of its expected 20-year-old upper secondary school graduates into primary teacher education programmes to achieve UPE by 2020” (EFA global monitoring report 2013/14).

The flow of secondary school graduates also affects the pool of tertiary graduates from which secondary teachers can be recruited.

The issue of recruitment to satisfy teacher needs is further complicated if one wishes, in addition, to ‘filter’ candidates in order to take into consideration a number of ‘quality’ criteria.



Questions for individual consideration

Is your country faced with the same constraints for providing a sufficient number of teachers? To what extent?

Does the share of the budget allocated to education seem sufficient to you?

In your opinion, are there other constraints/factors that could contribute to explaining teacher deficit or, on the contrary, to the fact that there is not a teacher deficit?

2.1.3 Some thoughts on possible solutions

Education policy makers, planners and managers must consider the constraints mentioned and adequate solutions in the light of their specific context. This module can only outline some general considerations and should serve as a guide to exploring the possible solutions.

Financing and cost control strategies

As explained above, it will be possible to raise the amount, and often also the share, of the budget devoted to education in many African countries in the coming years. At post-compulsory levels of education (generally beyond lower secondary), greater mobilisation of private contribution (companies, parents) to finance education can also be envisaged, on condition that devices are set up to ensure equal possibilities of access to these levels of education for children from poor families. These financing strategies should be explored with a view to making available the necessary resources to address teacher needs.

Logically, one can envisage paying each teacher slightly less in order to increase the number of teachers without a massive (sur)charge on the State budget. However, as civil service staff salaries cannot be lowered (acquired rights can only be modified via legislation), the 'cheaper staff policy' must focus only on new recruits, for whom the government can introduce different status categories with lower or virtually static levels of compensation.

This policy has in fact been widely adopted in sub-Saharan Africa since the 1990's. As demonstrated in Table 2.4 below, many countries in the region have started the new millennium with a substantial share of their teachers employed either as State contract teachers or as 'community teachers' paid (more or less in full depending on the context) by the parents, at significantly lower salary costs than those of civil service teachers.

Table 2.4: Teacher distribution and compensation in francophone sub-Saharan Africa, according to status (in the early 2000's)

	Distribution of teachers according to status (%)			Teacher compensation according to status (GDP/capita)		
	Civil servants	Contract teachers		Civil servants	Contract teachers	
		Public	Parents		Public	Parents
Benin (2002)	55	16	29	5.2	2.1	1.3
Burkina Faso (2002)	64	24	12	5.8	5.6	2.2
Cameroon (2002)	35	20	45	5.3	1.4	0.8
Congo (2003)	42	4	54	2.4	0.9	0.6
Côte d'Ivoire (2001)	87	0	13	4.8	-	-
Guinea (2000)	52	30	18	3.5	1.1	-
Mali (2000)	71	8	21	5.8	1.5	0.9
Niger (2000)	46	50	4	8.9	3.5	-
Senegal (2003)	44	41	15	5.7	2.6	-
Chad (2002)	32	0	68	8.2	-	2.3
Togo (2001)	35	30	35	6.4	3.3	1.3
Average	49	19	32	5.6	2.4	1.3

Source: Göttelmann-Duret, 2007.

The coexistence of different teacher categories doing the same job but with very unequal compensation and advantages has however proved very difficult, and often a source of conflict. The political and social viability of this strategy is therefore doubtful. Moreover, its negative repercussions on the quality of education are often criticised. Even if the debate is still open at present, the results of some recent studies (see for example the study on the teacher issue in Benin; Pôle de Dakar, 2011) seem to point out a link between the very low levels of achievement of a majority of pupils in many African countries and the lack of vocational training and/or motivation on the part of the 'cheaper teachers'.

Finally, it is hardly possible to bring the level of (initial and/or in-service) teacher compensation below a certain threshold without it affecting (if the labour market offers alternatives) the number of young people interested in the teaching profession in general and the number of 'good candidates' in particular.

Decision makers and managers should therefore give careful consideration to the strategy of limiting salary expenditure while increasing the number of teachers.



Questions for individual consideration

Teacher compensation to GDP/per capita ratio is a frequently used measure. In your opinion, what are the advantages and disadvantages of this indicator?

Recruiting a sufficient number of teachers

Possibilities are more limited when it comes to easing the constraints regarding the young people able to be recruited to become primary and secondary teachers. In any case, greater efforts to attract a larger share of secondary and tertiary graduates to teaching (through career guidance, scholarships and other incentive measures) must be considered as one of the possible avenues.

In order to address the particularly rapid increase in lower secondary teacher needs, training and recruiting a share of the teachers already in service in primary education can be envisaged. This strategy can however only be acceptable if primary teachers have a solid academic level and if there is a sufficiently large pool of young people who can be rapidly recruited to make up for the resulting deficit in primary teachers.

The recourse to recruitment of expatriate teachers from neighbouring countries, a strategy massively used in the countries of the Arabian peninsula to make up for their teacher shortages several decades ago, can hardly be used as a corrective measure in sub-Saharan Africa. In many cases, this strategy would lead to making the deficit worse in those neighbouring countries 'exporting' teachers.

Thus, since there is limited leeway for easing this constraint and as expenditure on teacher salaries cannot be raised beyond certain (economically and politically acceptable) limits, it is important to seek ways of curbing as much as possible the needs for additional teachers themselves.

Curbing additional teacher needs

Given the already high pupil-teacher ratios registered in African countries, it can hardly be concluded that they are suffering from a surplus of teachers in absolute terms. Nevertheless, it can be asked whether utilisation of teaching staff is optimal.

More particularly:

- Could the working hours of (primary and/or secondary) teachers be increased (at limited extra cost), and possibly retirement age be raised, so as to reduce the needs for additional teachers?
- Do school size (often small), service rules (e.g. prohibiting service in two schools) and teacher training (single-subject teachers, etc.) constitute obstacles to rational teacher utilisation, which could possibly be removed (at least in part) to curb teacher needs?
- Could schooling itself be reorganised in such a way as to need less trained teachers – but probably more staff and other support devices – to supervise pupils?
- Could teacher attrition be diminished (through improved healthcare or other incentive measures), and so the rate of new teacher recruitment too?

These questions stress the important role that rational and also efficient management can play in ensuring that teacher supply is 'sufficient' from a qualitative point of view. Efficiency, but also equity, constitute major imperatives of teacher management and will be at the heart of the next section of this Module (Section 2.2).



Questions for individual consideration

Aside from the measures suggested above for limiting teacher needs, are there, in your opinion, other measures that can be envisaged to address the double problem of i) increasing recruitment capacity in order to deal with teacher shortages and ii) making the profession more attractive in order to attract more candidates?

2.2 Addressing efficiency and equity...

The importance of measures (working hours; rules; multi-subject teachers, etc.) enabling the full utilisation of available teaching staff in order to limit the need for additional teachers has been handled in the previous section. Consequently, this section focuses on the question of teacher *distribution* (or from a management viewpoint: *allocation*), which is efficient from the angle of the economic utilisation of human resources and which, at the same time, addresses the equity requirement.

In many countries, serious imbalances in teacher distribution are still observed across different areas and schools. These imbalances are generally quantitative on the one hand: some regions, areas and/or schools benefit from a number of teachers well in excess of established norms, while others remain considerably below the norm and suffer from serious shortages. On the other hand, imbalances can be of a qualitative type: some regions, areas and/or school categories benefit from a proportion of highly qualified, experienced teachers well above the national average while others have only a small percentage of teachers with these 'qualities'.

2.2.1 The challenges of effective teacher allocation

The analysis of teacher allocation to schools throughout a country's territory informs us of the degree of effectiveness and of equity in allocation management.

A commonly used indicator to measure the effectiveness and equity of teacher allocation is the 'degree of coherence' between the number of teachers in service and the number of pupils enrolled in each school. In statistical terms, this is the determination coefficient, or R^2 , which has a value of between 0 and 1: the closer R^2 is to 1, the greater the coherence between the number of teachers and the number of pupils in the schools; or, to put it another way, incoherence (the share of teachers in service not attributable to the number of pupils) is particularly low when $1-R^2$ is closer to 0. You will become familiar with this indicator and calculate it in Module 4.

The degree of coherence of teacher allocation is widely used in the Education Sector Analyses (called CSRs) and the Methodological Guide (UNESCO, 2010) used by Pôle de Dakar in different

countries. It can also be of interest in international comparisons. Thus, it can be noted from Table 2.5 that incoherence in teacher distribution is somewhat low in Guinea and very high (over 50%) in countries like Burundi and Benin.

Table 2.5: Share of primary teacher allocation not attributable to the number of pupils (1-R²) in 15 African countries (years between 2002 and 2007)

Country	(1-R ²) teacher allocation by the government	(1-R ²) teacher allocation by the government + community teachers
Guinea (2004)	7	Na
Lesotho (2003)	18	-
Niger (2003)	19	Na
Guinea Bissau (2006)	20	
Burkina Faso (2007)	22	-
Mauritania (2004)	22	-
Ethiopia (2002)	28	-
Chad (2004)	33	34
Malawi (2007)	34	-
Congo (2005)	38	35
CAR (2005)	46	24
Burundi (2004)	50	-
Benin (2006)	54	39
Cameroon (2002)	Na	45
Mali (2004)	Na	27
Average	30	34

Source: UNESCO, 2010

The analyses conducted by Pôle de Dakar show that in most African countries “considerable differences are observed between regions but also within them. Moreover, these differences do not necessarily correspond to administrative areas.” (UNESCO, 2010)

This indicator (degree of incoherence or degree of randomness) does not however in itself tell us to what extent the incoherence observed conceals problems of overstaffing and/or of understaffing in the schools.

With a view to efficient and equitable teacher management, this indicator should therefore be used with care, and only in combination with complementary analyses. The respective share of ‘within the norm’, over-allocated and under-allocated schools must be known in order to grasp the specific situation. Moreover, the variation in teacher allocation norms depending on school size and possibly other criteria must be taken into account. In any case, according to the Pôle de Dakar studies, “rural areas tend to be systematically at a disadvantage compared to urban areas. Results of analyses carried out in different education sector analyses (CSRs) confirm that urban areas are generally at an advantage”.

As shown in Table 2.5, local recruitment of community teachers has reduced the ‘incoherence’ in teacher allocation in a number of countries. It is also interesting to observe, as indicated in Table 2.6 below, that the recruitment of community teachers can have a specific corrective effect on those regions at the greatest disadvantage in terms of pupil-teacher ratios.

Table 2.6: Pupil-teacher ratio (PTR) in pre-primary and primary education per département in Benin connected to the recruitment of non-civil service teachers

Départements	Pre-primary education				Primary education			
	PTR in 2005/06		PTR in 2008/09		PTR in 2005/06		PTR in 2008/09	
	Without teaching assistants	With teaching assistants	Without teaching assistants	With teaching assistants	Without community teachers	With community teachers	Without community teachers	With community teachers
ATACORA	41.2	30.3	199.4	60.2	72.4	46.3	67.4	47.3
DONGA	71.0	37.9	260.0	43.3	73.2	49.0	53.6	47.6
ATLANTIQUE	37.9	28.7	141.0	47.2	70.4	46.0	59.6	47.5
LITTORAL	36.1	25.7	80.9	29.1	54.7	43.4	48.2	44.7
BORGOU	43.2	29.7	132.5	50.2	81.0	49.7	70.8	53.3
ALIBORI	81.0	48.0	201.4	60.4	75.5	47.8	72.7	54.5
MORO	48.8	33.1	176.2	34.7	75.3	49.7	55.5	44.5
COUFFO	44.3	35.4	180.1	39.7	91.7	55.7	66.7	49.4
OUEME	37.2	30.2	117.8	42.2	65.4	43.4	55.9	48.2
PLATEAU	72.2	36.1	221.8	48.1	80.8	44.2	66.4	52.3
ZOU	33.8	27.0	117.0	28.3	71.7	44.5	58.6	45.0
COLLINES	80.3	39.1	263.9	45.1	70.5	44.3	65.6	48.1
OVERALL BENIN	44.8	31.5	150.5	41.2	73.3	47.0	61.4	48.3

Source: Pôle de Dakar, 2011

2.2.2 Some causes and possible solutions

The geographical disparities observed in actual teacher allocation to schools are, in many countries, connected to the variable attractiveness of the different regions and areas. There is still often a considerable divide between urban and rural areas, explaining the resistance of teachers to serve in rural or remote areas, to which governments have not yet found effective responses. The recruitment and financing of community teachers by the parents constitutes a corrective measure which goes against the concern for equality in that, rather than benefiting from the support of the public sector, already disadvantaged populations are called upon to play a larger role than urban populations.

Other causes of the imbalances in distribution are to be found at education sector management level.

In accordance with the Methodological Guide (UNESCO, 2010), two types of factors are seen to cause imbalances at this level:

- Procedures for teacher distribution are largely inadequate: criteria, rules and procedures for assigning teaching posts in schools are obscure, incoherent and/or lack transparency for those concerned; moreover, the staff in charge of teacher management may be insufficient in number and/or have insufficient skills to manage these processes correctly.

- Teacher distribution procedures are clearly defined and address precise criteria but they are not respected. In other words, management behaviour is not in line with regulations but yields (more or less) to ‘environmental’ pressure (from teachers and/or influential individuals).

These obstacles conflicting with efficient and equitable teacher allocation must therefore be addressed through a better knowledge (through studies/investigations) of the ‘individual’ (members of staff, their skills, etc.), ‘organisational’ (procedures, ...) and ‘environmental’ (social dialogue, rules and regulations and devices for their application, etc.) factors and reform measures addressing these factors.

2.3 Without forgetting the imperatives of teacher quality

In order to offer the desired educational service in a country, it is obviously not enough to have a sufficient number of teachers distributed efficiently and equitably. The quality of teachers is also imperative since the very quality of education and ultimately pupil achievement depend to a large degree on this factor.

The ‘quality’ of a teacher is difficult to define as a universal concept. Recent international debate on this topic has highlighted pupils’ cognitive achievement as the principal indicator for assessing teacher ‘performance’, while acknowledging that this achievement also depends on many other factors (school and family environment, etc.). In any case, there is a convergence of opinion on the main variables of teacher quality:

These variables are primarily:

- Selection of people with the necessary academic level and motivation for the job;
- Training – pre-service and in-service – enabling them to teach effectively;
- Devices ensuring the necessary motivation and support to do the job.

2.3.1 Adequate selection

Recruiting young people with the ‘adequate’ profile to become teachers supposes first of all that there are young people with that profile wanting to join the teaching profession (and in sufficient numbers as mentioned above). Starting salary and career prospects are important dimensions of the attractiveness of the profession, aside from the aspects linked to the nature of the job itself. We shall be looking at this in Module 3 of this course.

It is also important for the stipulated recruitment criteria and procedures for effective ‘filtering’ of young people with the desired qualities, to be effectively applied. As observed in Table 2.7 below, the required academic level to be hired as a primary teacher and the current selection and procedures vary somewhat from one African country to another.

Table 2.7: Admission criteria in pre-service training for primary teachers in several countries

	Eritrea	The Gambia	Lesotho	Malawi	Uganda	Zambia
Entry level	End of secondary (grade 12)	End of lower secondary (O Level)	End of secondary, 4 credits (to include English)	End of secondary/ MSCE with a credit in English, a pass in maths	End of lower secondary (O Level and 6 passes including English and maths)	End of secondary with a pass in English and maths
Basis of selection	Academic grades	Academic grades/ entrance exam/ interview	Academic grades	Academic grades	Academic grades	Academic grades

Source: UNESCO, 2010

It is particularly surprising that only a few countries include an interview in the recruitment process whereas qualitative aspects of the candidate's profile that are hardly reflected in exam results can be apprehended in an interview.

2.3.2 A global approach to training

It has emerged from debate on teacher training over the past years that sustainable solutions **require a global and contextualised approach**, which considers training as a continuum and takes into account the different aspects of effectiveness, without forgetting the cost aspect.

Assessing existing training capacity

Discussions on the objectives, content and organisation of pre-service teacher training cannot take place without firstly considering existing institutional capacities. In much of Africa, the number of teachers to be recruited and trained every year is so high that it exceeds the capacities of the 'traditional' teacher training institutions. Table 2.8 provides a meaningful example of the gap between existing capacities and training needs between 2008 and 2015 in Benin.

Table 2.8: Estimated gap between needs and capacities of initial training of primary teachers in Benin

	2008-2015	
	Low estimate	High estimate
Teachers needed	22,041	26,819
Training capacities	11,500	11,500
Gap	10,541	15,319

Source: UNESCO, 2010

Choosing a pre-service training system from a cost-effective stand

Once again, international comparisons (between several African countries in Table 2.9 below) illustrate that primary teacher pre-service training varies very significantly in both duration and in organisation (particularly for the portion of practical experience) from country to country.

Table 2.9: Some characteristics of the pre-service training system for primary teachers in some Anglophone countries

	Benin	Eritrea	Gambia	Ghana	Lesotho	Malawi	Uganda	Zambia
Duration	1 year + 1 year in classroom	1 year inc. classroom practice (2 weeks and 1 month)	1 year + 2 years in classroom	2 years + 1 year in classroom	3 years	1 year + 1 year in classroom	2 years + 6 weeks in classroom	1 year + 1 year in classroom

Source: UNESCO, 2010 (Lewin (2004), World Bank (2007a - g), authors)

It is true that neither the duration nor the organisation of pre-service training alone can predict the outcome in trained teacher performance. Moreover, in-service training received by the teacher should be taken into account when assessing the relationship between teacher training and performance (with criteria to be defined). Unfortunately, appropriate research is still sorely lacking.

As observed in the Methodological Guide (UNESCO, 2010)

Evaluations that relate the teacher's professional training to what pupils learn in school can provide us with useful information in regard to this issue. Unfortunately, these kinds of evaluations are scarce and often give only limited information. In most of these studies, which were not conceived specifically to analyse this dimension (for example, the standard evaluations of PASEC), pre-service training is measure on the basis of duration, as such mixing up several types of training of the same duration and not always controlling all of the parameters necessary for reliable comparisons.

In addition, education system planners and managers must take care about the cost of the different possible training options. Without going into great detail on this subject (see Module 3), it should be noted that existing research does not enable conclusions to be drawn as to a relationship between unit cost of training and teacher trainee marks in the final exam. Hasty conclusions should not be drawn regarding investment reductions on training, but it can be said that the best training is not necessarily the most expensive.

2.3.3 Good working conditions and career prospects for teachers

Teachers can hardly be expected to produce 'quality work' if they are not guaranteed the minimum necessary *conditions* to do so. The precise definition of 'minimum' must necessarily take into account the context. However, there are national norms and international recommendations (such as those of UNESCO/ILO) that provide relevant direction in this respect, more particularly relating to:

- Building and equipment standards for schools and classrooms;
- Norms for pupil-teacher ratios and the provision of materials for the teacher (and the pupils);
- The teacher's right to in-service training and teaching support;

- The right of defence of teachers' individual and collective interests and its actual and effective implementation;
- Transparent and objective personnel management.

Indeed, these conditions are not always respected and this should be at the centre of the future concerns and efforts of education sector policy makers and managers in many countries.

In addition, the starting salary is also seen to be insufficient, in some contexts more than others. It is the existence of interesting and tangible career prospects that will attract quality candidates to the teaching profession and ensure their retention. This is witnessed by the success of the teaching policies in several South East Asian countries (see Module 6).

A reform of the career system of teachers can, and must, be envisaged with a view to controlling and curbing future expenditure on teachers, taking care to choose the 'correct' rhythm and degree of salary increases and to find a 'fair balance' between flexibility, incentives and cost control when considering bonuses and other advantages. In reality, there are fewer countries following a 'rational' approach to teachers' careers than those shaping and adjusting teacher salaries and promotions as they go along, i.e. under the impact of immediate political, social or economic constraints.

2.4. The importance of effective Human Resources Management (HRM) in the education sector

What emerges from this overview of the current principal teacher challenges in developing countries is that it is no longer enough to manage, on a 'day by day' basis, without a global, coherent and (long term) projected approach, the personnel that is key for the expansion, quality and equity of the education service and, at the same time, a major source of expenditure for the different countries. In the context described above, the concept and approach to HRM can be a valuable contribution and, as such, deserve to be brought to the attention of decision makers and managers concerned with teacher issues. They are consequently the focus of the following module (Module 2).



Highlights

Teacher management is at the heart of any strategy of expansion and/or improvement in quality and equity of the provision of education in most developing countries. This does indeed impact simultaneously the cost of teachers, their allocation and utilisation, as well as their motivation and performance.

The results of the analysis of a variety of national experience converge as to the importance of addressing the different major challenges related to teacher issues (increasing the number of teachers, training, allocation, motivation, etc.) by adopting an integrated or systemic approach rather than a segmented approach.

With regards to the choices of appropriate policies, it implies articulating options and making sure that they are coherent, for teacher training (pre-service and in-service), their career (starting salary, rhythm of promotions, etc.), their employment and working conditions, etc.

As for the management system, it is important, as will emerge from the following modules, to benefit from tools (e.g. information systems), adapted rules and procedures (including a system ensuring their actual application) and structures and measures that provide effective support for coherent teacher management.



Questions for individual consideration

The key-word cloud hereunder has been drawn up from Module 1. After reading this unit and with the help of the word cloud, can you identify three words that reflect issues encountered in your countries?



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