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EFA Goals and Expanded Secondary Schooling – Taking Stock and Seeking Solutions

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Summary

The Dakar targets and the Millennium Development Goals have provided a framework for educational investment since 2000. Strategies based on these ambitions have stressed universalizing access to primary education and gender equity at primary and secondary level, though the goals themselves are more extensive. There remain about 45 million children in the Commonwealth who remain out of school at primary level, of whom about 70% are in South Asia and 30% in Sub Saharan Africa. Most are children who did enroll but who failed to remain in school and complete successfully. Much larger numbers – about 140 million - fail to access secondary schooling.

Low income Commonwealth countries have been successful in reducing gender gaps. Across the Commonwealth average female enrolment is 48% of the total at primary and 49% at secondary. However, gender disparities at primary remain high in parts of India and Pakistan, and in Mozambique and Nigeria where less than 45% are female. At secondary level only nine countries have fewer than 45% girls. Gender disparities at secondary are closely associated with low overall enrolment rates. Thus nearly 90% of countries with secondary Gross Enrolment Rates (GER) below 50% have more boys than girls enrolled; all countries with secondary GERs above 50% have at least 48% enrolment female. Gender parity is also associated strongly with overage enrolment – if girls schooling is delayed by late entry or repetition they are more likely to drop out than boys.

The Commonwealth is now half way towards the MDG targets set for 2015. It is now time to take stock of progress and reprofile the challenges that remain and revisit the targets that have been set. There are several reasons:

• Some goals and targets are unlikely to be achieved in some countries
• Existing goals and targets are losing currency in Commonwealth countries that have largely achieved them
• EFA and the MDGs are largely blind to equity, quality and distributional aspect of growth in access that are becoming more and more important
• Sector planning, that links investment at different levels and recognizes the interactions between primary, secondary and higher education has yet to become a reality, especially in low enrolment countries
• In particular, more and more countries are facing problems in financing and managing the expansion of secondary schooling in ways that are sustainable

This paper reviews key issues in improving access in the light of recent developments, identifies where and why new approaches to goal setting and educational financing are needed, and discusses the reforms necessary to extend access to those who remain excluded. There were never good reasons why so many children were denied access to literacy and numeracy, and to the higher levels of knowledge and skill that are associated with the kind of secondary schooling that can reduce poverty. The problems can be resolved if all the partners in the process play their roles with trust and commitment, and have the courage to keep asking why has it not happened? Otherwise the children of EFA will have every right to hold them to account.
EFA Goals and Expanded Secondary Schooling – Taking Stock and Seeking Solutions

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This paper explores the challenges that face developing Commonwealth countries seeking to build on success in improving participation in primary schooling in the context of Education for All (UNESCO 2000), and the education related Millennium Development Goals (United Nations, 2000). It has six parts. The first provides a rationale for improved secondary access in low enrolment countries. The second identifies typical enrolment and participation patterns in Sub-Saharan Africa (SSA). The third details the enrolment challenges countries face. The fourth estimates financial demands for expanded access in SSA. Fifth, some policy implications are identified. Finally concluding remarks draw together key issues. Though the analyses summarised are based on SSA data, the arguments and conclusions apply more broadly to low enrolment countries in other regions of the Commonwealth.

Rationales for Expanded Access

The need to find sustainable methods of supporting expanded access to secondary schooling is widely recognised, especially in Sub-Saharan Africa (Ndoye 2003). Though universalising primary schooling must remain a priority where it is far from being achieved, in much of the low income Commonwealth Ministers are increasingly pre-occupied by the challenges posed by needs to expand access to secondary schooling. The main reasons for this are outlined below and lead to needs to develop new approaches to finance enhanced access to secondary schooling. The case made for expanded access in this paper is that:

- First, the number of primary school students is set to double or more over the next 10 years in low enrolment countries as universal primary education and completion is approached. Demand for secondary places will therefore increase dramatically. If this demand is not met increasing numbers of children will be
excluded from realising their developmental potential, exclusion may create social and political tensions, and greater equity will prove elusive (Lewin and Caillods, 2001).

- UPE depends on an adequate flow of qualified secondary graduates into primary teaching (Lewin and Stuart, 2003). This will be hard to ensure where secondary enrolment rates are low. UPE also depends on sustained demand for primary schooling which will falter if transition rates into secondary fall. The MDGs commit countries to achieve gender equity in primary and secondary schooling. The evidence from SSA is clear that this is most likely where secondary Gross Enrolment Rates (GER2) exceed 50%, and is rarely achieved where enrolment rates are lower.

- Third, HIV and AIDs have decimated the active labour force and undermined prospects for economic growth in some developing countries, and pose a threat in many. The evidence suggests that those with secondary schooling are less at risk than those with lower levels of educational achievement, both because they are in school and because they are likely to be more receptive to health education messages (Gregson et al 2000, World Bank 2005, UNESCO 2005). In some countries conflict has seriously degraded capabilities. In both cases the human capital that has been lost has to be replenished if prospects for recovery are to bear fruit.

- Fourth, poverty reduction will stall unless both growth and distribution are considered. Access to and successful completion of secondary schooling is becoming the major mechanism for allocating life chances in most developing countries (e.g. Adea-Mensah, 2000). Secondary schooling excludes those below the 20th percentile of household income in low enrolment countries. This exclusion must be reversed if national pools of talent are to be fully accessed, equality of educational opportunities is to improve, and social mobility out of poverty is to be available to larger proportions of the population.

- Fifth, competitiveness, especially in high value added and knowledge based sectors of the economy, depends on knowledge, skills and competencies associated with abstract reasoning, analysis, language and communication skills, and the application of science and technology. These are most efficiently acquired through secondary schooling. Greater economic growth is associated with balanced patterns of public educational investment. Those countries which have grown fastest have more balanced patterns of investment across different levels of education than those with heavily skewed distributions (World Bank, 1993, 2005, Wood and Mayer, 1999).

- Sixth, curriculum reform at secondary level is essential both because it has been widely neglected and because expanded access will enrol children with different learning needs and capabilities. Increased participation without more relevant,
effective and efficient learning and teaching will not be fit for purpose and may create more problems than it solves.

Increased secondary participation within current cost structures in SSA is severely constrained. The basic arithmetic of the dilemma is straightforward. Typical budgeting patterns in low enrolment countries in SSA allocate relatively small amounts of public expenditure on education to secondary level, sometimes less than 10%. In these countries, where the average Gross Enrolment Rate at Secondary (GER2) can be less than 15%, increases in secondary level participation to say GER2 60% without reforms would require a quadrupling or more of allocations to secondary. This is unlikely.

Public expenditure per pupil at lower secondary level across Sub-Saharan African (SSA) countries averages about three times that at primary, and about six times that at upper secondary, and in South Asia two to four times. The ratios may be several times greater for specialised technical and vocational institutions. Cost per pupil at secondary in SSA average at least 30% and 60% of GDP per capita for lower and upper secondary. In the SSA countries with the lowest enrolment rates, the cost of a secondary school place may be as much as 100% of GDP per capita and more than 10 times as much as a place at primary school. Though South Asian rates are generally lower as a result of relatively lower teacher’s salaries, they may approach these levels in the low enrolments countries.

These costs mean that substantial increases in access will be difficult to finance in a sustainable way without reforms. Relative costs per pupil will have to fall to levels closer to those found in high enrolment Commonwealth countries where secondary places are usually less than twice the cost of primary places. Costs per pupil at lower and upper secondary will need to move towards 20% and 40% of GDP per capita. Investment in secondary schooling as a proportion of national education budgets will have to increase if the development gains associated with expansion are to be achieved.

**Setting the Scene**

There are about 45 million children of primary school age who are not enrolled in low income Commonwealth countries (LICCS). By far the greatest numbers out of primary school are in Sub-Saharan Africa and South Asia (Table 1). India, Pakistan, Bangladesh, Nigeria and Tanzania account for about 80% of children unenrolled in the world. Over 70% of the unschooled in Africa are found in Nigeria, Tanzania, Kenya, Ghana, and Mozambique.

Many more school age children are excluded from secondary schools. At least 140 million are out of school, of whom over 107 million are in South Asia and nearly 32 million in Sub-Saharan Africa (SSA). Where UPE is now within reach, priorities are shifting to secondary schooling, not least to meet the needs and aspirations of rapidly growing numbers of primary completers. Secondary schooling is very unequally distributed where enrolment rates are low. Household income is a very strong predictor of participation to the extent that in SSA children from the richest 20% may be 10 times
more likely to be enrolled in secondary school than those from the poorest 40% of households.

Table 1. Children Out of School in the Low Income Commonwealth Countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Primary Enrolled</th>
<th>Primary Out of School</th>
<th>Secondary Enrolled</th>
<th>Secondary Out of School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa (SSA)</td>
<td>61332</td>
<td>13219</td>
<td>17385</td>
<td>31758</td>
</tr>
<tr>
<td>South Asia</td>
<td>148082</td>
<td>31132</td>
<td>95068</td>
<td>107136</td>
</tr>
<tr>
<td>South East Asia</td>
<td>3069</td>
<td>154</td>
<td>2505</td>
<td>985</td>
</tr>
<tr>
<td>Caribbean +Central America</td>
<td>786</td>
<td>34</td>
<td>529</td>
<td>97</td>
</tr>
<tr>
<td>Pacific</td>
<td>861</td>
<td>196</td>
<td>303</td>
<td>601</td>
</tr>
<tr>
<td>Overall</td>
<td>233116</td>
<td>44832</td>
<td>131097</td>
<td>140577</td>
</tr>
</tbody>
</table>

Source: UNESCO Institute of Statistics 2005

There are some successes. In most LICCS there have been large improvements in girls enrolments to the extent that the Commonwealth average female enrolment is 48% of the total at primary and 49% at secondary. However, gender disparities at primary remain high in parts of India and Pakistan, and in Mozambique and Nigeria where less than 45% are female. At secondary level only nine countries have fewer than 45% girls. Gender disparities at secondary are closely associated with low overall enrolment rates. Thus nearly 90% of countries with secondary Gross Enrolment Rates (GER) below 50% have more boys than girls enrolled; all countries with secondary GERs above 50% have at least 48% enrolment female. Gender parity is also associated strongly with overage enrolment – if girls schooling is delayed by late entry or repetition they are more likely to drop out than boys.

The problems of expanding secondary access can be illustrated with an analysis across 44 Sub-Saharan Africa countries (Lewin, 2008). This indicates that there are five broad patterns in terms of access 4. These are:

- high participation in primary and secondary with low rates of repetition and drop out (1);
- very high initial enrolment rates in primary but high drop out and repetition with low completion rates, with falling transition rates into secondary and low participation (2);
- high primary entry rates and mid levels of repetition, drop out and completion with mid level secondary enrolments (3);
- primary entry rates below universal levels, and low primary and secondary enrolment rates (4);

4 The analysis is being extended to South Asian countries and preliminary data suggest similar patterns exist.
• very low primary entry rates and very low participation though primary and secondary school (5).

A consolidation of these patterns is illustrated in Figure 1 showing how participation falls by grade for each group of countries. These patterns are very different and create different starting points for investment in expanded access to secondary. Where the participation index (the number enrolled/the number in the age group for the grade) is around 100% though to grade 9, then most are already enrolled in lower secondary (type 1). In type 2 initial entry is much greater than the number of children of grade 1 age. However participation rapidly falls off such that by grade 6 enrolments are only about 20% of the age group. Type 3 countries have fewer overage pupils in grade 1 and manage to retain more of them through to grade 9 than is the case for type 2. Type 4 and 5 systems fail to enrol many children in grade 1, and have low and very low participation rates at grade 9. Countries with patterns 4 and 5 may come to resemble pattern 2 if UPE programmes are introduced rapidly. However, ideally future expansion will not create the exaggerated patterns of Type 2 whereby massive over enrolment in grade 1 is accompanied by high drop out and little improvement in secondary participation rates. If it does then the difficulties associated with falling transition rates into secondary will be exacerbated.

Figure 1 Generic Chart of Enrolment Patterns

The patterns suggest different policy priorities for countries in different groups⁵. In brief decisions are needed which

⁵ See Lewin K M 2006 for more details.
• balance progress on universalising access and completion in primary with needs to increase lower secondary participation;
• recognise the interactions between primary and secondary expansion (especially in teacher supply and transition rates);
• link upper secondary enrolment growth to labour market needs and those of post school education and training,
• identify sustainable frameworks to provide financial resources.

Why Some Targets will not be Met

Aspirational planning sets goals in the future (e.g. Net Enrolment Rate at secondary = 75%, gender parity, 100% primary completion). Most projection models then draw back a pathway to the present which indicates what needs to be achieved each year to stay on track. The pathway is often linear. What often happens in practice is that financial (time slippage related to agreeing plans, signing off agreements, disbursing tranches of funding etc) and non financial constraints (lead times on construction, teacher training, softening of demand to enrol and progress etc) lead to under achievement below the on track line. The gradient of what needs to be achieved then progressively steepens to the point where the planning and implementation system enters a Zone of Improbable Progress (ZIP). Either the goals fall into disrepute because they are unachievable and there is no confidence in the modalities of making more and more rapid progress, or the goals are redefined and time shifted (as with gender parity goals).

If a non linear approach is taken (which is more realistic), the gradient of achievement needed become concave and also steepens as time progresses, but in a planned way. This is only sustainable if increasing rates of change (more and more rapid school building,
teacher training, textbook supply etc) are sustainable and there is capacity to keep on track.

In both cases target generating planning based on the estimates of the highest sustainable rate of expansion that does not degrade quality to unacceptable levels offers a better basis for operational plans and mobilizing assets efficiently and effectively (Lewin 2007a). This depends on forward projections which draw attention to critical limitations of capacity, infrastructure and finance, and identifies forward commitments generated by present actions. It can also result in scenarios where the position in 2015 is not one of being on the steepest part of an S-Curve with no answer to what happens after 2015 (Lewin 2007a). As a rule of thumb secondary enrolment expansion rates much above GDP growth + 5% are unlikely to be sustainable in all but the very short term (Lewin 2008)

Eight observations are relevant about achievable targets for secondary expansion (Lewin 2007b). First, targets related to secondary participation often do not constitute a single list. Different governments and development partners stress different elements. There is often an element of “pick and mix” when it comes to applying targets to different systems. This is helpful if it reflects varying contexts; it may be confusing if the basis for choice is arbitrary. Identifying desirable levels of pupil teacher ratio, class size, teachers salaries as a % of GDP, % private sector provision etc. acquires very different meanings in different systems, since starting points are so different, and prospects for the achievement of goals so varied

Second, the types of benchmarks used and their derivation varies – sometimes they are absolute outcomes e.g. 100% of school age children enrolled in lower secondary. In other cases they reflect what is judged to be best practice – e.g. pupil teacher ratios of 35:1 at lower secondary. In yet other cases they may be based on abstract analysis of e.g. finance and unit costs which leads to advocacy of particular target levels (e.g. secondary teachers salaries at 5 times GDP per capita). Other possibilities include best case comparison (e.g. level of achievement in cross country comparisons, proportional progress (halving the illiteracy rate), and statistical redistribution (equity gains reflected in the distribution of participation by household income). Which types of targets are identified, on which basis clearly have implications for the extent to which they may be understood, accepted, and acted on. It may also shape which groups interests may be threatened, and which supported when decisions are made over resource allocation.

Third, often there are alternative ways of measuring performance (100% completion for lower secondary can mean 100% of the school age group including or excluding those who complete over age, 100% of those entering lower secondary three years before, 100% of those in the last grade compared to the number of children in the population of the appropriate age etc.). Which method is applied clearly has implications for apparent success.

Fourth, their may be incentives to choose the most achievable definitions of standards and manipulate data to show they have been achieved. Centrally planned government
bureaucracies in some countries were well known for producing statistical returns claiming to meet production quotas of different kinds which were artefacts of the reporting systems. If flows of external assistance depend on meeting targets they may well appear to be met when they are not. Paradoxically incentives may penalise the successful and reward the laggards. If the price of success is the withdrawal of subsidy and additional support to achieve the target, it may be more attractive to fall short. If the price of success is another more demanding target, the same is true. Falling short of the target, especially if the causes are lost in a fog of confused accountability, may be more attractive than succeeding. There may be an element of moral hazard if reaching targets has high stakes.

Fifth, if target setters are far removed from target getters (those with the responsibility for their achievement), disjunctions may occur which lead to low levels of credibility, commitment and accountability. If chains of accountability are diffuse and spread across many organisations and organisational levels they are unlikely to invite effective ownership. If target setters have not had experience of target getting, they may set unrealistic targets that lack credibility. Setting targets for levels of participation supported by non-government providers is also problematic - wholly private providers have no obvious incentive to respond to national targets.

Sixth, targets adopted by developing country governments may or may not coincide with public service agreements which development partners have with their sponsors, whether they be multi or bilateral development agencies answerable to national governments, or national or international NGOs with Boards of Directors. The scope for confusion is substantial with many different stakeholders responsible in different ways for the achievement of targets.

Seventh, targets often carry consequences for other necessary developments. More precisely, often not all desirable targets can be achieved simultaneously and there are likely to be trade offs. Thus targets generated from desirable wish lists are unlikely to be cumulatively feasible e.g. universalizing primary schooling, increasing primary secondary transition rates, supporting growth in secondary access, widening access to higher education, expanding life long learning opportunities, increasing early childhood care etc. invite prioritization. Interactions between targets can be very direct (setting targets for secondary enrolment rates implies minimum primary/secondary transition rates primary completion rates). It may also be less direct (gender balance at secondary level may be unlikely without high levels of primary enrolment).

Lastly, it is necessary to reemphasise the importance of including distributional targets when planning secondary expansion. Patterns of participation at primary and secondary level are heavily skewed by household income. The Demographic Household Survey (DHS) data sets allow some analysis of these patterns and indicate to what extent poverty marginalises large proportions of populations from participation. Households in these data sets are divided into the richest 20%, and the middle and poorest 40%. Children from the richest 20% of households have on average more than 11 times the chance of
reaching grade 9 than those from the poorest 40% of households. Gender is less important in explaining differences in enrolment amongst the richest 20% where boys are more likely to be enrolled in the ratio of 53% to 47%. Amongst the poorest 40% the ratio boys/girls is 79%/21% for participation at grade 9 on average across the data set. Gender differences tend to diminish for higher grades of attendance. Urban children have about 10 times more chance of being enrolled in grade 9 than rural children in the data set. It is possible that expanded access will reinforce these skews, especially if the varying quality of schools in rapidly expanding systems becomes more varied. Distributional targets that reflect more equitable access are therefore essential if expansion is to be pro-poor. Annex 1 includes some possible benchmarks for secondary education that can form the basis for discussion and adaptation to different country contexts.

The Increased Enrolments Needed

If GER 110% is to be achieved (a level sufficient to support universal enrolment and completion) then on average across SSA the number of primary places needs to expand by at least 1.3 times those available in 2001. If population continues to grow at current rates the number needed will be 1.8 times greater by 2015. If lower secondary was to enrol 100% of those of official entry age 4 times as many places will be needed rising to 5.6 times as many by 2015. At upper secondary the figures are 10.9 and 15.5 times respectively for 100% participation.

To achieve universal lower secondary education one third of the countries in SSA would have to provide between 4 and 10 times as many places as they do currently for the 2001 cohort and 8 to 20 times as many by 2015. The rates of increase needed to universalise upper secondary are even higher.

The detailed analysis suggests that:

- The total number of primary places needs to be increased by more than 30% by 2015 in about 70% of the countries in the data set, and some will have to increase places by as much as 100%.
- There are only eleven countries in SSA that are likely to universalise lower secondary if the maximum sustainable rate of increase in lower secondary enrolments is 10% a year (Seychelles, South Africa, Cape Verde, Botswana, Sao Tome and Principe, Namibia, Mauritius, Togo, Ghana, Zimbabwe, Swaziland, and Lesotho); if the maximum rate is set at 5% then only five will achieve this goal (Seychelles, South Africa, Cape Verde, Botswana, Mauritius).
- Targets less than GER2L 100% have to be set if they are to be achievable, and these will differ between countries depending on country prioritisation of increased access at primary and secondary levels, the resources available, and the costs of expansion.
- It will be difficult for most countries to hold primary secondary transition rates constant if all primary entrants complete the last year of primary school. Half the

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6 Based on median values across the 26 countries in the data set for highest level of participation amongst 15-19 year olds.
countries in the data set will not be able to achieve this unless lower secondary enrolments grow at an average of 10% per year to 2015.

- GER2L can continue to rise if growth is planned to ensure this outcome, even if transition rates fall for a period.

Financial Demands.

Estimates by country illustrate what percentage of GDP would need to be allocated to different levels\(^7\) to reach the target enrolment rates\(^8\). The recurrent financial resources needed to support expanded access of GER1 = 110%, GER2L = 60% and GER2U = 30% on average require 2.3%, 1.5% and 1.2% of GDP per capita to support primary, lower and upper secondary schooling across low income SSA. This is equivalent to about $3.7, $2.4, and $2.0 billion per year rising to $5.0, $3.2 and $2.7 billion by 2015. Total expenditure on education would need to be about 6.3% of GDP. This is equivalent to about $10.2 billion rising to $13.5 billion per year by 2015. This is about $3.8 billion less than is currently allocated.

Targeting higher enrolment rates of GER1=110%, GER2L=100% and GER2U=50% results on average in 2.3%, 2.6% and 2.0% of GDP per capita being needed to support primary, lower and upper secondary schooling. This is equivalent to about $3.7, $4.1 and $3.3 billion per year in 2001 rising to $4.9, $5.4 billion and $4.5 billion by 2015. Total expenditure on education would need to be about 8.6% of GDP on average. This is equivalent to about $13.9 billion rising to $18.5 billion per year by 2015. This is about $7.5 billion (at 2002 prices) more than is available from current patterns of expenditure.

If recurrent costs per pupil could be reduced to 12%, 20% and 40% of GDP per capita through packages of reforms the amounts needed for education would fall to about 5% of GDP and the recurrent shortfall to about $1.5 billion per year. If the higher enrolment targets are used, 6.3% of GDP would be needed with a recurrent shortfall of about $3.8 billion a year. These lower cost levels imply dramatic reductions in expenditure per pupil at secondary over current levels, especially in low enrolment countries. Efficiency gains of this magnitude would take several years to achieve and may be beyond reach in the short term. Table 1 summarises the results.

These costs are for recurrent expenditure only. Development costs for classroom building at $10,000 per classroom would be about $39.2 billion, of which $18.9 billion would be for secondary expansion. These costs are projected over the period 2002-2015 and thus would amount to nearly $3 billion a year, or more if incurred over a shorter period. If higher enrolment rate targets are chosen then $20.4, $20.3 and $17.8 billion would be needed for primary, lower and upper secondary respectively totalling $58.5 billion by 2015, or at least $4 billion per year using $10,000 per classroom. If provision of learning materials is regarded as development expenditure then these additional costs could be substantial. The cost would be at least at least$1.7 billion at primary and $1.1 billion at

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\(^7\) Using current cycle lengths for primary, lower and upper secondary.

\(^8\) These new estimates are published in full and by country in Lewin (2008). Mingat (2004) has also estimated costs for a smaller set of countries.
secondary. The amounts needed could easily be doubled with higher enrolments. Thus other development costs are of the order of $3 billion per year.

**Policy Options for Reform.**

There are a wide range of options that could result in more participation at affordable costs\(^9\). These options are summarised in Annex 2. Twelve key policy challenges and associated options can be identified which apply to a greater or lesser extent to all low secondary enrolment countries in SSA and South Asia.

First, the allocation of national resources to education has to be considered. The analysis indicates that in general expanded secondary enrolment is unlikely to be sustainable unless more than 5% of GDP is allocated to education as a whole, and at least 2.5% of GDP is available for lower and upper secondary schooling. In countries with longer secondary cycles and higher ratios of secondary costs as a proportion of GDP per capita, substantially more than 3% of GDP would be needed to achieve GER2L 60% and GER2U 30%, excluding the costs of primary and higher education. In most case allocations to primary education would have to drop below 50% of the education budget — level often cited in conditionalities associated with external support.

Second, the salary and non-salary costs per pupil of secondary provision have to fall in most of SSA if higher levels of participation are to be financially sustainable. Public costs per pupil need to fall below 30% and 60% of GDP per capita for lower and upper secondary. Levels as low as 20% and 40% would bring GER2L 60% and GER2U 30% within reach in most countries without allocating much more than 5% of GDP to education assuming a budgetary distribution designed to achieve this goal. It is important to remember that this does not necessarily imply falling salaries. It does imply much greater levels of productivity similar to those in high enrolment countries.

Third, a balance has to be struck between rates of expansion towards enrolment targets at primary, lower and upper secondary levels. What is appropriate is a policy choice determined in part by current patterns (especially distance from universalising primary), and partly by domestic prioritisation (especially the choice of expanding lower secondary whilst restricting publicly financed growth at upper secondary).

Fourth, structural changes in some countries could facilitate higher secondary enrolment rates at affordable costs (Lewin 2006b). The most important options are reducing elective boarding and/or withdrawing boarding subsidies except where these are essential through progressive transition to more and more day schooling; double shifting where this can reduce constraints on school capacity pending new construction; core curriculum with a limited range of options, and careful scrutiny of the cost benefits associated with high cost specialised secondary level schools when compared to general secondary alternatives (Gill at al 2000, Johanson, 2005)\(^{10}\).

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\(^9\) These are discussed in more detail in Lewin K M (2008).

\(^{10}\) Especially where these provide technical and vocational education and market demand signals are weak.
Fifth, better management of the flow of pupils could increase completion rates, lower costs per successful completer, and improve gender equity. This implies strategic intervention to reduce repetition and drop out, lower direct costs to poor households, and review selection and promotion policy related to public examinations.

Sixth, improved teacher deployment is likely to be critical to successful expansion. Much more access could be provided if norms for pupil teacher ratios (e.g. 35:1 at lower secondary, and 25:1 at upper secondary) could be applied; similarly class teacher ratios at secondary level should be less than 2:1. In both cases variations between schools could be reduced to say +/- 10% of the average.

Seventh, an increased supply of trained teachers will be critical to secondary expansion. Where demand is greatest, and existing initial training lengthy and expensive, alternative methods will have to be considered. This will include shortening initial training, making more use of in-service and mixed mode training, and agreeing appropriate levels of qualification for new secondary teachers that may be different from in the past.

Eighth, changes in school management should be considered that provide some incentives to manage human and physical resources efficiently. This can be linked productively with changed methods of school financing that introduce more elements of formula funding, local accountability, and whole school development strategies.

Ninth, secondary expansion without curriculum reform risks irrelevance and wastage. New populations of school children require curricula that address their needs, respond to changing social and economic circumstances, and recognise resource constraints. Well designed core curricula teachable effectively in all schools leading to valued knowledge, skills and competencies are essential.

Tenth, physical capacity needs planned expansion in ways that optimise increase access. This implies effective school mapping, efficient procurement, and medium term planning of construction programmes for new classrooms and schools.

Eleventh, expanded secondary access will benefit greatly from successful mechanisms to generate support from the communities that schools serve. There are many possible methods of cost sharing and cost recovery that can and should be facilitated. These need to be developed. They also need to be linked to the capacity of households to support fees and contributions so that they do not become exclusionary.

Finally, partnerships with non-government providers should be explored to see what contribution they can make to expanded access (Lewin 2006a, Lewin and Sayed, 2005, Lassibille and Tan 2000). The central policy questions are what relationships should be facilitated, how should they be regulated, and to what extent should public subsidy be directed towards which kinds of non-government providers?

**Concluding Remarks**
The challenges Ministers of Education face in low secondary enrolment countries are considerable. Priority has to continue to be given to improved access and completion through primary school where primary enrolments and achievement levels remain low. This is the most socially efficient way to raise literacy and numeracy levels, and consolidate basic learning skills. It is likely to mean that more than 50% of the education budget needs to be allocated to primary schooling in these countries and that the public cost per child should not fall below about 12% of GDP per capita – the lowest levels found in effective systems. Including the “last 20%” must be approached through fee free primary schools that relieve households of all the direct costs of schooling.

In the majority of low secondary enrolment countries where UPE is in sight, new approaches to investment in expanded secondary education are becoming essential. This offers the prospect of increasing and redistributing opportunities to learn, producing enough secondary graduates to sustain UPE, and improving the knowledge, skill and capability of the labour force. Not only are existing patterns of access to secondary school very regressive (the relatively rich participate and benefit from public subsidy disproportionately), but the gaps between SSA and other regions in participation have been growing. This must have adverse consequences for economic growth and competitiveness.

It has been noted that the costs per student at secondary level relative to GDP per capita must fall. Secondary schooling is very expensive in much of SSA and parts of South Asia costing five or more times as much per student as primary. All high enrolment systems operate at ratios of primary to secondary costs per student of less than 2:1 and rarely exceed about 30% of GDP per capita per student. At higher ratios the arithmetic is inescapable. It leads to the conclusion that mass access to secondary schooling would require most if not all of the education budget, leaving little for other levels. Without serious reform in working practices and teacher deployment mass participation at secondary is, and will remain, unaffordable in many low enrolment countries.

The contribution that non-government and private providers can make to expanded access is valuable but will not provide a substitute for publicly financed mass provision. In most of SSA, families below the 20th percentile of household income cannot afford unsubsidised private schooling. Private providers lack incentives and capacity to reach out to those who are income poor. Not-for-profit providers have to be financed somehow and have their own limitations of reach and capacity. Neither will ever be ever be “providers of last resort” on the scale needed. In the long run only States will make a reality of commitments to EFA which includes expanded secondary access..

Improving gender equity could be accelerated by equalising initial enrolment rates\(^{11}\), encouraging progression on-schedule for age\(^{12}\), and attaining levels of enrolment at

\(^{11}\) Most Commonwealth countries succeed in this; those that do not should see this as a priority

\(^{12}\) Where enrolments are gender inequitable it is often because girls drop out faster after the age of 14 no matter what grade they are in. If all girls reached the end of lower secondary school by the age of 15 many of the differences in enrolments would disappear.
secondary above GER2 50%\textsuperscript{13}. These actions alone would greatly reduce differences in enrolment rates between boys and girls. Higher overall secondary enrolment rates are gender equitable and also have a positive impact on HIV/AIDS since clear associations exist between educational level and infection.

Trade-offs in public investment in education are unavoidable\textsuperscript{14}. Some low secondary enrolment countries spend less on all secondary schools than on higher education. In others as much as 70% of the education budget is spent on primary schools alone. Balanced growth is needed that extends access more equitably, and recognises that subsidies should be progressive, not regressive, and more pro-poor.

There is now great willingness to mobilize resources internationally. The Dakar meeting offered the commitment that no country with credible plans would fail to make progress as a result of lack of financial resources. At Gleneagles the G8 meeting in July 2005 pledged an additional $50 billion in aid by 2010, with half of this being directed towards SSA. Much of this was intended for educational investment. Eighteen of the poorest countries have now had their debt cancelled which frees up additional resources. The Fast Track Initiative (FTI) promises purposeful action and additional support. The climate is changing to recognised that EFA requires more than universal primary schooling, as was always clear from close reading of the commitments.

It is therefore essential to develop the credible plans longer term plans that mobilise the external finance that is available. This can have pitfalls – several SSA governments are now more than 50% externally financed, and further support will increase this dependence. But without such support, even with serious educational reform, universal access through to the end of a basic education cycle (e.g. grade 9) will not happen in most low enrolment countries, and more than half of Africa’s children, and large numbers in South Asia, will not experience anything beyond primary schooling. There were never good reasons why so many children were denied access to literacy and numeracy, and to the higher levels of knowledge and skill that are associated with the kind of secondary schooling that can reduce poverty. The problems can be resolved if all the partners in the process play their roles with trust and commitment, and have the courage to keep asking why has it not happened? Otherwise the children of EFA will have every right to hold them to account.

\textsuperscript{13} Most countries with GER2 above 50% enrol more boys than girls.
\textsuperscript{14} These trade offs come in many forms – higher enrolment rates may necessitate higher PTRs and lower teacher per class ratios, core curricula with fewer options, better teacher deployment, strategic and equitable use of cost recovery, pro-poor subsidies e.g. bursaries, limited subsidy of private schools in favour of extending the reach of the public system, cost sharing in construction, and balanced investment between general secondary and any support for high cost TVET, and between primary, secondary and tertiary sectors.
References


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See [http://www.sussex.ac.uk/education/profile1591.html](http://www.sussex.ac.uk/education/profile1591.html) and [http://www.create-rpc.org](http://www.create-rpc.org)
Annex 1 Benchmarks and Indicators for Increasing Secondary Enrolment

<table>
<thead>
<tr>
<th>Category</th>
<th>Benchmark/indicator</th>
<th>Analytic observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service delivery indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTR</td>
<td>Lower-secondary 40:1 Upper-secondary 35:1</td>
<td>Lower ratios will increase costs and reduce access.</td>
</tr>
<tr>
<td>Variation in PTRs across</td>
<td>Less than 10% of mean value for all schools</td>
<td>Large variations in staffing ratios disadvantage pupils and reduce cost effectiveness.</td>
</tr>
<tr>
<td>secondary schools</td>
<td></td>
<td>Higher ratios indicate inefficient teacher deployment and light teaching loads.</td>
</tr>
<tr>
<td>Teacher: class ratio</td>
<td>Lower-secondary maximum: 1.5:1 Upper-secondary maximum: 2:1</td>
<td>Smaller schools have higher costs per pupil and diseconomies of scale. Small schools have to have restricted curricula options and multigrade teaching to be cost effective.</td>
</tr>
<tr>
<td>Secondary school size</td>
<td>Minimum of 500 students</td>
<td>Higher rates of growth are unlikely to be financially sustainable for more than a short period (three years or less) or physically manageable (classroom construction and so forth).</td>
</tr>
<tr>
<td>Rates of expansion</td>
<td>Increase in enrolments in secondary a year of 5% + GDP growth</td>
<td>Higher rates are unlikely to be sustainable.</td>
</tr>
<tr>
<td></td>
<td>Teacher supply growth of less than 10% per year</td>
<td></td>
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<tr>
<td>Gender indicators</td>
<td>Gender parity in all grades</td>
<td>GER secondary must exceed 50% before gender parity is likely.</td>
</tr>
<tr>
<td></td>
<td>Less than 10% of girls overage for grade;</td>
<td>Overage enrolment results in higher rates of dropout and noncompletion among girls.</td>
</tr>
<tr>
<td></td>
<td>Less than 5% girls enter grade 1 overage</td>
<td></td>
</tr>
<tr>
<td>Costs and finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per pupil</td>
<td>Lower-secondary: 20%–30% per capita GDP</td>
<td>Higher costs preclude mass access; lower costs allow more access within the same financial limits.</td>
</tr>
<tr>
<td>General secondary</td>
<td>Upper-secondary: 40%–60% per capita GDP</td>
<td>Where TVET costs per pupil are more than 50% greater than general secondary schools it is unlikely that the public benefits outweigh the opportunity costs of foregone general secondary places</td>
</tr>
<tr>
<td>TVET</td>
<td>TVET costs per pupil should be less than 1.5 times those for general secondary schools</td>
<td>Higher cost ratios preclude mass access; lower ratios facilitate higher enrolment rates</td>
</tr>
<tr>
<td>Ratio of secondary and</td>
<td>Lower-secondary: primary ratio of less than 2:1</td>
<td></td>
</tr>
<tr>
<td>primary costs per pupil</td>
<td>Upper-secondary: primary ratio of less than 4:1</td>
<td></td>
</tr>
<tr>
<td>Education recurrent budget shares for enrolment rates of GER2L = 60% and GER2U = 30%</td>
<td>Education recurrent budget shares for enrolment rates of GER2L = 100% and GER2U = 50%</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lower-secondary: At least 25%</td>
<td>Lower-secondary: At least 30%</td>
<td></td>
</tr>
<tr>
<td>Upper-secondary: At least 20%</td>
<td>Upper-secondary: At least 25%</td>
<td></td>
</tr>
<tr>
<td>Total secondary: At least 45%</td>
<td>Total secondary: At least 55%</td>
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</tbody>
</table>

- Expanded enrolments require at least 45% of the total education budget including higher education. Benchmarks subject to cycle length and cost per student.
- Expanded enrolments require at least 55% of the total education budget including higher education. Benchmarks subject to cycle length and cost per student.

**Secondary education as percentage of GDP**
- 2%–3% of GDP
- Level depends on costs per pupil and enrolment rate targets.
  - Higher rates create unsustainable costs or require very high PTRs.
  - Higher proportions restrict access by inflating costs per pupil; more day schools should reduce nonteacher costs.
  - Lower allocations will result in low levels of textbook provision and so forth and compromise learning outcomes.
  - Subsidized boarding only for students with no access to day schools.
  - Unsubsidized schools of quality cannot be financed from fees paid by households below the 25% of household income.
  - Subject to realistic local cost accounting.

**Teacher salaries**
- Lower-secondary: Less than five times per capita GDP
- Upper-secondary: Less than six times per capita GDP
- Higher rates create unsustainable costs or require very high PTRs.

**Nonteacher recurrent costs**
- Lower secondary: Less than 25% of total recurrent
- Upper secondary: Less than 35% of total recurrent
- Higher proportions restrict access by inflating costs per pupil; more day schools should reduce nonteacher costs.

**Learning materials**
- At least 10% of recurrent costs
- At least 10% of total expenditure
- Lower allocations will result in low levels of textbook provision and so forth and compromise learning outcomes.

**Subsidized boarding places**
- Less than 10% of total expenditure
- Subsidized boarding only for students with no access to day schools.

**Privately financed secondary schooling**
- 25% unsubsidized private provision
- Unsubsidized schools of quality cannot be financed from fees paid by households below the 25% of household income.

**Building costs**
- Less than $10,000 per classroom in general
- Low-cost school designs less than $100,000 per four-classroom school
- Subject to realistic local cost accounting.

**Teacher training**
- Annual cost per trainee less than twice that of an upper-secondary school student
- Higher costs reduce the numbers that can be trained, with little evidence that more-expensive training is more effective.
- Teacher training entry level at least two years above level trained to teach.
- Less than two years additional education are likely to result in poor grasp of secondary curriculum content.
- Maximum of two years training before employment
- Longer periods of preservice training are unlikely to be cost effective.

**Source:** Author.
### Annex 2 Options for Affordable Expansion of Secondary Schooling

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Options</th>
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</table>
| Reallocating Budget Resources | Increase share of GDP allocated to education towards 5% of GDP  
Increase education’s share of public expenditure towards 25%  
Increase share for secondary to more than 30% of total education spending  
Agree secondary sector development plans with development partners and seek additional support |
| Structural Changes | Shorten the length of the education cycle to twelve years where it is longer; consider 6:3:3 or 6:4:2 systems.  
Extend primary schools upwards to include lower secondary grades on the same school site. Reduce fixed costs per student related to buildings and infrastructure as a result.  
Increase average school size at secondary to 500 or more where population density allows. Limit the range of optional subjects.  
Develop multi-grade teaching methods for small schools.  
Expand lower secondary enrolment before upper secondary; retain selection into upper secondary.  
Double shift schools in high population density areas.  
Limit boarding schools to low population areas and increase the proportion of day schools Progressively withdraw boarding subsidies with safeguards for disadvantage groups.  
Limit high cost technical and vocational schools to upper secondary level. Locate specific job related training close to or in workplaces. Identify and support essential upper secondary specialised institutions |
| Containing Recurrent Costs | Review salary structures in relation to local labour markets and productivity. Move towards salary costs of 3.5,4.5 and 6 times GDP per capita for primary, lower and upper secondary teachers. Review non salary benefits to provide incentives in difficult areas  
Review non-teaching salary expenditure which can account for up to 40% of salary budgets; re-deploy qualified staff back into the classroom as teachers. Establish norms for secondary non-teaching salary budgets and constrain to less than 20% of total recurrent expenditure in day schools.  
Review non-salary costs if more than 20% of total costs. Protect learning material expenditure. Review flat rate subsidies for food, books etc. in favour of needs-based subsidies. Establish norms for non-salary costs of less than 15% of total recurrent expenditure in day schools.  
Develop norm based funding systems (related to pupil, teacher and school characteristics) to increase efficiency, equity and promote pro-poor subsidies to improve access. Develop effective capitation grant systems for non-salary expenditure. Develop quality improvement grant systems |

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Improving the Flow of Students

Reduce repetition rates to less than 5%. Management incentive systems should reward higher achievement and lower repetition. Reduce the range of ages within grades to less than 2 years. Identify reasons for drop out and act accordingly. Reduce barriers to enrolment, improve curricula attractiveness, ensure safety, support school feeding, and identify effective incentives to remain enrolled. Reduce direct costs to poor households. Use means tested fee waivers and bursary schemes in preference to universal fee free secondary education. Discourage elite capture of subsidies including by locating fee waivers and bursaries in low fee cost schools, and using selection quotas linked to poverty indicators. Adopt measures to monitor and improve attendance to ensure learning opportunities are maximised. Make schools more child friendly and child seeking. Improve reliability and validity of selection examinations. Consider automatic promotion within primary and lower secondary cycles. Reduce incentives to retake selection examinations and limit opportunities to retake. Integrate measures to improve flows into school management systems.

Improving Teacher Deployment and Utilisation

Increase PTRs where these are low. Increase to a maximum of 40:1 at lower secondary and 35:1 at upper secondary. Reduce teacher class ratios at secondary to below 2:1. Use more efficient timetabling and grouping. Monitor variation in school inputs and performance indicators. Use formula funding to reduce variance between schools on PTRs, proportion of untrained teachers, class teacher ratios, textbooks per student. Aim to restrict variations in indicators to +/- 10% of the average for all schools. Encourage recruitment of lower cost teachers within career structures that allow development and promotion. Extend use of experienced teachers using team teaching, parallel classes, common lesson planning. Use experienced teachers to support less experienced. Employ “contract” teachers strategically. Adopt more flexible learning strategies especially for older students including peer learning, materials based self-instruction, and conventional and information technology distance based programmes if these are cost effective for learning outcomes.

Enhancing School Management

Review national, regional, district and school level allocation and spending procedures. Develop incentives for budget holders to increase efficiency, especially in relation to teacher deployment and other major cost drivers. Review conditions of service. Limit penalty-free casual leave. Reward continuous teacher attendance with bonuses. Increase student learning time through better classroom management and pedagogy. Monitor time on task through school and district supervision systems. Review actual teaching workloads. Profile workloads of more and less qualified and experienced teachers. Distribute loads more evenly across staff so that more experienced teachers teach as much as less experienced.
Reforming Curricula
Introduce core curricula at lower secondary with a restricted range of subjects. Identify core specialisations at upper secondary. Design more outcome based curriculum. Link upper secondary curricula to opportunities in the labour market and higher education and training. Develop modularised learning to recognise attendance patterns of teachers and pupils. Ensure new curricula are teachable in small schools. Adopt multigrade approaches in small schools which are pedagogically effective and cost efficient. Develop learning materials suited to new learners which can be produced at low cost. Devise effective methods for distribution of textbook and other learning material using the private sector where appropriate. Invest in revolving textbook funds and encourage some cost recovery at affordable levels. Share learning material costs across several generations of pupils.

Reforming Teacher Education
Review entry qualifications and set these at levels that provide an adequate supply of applicants. Encourage graduates to enter teaching directly and up-grade with in-service. Permit non-traditional routes into teaching. Reduce the length of initial teacher training. Increase opportunities for training on-the-job, mixed mode (college/school based training) and distance programmes. Reduce training costs with more efficient teaching methods. Increase trainee:staff ratios where these are low. Use teachers in schools as training associates. Increase college utilisation throughout all months in the year. Train secondary teachers to teach two or three subjects, not one.

Improving Facilities and Buildings
Develop standardised school and classroom procurement systems. Design low cost secondary schools. Explore multi use designs for new buildings. Undertake school mapping exercises to locate new schools in areas of need. Identify specifications and needs for specialised facilities at upper secondary level.
Increasing Cost Recovery

Charge fees to those who can afford to pay. Provide subsidies and waivers for those who cannot pay. Develop scholarships/bursaries for low-income students. Reduce subsidies to high fee charging government schools. Offer grants in aid to non-government schools that are partly self financing and meet criteria for accountability and quality. Regulate non-tuition fee costs in public schools and make these transparent and accountable. Develop mechanisms to fund learning materials with contributions from the community. Use full cost recovery for non essential boarding. Encourage fundraising by parent teacher associations, alumni, and school development societies to supplement non-salary expenditure and fund additional teachers. Reduce subsidies on school meals except where there is evidence of inadequate nutrition. Encourage parental/community contributions of labour time for construction and maintenance linked to systems of quality assurance. Encourage agricultural production, workshop production to make modest contributions to costs. Charge for use of school facilities by community and other groups outside school hours. Levy marginal taxes on salaried employees and/or taxes on local production or sales. Support low interest loans to finance the private costs of schooling.

Utilising Non Government Providers

Facilitate well founded non government providers within a clear legal and governance framework with adequate registration and licensing, monitoring and quality assurance systems, and financial transparency. Direct subsidy to low cost providers. Regulate to protect the public interest. Discourage destructive interaction between public and private sectors (e.g. sharing teachers). Ensure accountability for public funds. Make low cost and subsidised learning materials available to non-government schools with the exception of those that charge high fees. Allow non-government teachers to participate in in-service training related to national curricula at subsidised costs.