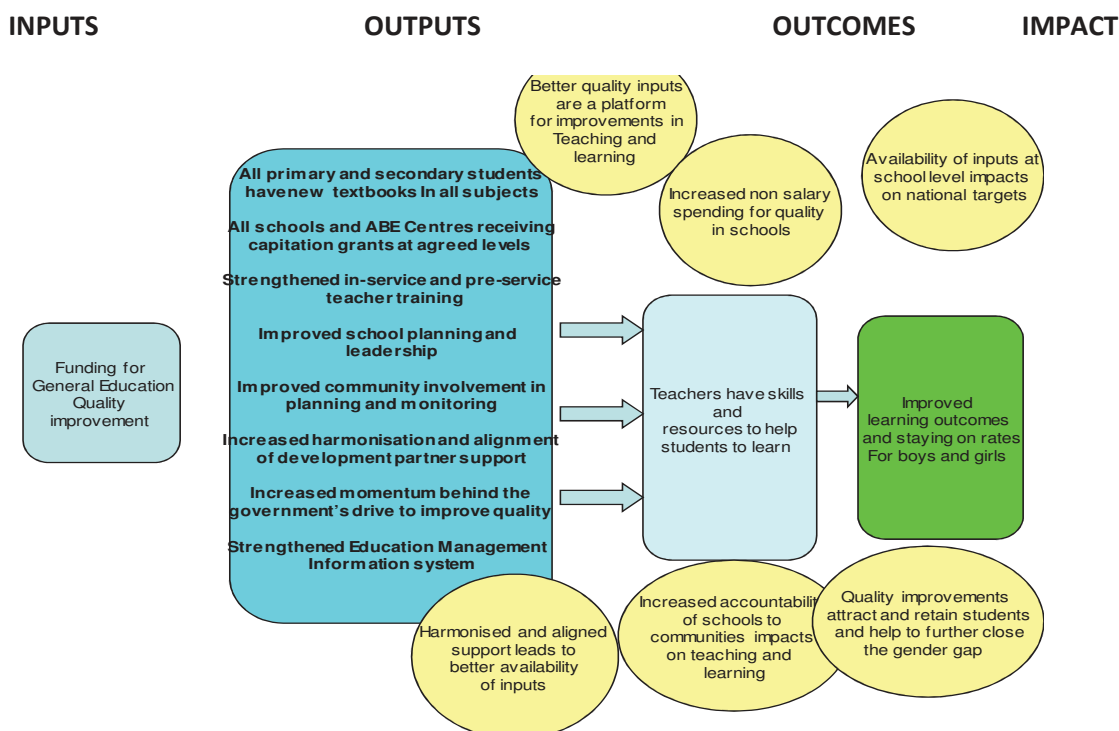


Improving the Quality of General Education in Ethiopia

The key assumptions underlying the theory of change for this support are as follows:

1. That harmonised and aligned support will lead to increased availability of key inputs at school level
2. That enhanced teacher training and professional development has a positive impact on learning
3. That the provision of textbooks has a positive impact on learning
4. That increased accountability of schools to communities will impact positively on learning outcomes
5. That increased discretionary spending will be used by schools to improve quality
6. That these inputs will have a positive impact on retention of students and closing the gender gap.

Figure 3: Theory of Change



The evidence underpinning the key assumptions in the Theory of change is summarised below.

1. Does harmonisation and alignment lead to increased inputs? Limited evidence

Multiple and fragmented development assistance has the potential to increase transaction costs for recipient Governments as well as for duplication of effort and reduced efficiency of resources. The empirical evidence that more harmonised and aligned approaches lead to improving the effectiveness of aid and delivering better outcomes is however limited. The issues appear to have been studied more in health than in education. A review of harmonisation and alignment in health commented that “it is unclear how to separate out the impact of aid practices such as having a sector wide approach or more aligned aid, from the impact of the health strategies and policies followed, and the adequacy of financing and implementation capacityⁱ

A recent synthesis of the evidence to determine whether aid effectiveness processes are improving results in the health sector reached a similar conclusion – it is difficult it is to demonstrate the impact of processes such as harmonisation, but that they do contribute to development through creating conditions for sustainable impact¹

Evidence to date from Ethiopia indicates that harmonisation and alignment in the education sector is a mechanism for attracting additional resources in support of the government’s quality improvement plan. The GEQIP instrument attracted \$168 million of Fast Track Initiative financing which would have been difficult to mobilise with pre-existing instruments. The approach has also helped to encourage other donors working on general education to harmonise their support. Most notably, USAID is supporting government efforts to improve textbooks through complementary support.

Major achievements of GEQIP to date include:

- The development and distribution of over 7 million secondary science and mathematics textbooks
- Strengthened school planning and school grants to over 27,000 primary and secondary schools
- Improved pre-service teacher training for over 40,000 primary and secondary teachers
- Upgrading of over 30,000 primary teachers from certificate to diploma

GEQIP is not without its problems and these are summarised in the recent Mid term Review of the Project². There are concerns about the pace of procurement of textbooks and delays in financial reporting. Despite these caveats, partners agreed during the review that the project was making good progress and signalled that it could effectively absorb additional funding up until the end of the first phase. As described in the previous section, fiscal space has been created in GEQIP through the expanded scope of the programme.

2. How does enhanced teacher training impact on learning? Strong evidence

International evidence suggests that, after family characteristics, teacher quality is the most important contributor to quality of education³. From the evidence, it is clear that teacher quality can be

¹ Dickinson (2011) Is aid effectiveness giving us better health results? HLSP Institute, London.

² Aide Memoire for the General Education Quality Improvement Programme Mid-Term Review Mission, May 2 – 21, 2011 (Annex 7). Quest no. 3120734

³ OECD. 2005. Teachers Matter: Attracting, Developing and Retaining Effective Teachers, Paris: OECD.

improved by both pre-service and in-service training. The World Bank⁴ found in Ghana that after textbook provision, teacher training was the next most cost effective means of improving test scores. However, the evidence also shows that not all teacher training interventions have been successful in improving quality, and that the structure and quality of the teacher training is of critical importance.

In Ethiopia, there is some evidence of the impact of teacher training. The NLA data shows that higher test scores were significantly correlated with the provision of teacher training (at Grade 4 and 8 in 2004, and at Grade 4 in 2007). Similarly, the preliminary findings of the school based component of Young Lives research found a relationship between teacher qualifications and experience and student math scores, although this may be confounded by student age. However the impact of teacher training is not always clearcut. For example, qualitative studies of the TDP 1 teacher training interventions found that the training was not always reflected in observed classroom practices⁵. The available evidence suggests the need for training to be relevant to classroom reality in order to maximize the chance of teachers adopting new techniques in the classroom and to be linked to better management of teachers at school level to maximize time on task⁶.

GEQIP tackles both the relevance of teacher training and the management of teachers. The first through a strengthened practicum component during in-service teacher training and through revised and improved teacher training materials. The second through provision of school leadership training and also structured continuous professional development for practicing teachers. Broader issues around pay and incentives for teachers are not addressed directly by GEQIP but are part of our broader dialogue with government on the effectiveness of the civil service through other instruments such as PBS and PSCAP.

3. How does the provision of textbooks impact on learning? Strong evidence

The GEQIP Project Appraisal Document summarises substantial evidence that has demonstrated that textbooks have had a consistently positive effect on student achievement. Recently, a World Bank study⁷ found that in Ghana, “textbook provision is among the most cost effective means of improving test scores.” Several studies have had more nuanced findings. For example, Glewwe, Kremer and Slviemoulin⁸ found little evidence of the impact of textbooks on the average test scores of students in Kenya, contrary to the results they found in Nicaragua and the Philippines. A possible explanation was the lack of training for teachers in the use of textbooks in Kenya – extensive training in the Philippines and minimal training in Nicaragua. Nannyonjo⁹ found a small correlation between improved textbook provision and higher test scores. The study suggests that the impact of textbooks may be limited by

⁴ World Bank (2004) Books, Buildings, and Learning Outcomes. An Impact Evaluation of World Bank Support to Basic Education in Ghana. Washington, DC: World Bank.

⁵ Dewees, A. and Terefe, H. (March 2010) TDP I Completion Report. Unpublished report.

⁶ DeStefano, J and Elaheebocus, N. (June 2009) School Quality in Woliso, Ethiopia: Using Opportunity to Learn and Early Grade Reading Fluency to Measure School Effectiveness. USAID

⁷ World Bank. (2004). Books, Buildings, and Learning Outcomes. An Impact Evaluation of World Bank Support to Basic Education in Ghana. Washington, DC: World Bank.

⁸ Glewwe, Paul, Michael Kremer and Sylvie Moulin. (2001) “Textbooks and Test Scores: Evidence from a Randomized Evaluation in Kenya”. Development Research Group, the World Bank, Washington DC.

⁹ Nannyonjo, (2007). [Education Inputs in Uganda An Analysis of Factors Influencing Learning Achievement in Grade Six](#) : World Bank, Africa Region Human Development Dept., Washington, D.C.

teachers making poor use of textbooks, and emphasizes the need to link textbook provision with appropriate teacher training

Evidence from Ethiopia very strongly suggests that textbook usage improves academic achievement. For example, the findings of the 2007 National Learning Assessment (NLA) demonstrates that, for all subjects, Grade 8 students with a textbook in a particular subject obtained higher test scores on average. It also finds that having textbooks in English, mathematics and the sciences were all significantly and positively correlated with improved overall learning outcomes of both Grade 4 and Grade 8 students. These findings were confirmed in the 2010 NLA conducted in grades 10 and 12. The same study also found that a student having his/her own textbook was positively associated with performance. Similarly the 2010 Early Grade Reading Assessment found a strong positive relationship between having a textbook and reading fluency¹⁰. While GEQIP supports the provision of textbooks in all grades, the EGRA findings have led to a renewed emphasis and impetus to tackle early grade reading problems both through GEQIP and by other partners such as USAID.

4. Do interventions to enhance school accountability improve learning outcomes? Limited evidence

Recent evidence from Sri Lanka¹¹ shows that a school improvement programme focusing on greater community involvement and better planning in schools resulted in significantly improved English and maths scores for grade IV students compared to control schools. Interestingly, results from a school report card intervention did not have any significant impact on student results. In a DFID supported pilot project in Somali region of Ethiopia, PTAs are already increasing enrolment and attendance rates, especially of girls¹².

However, there has been no systematic study in Ethiopia to date of the impact of school level planning processes and increased accountability of schools to communities on student achievement.

5. Do interventions to increase discretionary spending improve learning outcomes? Limited evidence

International evidence shows that the provision of school grants is an effective mechanism to strengthen school-based management, increase community participation, improve transparency and accountability in the use of available resources, and improve learning outcomes¹³. In Ethiopia, the limited evidence suggests that schools' discretionary resources have positive impact on student learning outcomes. The 2007 National Learning Assessment, for example, found positive correlations between schools available funding and student performance.

6. How do interventions combine in the classroom to improve learning? Limited evidence

Rather less is known about how specific interventions interact to improve learning, and whether any particular intervention is more cost effective than another. However, school effectiveness research

¹⁰ USAID Ethiopia (2010) Ethiopia Early Grade Reading Assessment. Data Analytic Report. RTI International

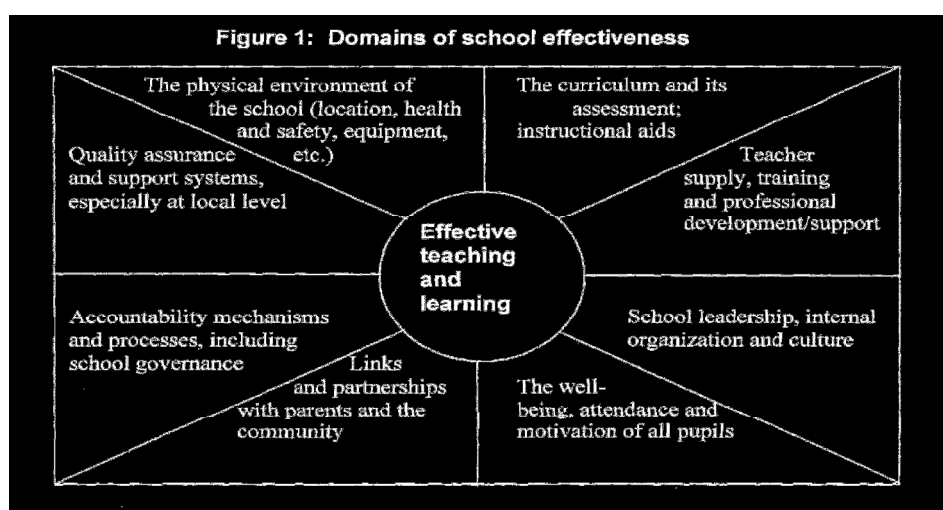
¹¹ World Bank (May 2011) An impact evaluation of Sri Lanka's policies to promote the academic performance of primary school students through school improvement and report card programmes. South Asia: Human Development Unit. Report No.35

¹² Save UK (February 2011) Emerging Lessons from the BRIDGES Project: Piloting the delivery of quality education services in the developing regional states of Ethiopia, Addis Ababa

¹³ Hanushek, E. and Woessmann, L. (2007) Education Quality and Economic Growth. The World Bank, Washington DC

points to the need for a holistic approach. Figure 4 illustrates a model with eight domains of school effectiveness that have been posited contribute to high quality teaching and learning

Figure 4: Domains of school effectiveness



Although GEQIP does not address all eight domains of the model, the figure above illustrates where the project is seeking to add value. The key to the success of the intervention rests on the extent to which the project components are implemented in coordination with other inputs. For instance, GEQIP does not include infrastructure investment or finance for teacher salaries, but these are supported through complementary financing through PBS. Nor does GEQIP support demand side constraints such as the well-being of students, but these will be the subject of a separate DFID workstream.

A study of the determinants of primary schooling in Ethiopia¹⁴ using household survey data found that while the physical supply of schools continued to be an important barrier, the quality of schooling was also an important variable in persuading parents to send their children to school. Other literature from Ethiopia suggests that key issues beyond the availability of resources and improved school planning will revolve around teacher time on task and promotion of approaches which maximise learning. For example, on a small sample of schools, USAID-funded research¹⁵ focusing on reading achievement concluded that teacher absenteeism and effective use of teaching time were both key factors in explaining reading scores. GEQIP as planned included a comprehensive evaluation of the programme and its impact on teaching and learning. The evaluation of GEQIP, to be commissioned this year, will generate evidence of what works with respect to improving education quality in Ethiopia.

7. Do quality interventions contribute to attracting and retaining students and closing the gender gap? Medium evidence

There is relatively robust evidence with respect to what works with respect to girls accessing and staying in school. These include a mixture of demand side and supply side interventions. Important factors are making schools safe places (including separate latrines for boys and girls), locating schools close to girls' homes, and changing attitudes towards the importance of schooling for girls¹⁶. Factors

¹⁴ Schaffner, JA (November 2004) the determinants of schooling investments among primary school aged children in Ethiopia. Human Development Sector, Africa Region, The World Bank

¹⁵ DeStefano, J and Elaheebocus, N. (June 2009) op cit

¹⁶ Chitrakhar, S. (2009) Overcoming barriers to girls' education in South Asia: deepening the analysis. UNICEF, Regional Office for South Asia

associated with drop out include high rates of repetition, inflexible schooling, language of instruction, and access to post primary education¹⁷.

In Ethiopia, available literature points to the importance of the quality of services delivered, including teacher training, and an increased supply of basic materials, as important factors in enrolling and keeping children in school^{18 ii}. Other literature confirms the relationship between delayed entry and drop outⁱⁱⁱ, and between violence and school attendance for both girls and boys^{iv} and also the importance of demand side interventions to address opportunity costs to families of sending girls to school.

¹⁷ Create (September 2009) Dropping out from school. Policy Brief No.9. Consortium for Research in access, Transitions and Equity

¹⁸ Schaffner et al (November 2004) The determinants of schooling investments among primary school aged children in Ethiopia. Africa Region, the World bank