Ethiopia: Primary School Construction in Tigray (FC), Rehabilitation of Teacher Training Colleges in Oromiya (FC), Primary Education Assistance Project (TC)

Joint ex-post evaluation by GTZ and KfW

OECD sector	Educational facilities and training/11220	
BMZ project numbers	1996 65 720, 1996 65 738 (FC) 1993.2066.4/2000.2174.1 (TC)	
Project executing agency	Ethiopian Ministry of Education and/or Ministries of Education in Tigray, Oromiya and Southern Provinces	
Consultant	GOPA, Bad Homburg	
Year of ex-post evaluation	**2007 (joint ex-post evaluation by KfW and GTZ)**	
	Project appraisal (planned)	**Ex-post evaluation (actual)**
Start of implementation	Tigray: 3rd quarter 1997 Oromiya: 3rd quarter 1996 TC: 1st quarter 1995	Tigray: 3rd quarter 1998 Oromiya: 3rd quarter 1998 TC: 1st quarter 1995
Period of implementation	Tigray: 36 months Oromiya: 36 months TC: 96 months	Tigray: 50 months Oromiya: 35 months TC: 98 months
Investment costs	Tigray: EUR 4.4 million Oromiya: EUR 4.1 million TC: EUR 7.3 million	Tigray: EUR 5.0 million Oromiya: EUR 4.3 million[1] TC: EUR 7.1 million
Counterpart contribution	Tigray: 0.6 million Oromiya: 0.3 million TC: -	Tigray: EUR 0.5 million Oromiya: EUR 0.3 million TC: -
Finance, of which FC or TC funds	Tigray: 3.8 million Oromiya: 3.8 million TC: 7.3 million	Tigray: 4.5 million Oromiya: 4.3 million TC: 7.1 million
Other institutions/donors involved	GTZ	GTZ

Criterion/Project	**FC Tigray**	**FC Oromiya**	**TC**	**Overall (FC/TC) assessment**
Relevance	2	2	2	**2**
Effectiveness	3	3	3	**3**
Efficiency	2	3	3	**3**
Developmental impacts	2	3	2	**3**
Sustainability	3	3	2	**3**
Overall assessment	**2**	**3**	**2**	**3**

[1] The counterpart input in the Oromiya project was provided outside the project.

Brief Description, Overall Objective and Project Objectives with Indicators

From 1995 to 2003, three basic education projects were carried out by German development assistance in a cooperation programme in Ethiopia: The two FC projects (primary school construction in Tigray, rehabilitation of teacher training colleges in Oromiya) and the TC project to promote primary school education. The overall objective of these projects was to make qualitative and quantitative improvements in primary education in Tigray, Oromiya (FC and TC) and Southern Provinces (TC).

The project objectives were:

- FC in Tigray: Improvement of teaching and learning conditions for approx. 12,400 children in Tigray through the construction of 48 primary schools in 12 districts in Tigray Province
- FC in Oromiya: Increase in the quality of primary school teacher training by improving the training and living conditions of teacher students in four teacher training colleges in Oromiya (Robe, Jimma, Nekemte, Adamaa)
- TC in Oromiya, Southern Province and in Tigray (Primary Education Assistance Project, PEAP): Improvement in teaching and learning conditions in primary schools in the project regions based on the New Education and Training Policy of 1994 as part regionalization/decentralization.

The numerous indicators for the programme objectives will be dealt with below under the 'Effectiveness' heading.

Programme Design/Major Deviations from Original Planning and Main Causes

At first, the three evaluated projects were not explicitly planned as cooperation venture. By virtue of the common programme regions and the joint support for the new education policy of the Ethiopian government and the sector programme based on it, they were in close alignment with each other and with the activities of other donors. As opposed to the heavy bias placed by the government policy on rapidly expanding school facilities, the measures financed from German funds emphasized (i) a robust construction for school buildings, (ii) a quantitative and qualitative improvement in teacher training and (iii) the introduction of more innovative learning methods in conjunction with a new curriculum. They also supported decentralization and regionalization policy. To assist the TC project, altogether 113 primary schools were renovated and equipped in Tigray and Oromiya using FC funds.

The approach of intervening in several areas at once proved to be effective in large part, also as concerned the preparation and provision of teaching aids (guides for teachers, books for the libraries) and cooperation between school and population. Considering the prevailing conditions, however, too much was expected of the local actors. Although the Ministry of Education (MoE) had a keen interest in the German services, the executing agencies were in part overstretched with the task of preparing and supervising the construction works. The parent-teacher associations were unable to make their agreed contributions. Insufficient finance allocated by the districts hampered the implementation of school development plans. As in other African countries, the planning and control functions were then successfully performed by consultants, who acted as a project implementation unit, either formally or informally, which incurred a relatively high percentage of consulting costs.

As a cooperative effort, the overall programme was successfully implemented thanks to the dovetailing of various components for improving *access to the formal educational system* and the *quality* of basic education in the cooperation schools (TC-assisted schools) as well as other FC-financed schools (in Tigray), as was plainly evident in the field visits.

Key Results of Impact Analysis and Performance Rating

In visits to 9 randomly selected, non-representative schools, the evaluators were able to confirm that the FC-financed primary school buildings inspected were in good to acceptable physical condition after five to seven years of use. Sufficient teaching and learning aids for the main

subjects in the lower grades (1-4) were generally available. There were considerable shortages in the higher grades (5-8) because the Ministry of Education lacks sufficient capacity at district level to transport the textbooks. Particularly impressive were the outputs of the basic education development centres introduced with the new curriculum and supported by TC for the production of additional teaching and learning materials tailored to local requirements. Teachers and also some pupils produce simple literacy aids, maps, anatomical diagrams, educational posters (on issues such as HIV/AIDS), teaching and learning aids for science lessons and basic tools. Both the FC-financed working aids for physics lessons (science kits) and the manuals and guides developed with TC funds provide appropriate supplements to this material.

Despite the massive increase in the number of schools, to which FC and other donors have contributed, average class sizes still exceed the government standard of 50 pupils per class. In developing countries, the standard number of pupils per teacher for competent education in specialist subjects, science, for example, is about 40. The very large class sizes that are still quite common in Ethiopia make it difficult to apply modern teaching methods. The introduction of these teaching methods, the aim of the TC measures, was necessary but very ambitious considering the rapid rise in pupil numbers. During school visits, the evaluators noted that school yards and gardens were often used for practical lessons and experiments and that pupils were actively involved. This indicates that attempts are being made to apply new approaches, even though the conditions are not yet ideal.

In all the schools visited there were active parent-teacher associations (PTAs) that deal with general school development, school management, follow-up on learning performance and in Tigray also with school budget appropriations and the development of income-generating measures. The PEAP contributed to revitalizing the PTAs at regional level, which have come to play an integral role in basic education development. There is also a critical side to the way these associations function, though: There is reason to suspect political influence, which can impair the PTAs' autonomous development. Moreover, the voluntary members are demotivated by unreliable budget funding even for sound plans.

After many years, the teaching materials for teachers and manuals for different subjects developed under the PEAP were still familiar, available and in use. Further training on animating teaching methods, school management, time management and promoting girl pupils, for example, were considered to have been very useful. The teachers questioned said this content was passed on to all teachers and a regular exchange of professional experience (in part every month) has been organized.

The teacher-training centres upgraded to colleges (TTCs) after project appraisal are in a very disparate state of repair. The college relatively near to the capital and conference centre in Adamaa is clean, well cared for, well equipped and maintained. The second TTC visited (Jimma) was completely dilapidated and no longer renovatable (an application for a new building has been submitted to the MoE). According to present information, the maintenance of the teacher training colleges is not assured as the regional government responsible in this case provides little budgetary funding for building maintenance. Only the TTC in Adamaa is in a better position in this respect as it can let out the conference centre to generate substantial income of its own, which is earmarked for renovations.

Summarizing, the FC-financed extension of classrooms (and other school infrastructure) in Tigray and Oromiya in combination with the TC measures made a major contribution to increasing basic education facilities in Ethiopia. Capacity utilization is evidently high. Due to the enormous growth in the numbers of pupils, though, there have been no sustainable improvements to reduce overcrowding in classrooms or two-shift operations. The teacher training colleges are also far too overoccupied and only some are run properly. In both cases, the lack of or meagre budgeting for building maintenance at municipal and provincial level poses a considerable risk to sustainable operation. This is exacerbated by the rigid stance taken by the regional ministries of education, which attach no priority to assigning budgetary funds for maintenance as long as there is a large unmet need for classrooms. Due to the severe overoccupation of the buildings pupils and students do not receive the necessary supervisory care so that the contents of the TC advice cannot take full effect.

We assess the developmental efficacy of the projects based on the following five subcriteria:

Relevance: Subrating 2

The objectives and interventions (access to education, quality of teaching through teacher training, including the use of regional languages, education management and active involvement of the population) were coherently aligned with government goals and were directly geared to meeting basic needs and reducing poverty. In the selected constellation, the measures were of developmental relevance.

The cooperation programme successfully contributed to enhancing the profile of German development cooperation because the two project implementing organizations were able to bring in a part of their respective strengths and core competencies in a concerted way. The decentralised further training is being continued by other donors.

Effectiveness: Subrating 3

For the most part, the project objective indicators defined at project appraisal were largely met. No specific information is available as evidence of an improvement in learning performance, though. The overoccupation of the facilities, which hampers the application of innovative teaching methods, detracts from quality. Primarily as a consequence of the overambitious expansion plans of the Ethiopian government a trade off was made between quantity and quality in the course of programme implementation.

- FC in Tigray: (a) Four years after the end of the project, 90% of the new or renovated classrooms are occupied by an average of 50 pupils. (The target group is approx. 12,400 children a year).

The indicator has been met. On average, the rooms are occupied by more than 50 and as many as 85 pupils. Out of altogether 48 financed schools the six visited at the final evaluation already house more than 6,000 pupils. If we project this figure for all the financed schools, FC-financed school construction reached approximately 50,000 children due to larger classes and shift teaching.

- FC in Tigray: (b) The dropout rate at the renovated schools is 10% below the national average.

The indicator has been met. The dropout rates in the schools visited were less than 1% (as compared with 20% in the first grade on national average); active efforts are being made to support weaker pupils; involving parents gives them more of an incentive to send their children (also girls) to school.

- FC in Oromiya: (a1) Every two years, 2,250 students are trained at the TTCs by approx. 120 trainers.

The indicator has been far surpassed, also despite the declining facilities at TTC Jimma. At the four rehabilitated TTCs (upgraded as part of the reforms), over 9,000 students undergo a three-year training as teachers for the 5-8 grades. Added to this are summer and evening classes for in-service training of working teachers. Altogether, over 20,000 students attend the 4 TTCs every year. The number of teachers has also increased, though not on the same scale as the number of students.

- FC in Oromiya: (a2) The number of students per seminar room does not exceed 40 and the seminar rooms are occupied by 30-35 pupils on average.

The indicator has not been met. According to the teacher training colleges, the rooms are occupied by 50 students on average (also 60 in some cases). Despite the conversion of dormitories into classrooms, the classes as well as the workrooms, libraries and laboratories are overcrowded.

- FC in Oromiya: (a3) At least 3.1 m^2 of floorspace per student is available in the rehabilitated dormitories.

The indicator has not been met and is no longer valid as the dormitories are used for teaching purposes. This is generally understandable in view of the need for teachers, but the dormitories are too small and poorly soundproofed for teaching purposes.

- FC in Oromiya: (b) 90% of the renovated classrooms are occupied by an average of 30-35 pupils.

The indicator has been largely met. The cooperation schools financed from FC funds generally have higher but still acceptable pupil/classroom ratios; 58 schools were assisted. The cooperation schools financed from FC funds generally have higher though still acceptable pupil/classroom ratios; 58 schools were assisted.

- FC in Oromiya: (c) 40 primary school teachers are trained every year

The indicator has not been met and is no longer valid as the teachers had already been recruited in 2004 and the rooms are now rented out or used for teaching purposes.

- TC/PEAP: Application of animating learning in school practice in 20% of the schools in Oromiya and the Southern Province and in 25% of the schools in Tigray from 2001 to the end of 2002.

This indicator was exceeded: 21% of the schools in Oromiya and almost 100% of the schools in Tigray and in the three zones of Southern Province, pupil-centred and animating teaching methods have been introduced into school practice by the teachers who underwent further training.

- TC/PEAP: Introduction of methods that foster animating learning in training at the teacher training centres/TTCs.

The indicator has only been met in part. The improved training curriculum for primary school teachers through animating teaching methods belongs to the training profile and is closely linked with the use of basic education development centres for the practical and independent production of teaching/learning materials. Because the examination results for the teacher trainees have not been made available, the qualitative evidence for the indicator is lacking.

- TC/PEAP: Renewed increase in the attendance ratio of girls at primary school (grades 1-4) in the schools of the project regions from 2001 to December 2002 by an average of 5%.

The indicator has been met. It can be accredited to the project that the enrolment and continuation rates for girls have risen above average in the cooperation schools, particularly in areas where there were pronounced cultural or religious misgivings against girls' education.

Efficiency: Subrating 3

Altogether, the FC projects are relatively efficient as far more children and students were reached than planned with relatively small investments and at low subsequent costs. The specific investment costs of the infrastructure measures were commensurate with local conditions. The relatively high unit costs for the schools with natural stone facades nevertheless merit a favourable assessment since they require less maintenance over their lifetime. Thanks to the low dropout and repeater rate, the internal efficiency record is much better at the programme schools (especially FC in Tigray) than the discernible nationwide trend, which is also already positive. Due to shift, holiday or evening operations, capacity utilization at the teacher training college buildings (TTCs) is very good, which cuts costs per pupil/student by a large margin. The allocative efficiency is, however, impaired overall by the quality deficits in the training of pupils and teachers. A major weakpoint is the lack of maintenance budgets for larger repairs, which impairs efficiency (especially in FC in Oromiya).

For lack of detailed documentation and evidence, the efficiency of the TC measures could only be ascertained to a very limited extent in the evaluation. No comparison can be made between the TC-supported activities and the training measures of other donors. Nevertheless, a plausible overall efficiency can be attested to the procedure for selecting methods and approaches (decentralised teachers' in-service training, local development of teaching and learning materials, promotion of cooperation between school and population, special attention to the concerns of girls), which facilitated the development and implementation of new concepts in the Ethiopian setting. Synergies between FC and TC helped improve internal efficiency (declining

school dropout and repeater rates, particularly for girls).

Developmental impacts: Rating 3

Altogether, the German contribution to the overall objective achievement is satisfactory. Under the given circumstances, access to and continuance in primary school has been improved (which is reflected in gross enrolment rates and the distinct fall in dropout rates, particularly amongst girls) and the methodological know-how of teachers has been enhanced as a major element in quality improvement. The gender impacts are very beneficial. The quality of teaching and the competency of the administrations involved have been improved to a limited degree only, however. Due to the very difficult training situation in the technical colleges and the discontinued training of primary school teachers, the overall developmental efficacy for the Oromiya FC project is assessed as satisfactory only. As their positive quantitative and qualitative impacts are more clearly discernible, the other two projects (FC Tigray and TC) are rated as just about good. The programme overall therefore merits a satisfactory rating.

At project appraisal the ratio of girls to total primary school pupils in the programme regions amounted to well under 50% so there was large scope for improving gender impacts. Grouping the TC and FC instruments has contributed to a considerable improvement in school access for girls. In only a decade (1996-2005) the percentage of girls enrolled at school more than doubled in the two regions.

The three projects under the programme belong to the category direct poverty reduction; improving the basic education or participation of women and girls addresses two MDGs. Forty-four per cent of the Ethiopian population is poor and the ratio of the poor is even higher in the target group due to the choice of underprivileged programme regions.

The measures had no direct environmental impacts. The cooperation programme's objectives were not explicitly geared to environmental protection and resource conservation. The TC measures did, however, also address environmental education.

The programme has effectively supported government decentralization measures in three regions through capacity building at different levels in the administrations and the involvement of the local population in school development. The parent-teacher associations, which exist at all schools, take part in school development generally and in smaller-scale repair work. The FC projects did not aim explicitly at participation/good governance.

Sustainability: Subrating 3

Due to the complete lack or shortage of funds for periodical maintenance, the long-term sustainability of the building fabric at some of the primary schools and at most of the teacher trainer colleges is in serious jeopardy. Owing to the economic situation of the population, the parent-teacher associations cannot provide finance for maintenance costs on their own. The application of robust construction methods and the development of maintenance schemes (and the distribution of toolsets) by the FC consultants have mitigated these problems for the time being but they have not remedied them by any means.

For the most part, the TC measures have been sustainable in relation to the methods chosen (decentralised training, several people at each school, repetition of further training over several years) as well as the assimilation of new curricular contents by the entire teaching staff (teaching in the mother tongue, use of teaching and learning aids tailored to local needs, promotion of girls, participation of parents, locally adapted and integrated curriculum). These contents also find application beyond the cooperation schools through staff transfer and via school networks. The continuation of similar measures in programmes promoted by other donors is very conducive to consolidating the TC outputs.

The very large expansion of the basic education sector in the last 10 years is likely to consolidate in a few years (smaller increase in the numbers of pupils with relatively good internal efficiency of the system) so that the risks for the sustainable efficacy of the impacts remain acceptable. We assess the sustainability of the overall programme as satisfactory.

Summary assessment

The programme has achieved pronounced impacts, particularly in quantitative terms, i.e. the provision of pupil places and teacher training facilities. There are clear deficits and information

gaps when it comes to the quality of learning performance and of teaching. Weighing up the above subcriteria, we assess the developmental efficacy of the overall FC-TC programme as satisfactory (Rating 3). The three individual projects are assessed as follows:

Criterion	FC Tigray	FC Oromiya	TC	Overall assessment FC/TC
Relevance	2	2	2	**2**
Effectiveness	3	3	3	**3**
Efficiency	2	3	3	**3**
Developmental impacts	2	3	2	**3**
Sustainability	3	3	2	**3**
Overall assessment	**2**	**3**	**2**	**3**

General Conclusions

- The technical layout for the construction measures and equipment should be calculated to include maintenance costs over the entire lifetime. Especially in countries where no reliable funding is available for maintenance, precedence should be given to a solution that incurs higher initial costs but is more economical in terms of maintenance (such as schools made of natural stone).
- Besides constructing classrooms, education programmes should comprise quality factors such as fitting out technical rooms and workshops as well as educational measures and the participation of the population. Their active involvement in planning, executing and evaluating the (construction) measures fosters responsibility for the school (ownership).
- Planning and control functions must be performed by consultants to maintain a satisfactory quality standard when executing/implementing agencies are weak. This entails a relatively high percentage of consulting costs.
- As with many other projects in German development cooperation, providing funds for larger replacement investments quickly overstretches the population's resources. Regular maintenance calls for regular budget appropriations.
- Proper measurement of learning performance as the main impact of education projects requires regular lessons monitoring and performance tests during the project.

Notes on the methods used to evaluate project success (project rating)

Projects are evaluated on a six-point scale, the criteria being relevance, effectiveness (outcome), "overarching developmental impact" and efficiency. The ratings are also used to arrive at a final assessment of a project's overall developmental efficacy. The scale is as follows:

1 Very good rating that clearly exceeds expectations

2 Good rating fully in line with expectations and without any significant shortcomings

3 Satisfactory rating – project falls short of expectations but the positive results dominate

4 Unsatisfactory rating – significantly below expectations, with negative results dominating despite discernible positive results

5 Clearly inadequate rating – despite some positive partial results the negative results clearly dominate

6 The project has no positive results or the situation has actually deteriorated

A rating of 1 to 3 is a positive assessment and indicates a successful project while a rating of 4 to 6 is a negative assessment and indicates a project which has no sufficiently positive results.

Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability)

The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability)

The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected.)

Sustainability level 3 (satisfactory sustainability)

The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability)

The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and an improvement is very unlikely. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.