

**Egypt: Construction of Primary Schools IV and V**

**Ex post evaluation**

<b>OECD sector</b>	11220/Primary education	
<b>BMZ project ID</b>	1) 1999 66 391 2) 2001 65 894	
<b>Project executing agency</b>	General Authority for Educational Buildings (GAEB)	
<b>Consultant</b>	Dorsch Consult, Munich (in cooperation with Engineering Consultants Group, Cairo)	
<b>Year of ex post evaluation</b>	2008	
	<b>Project appraisal (planned)</b>	<b>Ex post evaluation (actual)</b>
<b>Start of implementation</b>	1) 1st quarter 2001 2) 2nd quarter 2002	1) 1st quarter 2002 2) 3rd quarter 2002
<b>Period of implementation</b>	1) 36 months 2) 36 months	1) 36 months 2) 51 months
<b>Investment costs</b>	1) EUR 17.1 million 2) EUR 18.63 million	1) EUR 17.26 million 2) EUR 18.2 million
<b>Counterpart contribution</b>	1) EUR 1.76 million 2) EUR 3.29 million	1) EUR 1.92 million 2) EUR 2.9 million
<b>Financing, of which FC funds</b>	1) EUR 15.34 million 2) EUR 15.34 million	1) EUR 15.34 million 2) EUR 15.33 million
<b>Other institutions/donors involved</b>	-	-
<b>Performance rating</b>	Phases IV and V: 3	
• <b>Relevance</b>	Phases IV and V: 3	
• <b>Effectiveness</b>	Phases IV and V: 2	
• <b>Efficiency</b>	Phases IV and V: 3	
• <b>Overarching developmental impact</b>	Phases IV and V: 3	
• <b>Sustainability</b>	Phases IV and V: 3	

**Brief description, overall objective and programme objectives with indicators**

The "Primary School Construction Programme" (PSCP) has been in operation as an open programme of German Financial Cooperation (FC) since the beginning of the 1990s. Programme phases IV and V were intended to improve the availability of

classrooms in the governorates of Beheira, Faiyum, Beni Suef and Qena (with the latter participating in phase V only). To achieve this, new primary schools were built, and older ones were expanded, rehabilitated and/or replaced in part or in full. The schools covered by the programme were also equipped with furniture and other supplies. In 2008, the sixth phase of the programme series was launched. PSCP is implemented by the Egyptian General Authority for Educational Buildings (GAEB).

The overall objective of the two phases was to help improve formal primary education in selected governorates (PSCP IV and V) and enhance the efficiency of primary school teaching in the programme areas (PSCP V). The programme objective was to provide better access to nursery and primary schools and improve the teaching and learning conditions in the target areas.

The programme appraisal report defined the following overall objective indicators for phase IV:

- reduction in the repetition and dropout rates
- increase in the number of successful primary school graduates.

The programme appraisal report did not quantify any targets for these indicators. For phase IV, it defined the following programme objective indicators:

- increase in the aggregated enrolment rates across all PSCP school districts of a given governorate, disaggregated by boys and girls
- reduction of class sizes to fewer than 40 pupils in at least 80% of the classes
- provision of 0.75 m<sup>2</sup> of available space per pupil
- use of school buildings by only one school community (one-shift operation) in at least 80% of the schools.

The target indicators of PSCP IV were modified for phase V following a recommendation made in the 2001 evaluation by the German Ministry for Economic Cooperation and Development (BMZ) (*'Serienevaluierung zu Erfolgsaussichten von Grundbildungsvorhaben'* [Serial Evaluation of the Prospects of Success of Primary Education Programmes]). Consequently, no indicators were used to track the overall objective in phase V. Also, the first indicator for the programme objective (enrolment rates) was modified as follows in phase V:

- increase in the absolute enrolment numbers within the catchment area of any village where one or several PSCP schools are located.

The reasoning behind this modification was that due to the relatively low share of PSCP schools in the overall number of schools in the programme governorates (PSCP IV: 18%, PSCP V: 33%), it was not possible to distinguish the effects of the FC measures from those of other donors operating in the same governorates. With regard to this indicator, the programme appraisal report for phase V stipulated that the objective would be deemed to be achieved if two years after opening the schools the increase in the enrolment numbers was significantly higher than population growth. According to the World Bank, Egypt's population grew by some 2% p.a. in the period from 2001 to 2007. While the programme appraisal report did not define any target for the increase in the enrolment numbers, the ex post evaluation fixed the target, by analogy, as greater than or equal to 2%. From today's point of view, indicators that are based on the enrolment rates are more appropriate to track overall objectives than programme objectives.

## Project design / major deviations from the original programme planning and their main causes

As in the previous phases, the FC programme aimed to improve the primary education infrastructure for grades 1 to 5 (and from 2004 on, for grades 1 to 6). The following table provides an overview of the number of classrooms planned and built, distinguishing between three categories – 'new or extended', 'replaced' and 'rehabilitated'.

Table 1 – Comparison of target and actual measures in phases IV and V.

Measure	Phase IV		Phase V		Total of phases IV and V		Variance	Share in phases IV and V	
	actual	target	actual	target	actual	target		actual	target
New / extended	342	445	524	360	866	805	+7.6%	34.9%	47.6%
Replaced	403	207	354	200	757	407	+86.0%	30.5%	24.1%
Rehabilitated	437	165	420	315	857	480	+78.5%	34.6%	28.4%
Total	1182	817	1298	875	2480	1692	+46.6%	100%	100%

The share of newly built or extended classrooms in the overall programme work (of both phases) was reduced by approximately 13% to 34.9%, compared with a target share of 47.6%. In absolute terms, however, the number of classrooms that were newly built in both phases was 7.6% higher than planned. All told, the number of classrooms that were newly built, replaced or rehabilitated was approximately 47% higher than planned, while the expenditure remained more or less the same. This means that the programme exceeded its targets, which may mainly be attributed to favourable exchange rate movements (following the floating of the Egyptian pound).

During the six phases of PSCP that have been implemented so far, the school planning process kept evolving as new data and findings were incorporated. In phase V, the so-called IVP approach (integrated village plan) was developed and introduced through pilot projects in four villages. IVP is designed to shift planning and decision-making processes concerning school management to the local level. All major local stakeholders (including local governments, the local Islamic school network El Azah, local agencies, NGOs, school boards etc.) are involved in the school planning process, attending two-day planning workshops and jointly elaborating so-called 'action plans'. The planning process uses GIS technology (Geographic Information System), including satellite pictures. GIS is a helpful tool to identify appropriate locations, for instance in very poor rural target areas, for the construction or rehabilitation of schools.

The decentralized maintenance system (DMS) for school buildings, which was introduced in phase III, proved successful and was continued. Under DMS, German FC agrees to bear a degressive share of the costs of all necessary and preventive maintenance work that is carried out at a given PSCP school during its first three years of operation. In addition to DMS responsibilities assumed by local teachers, school boards (of trustees) were set up, comprising pupils, teachers and parents. In the future, responsibility for cleaning and maintaining the school buildings will be transferred to these school boards. At this stage, however, most schools continue to use paid staff, which creates funding problems as budgets are tight.

## Key results of the impact analysis and performance rating

### Overall objective level:

In total, some 24,000 schoolgirls and 29,000 schoolboys benefited from the measures (i.e. newly built, rehabilitated or replaced classrooms) undertaken in phase IV, and some 27,000 schoolgirls and 30,000 schoolboys from those implemented in phase V. This represents an increase of approximately 21% and 20% respectively, compared to the targets set at the launch of the programme. The increase in the number of pupils covered by the programme was partly due to the fact that in 2004 the Egyptian government extended primary education to grade six; the new system also applied to the PSCP schools. Up until 2004, primary education comprised grades one to five, while grade six was part of secondary education. As primary education was extended by one year in 2004, grade-six pupils were also able to benefit from the FC measures implemented at PSCP schools, and the overall number of pupils covered by the programme increased.<sup>1</sup>

Although the share of girls in the overall number of pupils in the programme areas was lower than the share of boys, the difference diminished from 3.7% in phase IV to 1.3% in phase V. This increase in the girls' share may be partly attributed to the fact that more and more boys enrol at religious EL Azah schools, which are run privately and have more teachers. They admit about 10% of Egypt's schoolboys. At the national level, the enrolment rates for six-year-old schoolboys and girls showed similar trends as in the programme areas. The boys experienced a decrease from 93.2% (2001/02) to 89.5% (2005/06), while girls' enrolment rose from 90.5% to 93.1%.

At the beginning and after completion of the measures, the implementation consultant took samples at 68% of the PSCP schools in phase IV and at 90% of the PSCP schools in phase V. This enabled us to study the trends in enrolment rates on the basis of absolute pupil numbers. For phase IV, we compared the data for 2001/2002 and 2004/2005, and for phase V, we compared 2002/2003 and 2006/2007. The results are summarised in the following table. To ensure comparability of the two phases, the figures include only grades one to five (because grade six was not part of primary education before 2004).<sup>2</sup>

Table 2 – Trends in enrolment rates in the programme areas of phases IV and V

	Phase IV				Phase V				
	Beheira	Faiyum	Beni Suef	Total	Beheira	Faiyum	Beni Suef	Qena	Total
Boys	-7.8%	-3.0%	3.3%	-2.3%	-10.9%	0.0%	0.2%	-1.4%	-2.3%
Girls	-4.7%	7.1%	18.1%	6.2%	-7.1%	6.1%	4.7%	1.0%	1.6%
Total	-6.3%	1.3%	9.3%	1.4%	-9.1%	2.7%	2.2%	-0.2%	-0.5%

On the basis of the estimated population growth rate of 2% p.a., it is possible to use the cohort calculation method to determine targets for the increase in the enrolment rate; for phase IV (three-year implementation period) the target is 6.1% and for phase V (four-year implementation period) it is 8.2%. These targets were met, or even exceeded, only by Beni Suef in phase IV (9.3% growth rate). Faiyum showed a slightly

<sup>1</sup> The decision to include grade six was made prior to programme appraisal in 1999 and was taken into account when the programme was drawn up.

<sup>2</sup> If we add the pupils of grade six, which was included in primary education in 2004/05, the absolute enrolment numbers in the PSCP school districts of phase V increased by a total of 20%.

positive trend in the enrolment rate (+1.3% in phase IV and +2,7% in phase V) but missed the target by far. Negative trends were recorded in Beheira, where enrolment dropped by 6.3% in phase IV and 9.1% in phase V. This means that only Beni Suef reached the overall objective of higher enrolment, while Faiyum, Beheira and Qena missed it. However, it is important to note that the enrolment rates might have been even worse without the classroom construction programme. Possible reasons for the slow trends include internal migration and the absorption of pupils by El Azah schools.

Technically speaking, the gross or net enrolment ratios of the schools' catchment areas may be more appropriate than absolute enrolment numbers to track the effects of the programme at the overall objective level. In 2006, the consultant performed an initial calculation of the gross enrolment ratios in the FC target areas but did not continue to track them for later periods. Therefore, there are no figures available for comparison. According to the Consultant's Final Report (dating from 2006), the gross enrolment ratio<sup>3</sup> was 99.2% in the target areas of Beheira, 72.9% in Faiyum, 76.2% in Beni Suef and 76.3% in Qena. These figures are based on phase IV, with the exception of Qena, where the figures are based on phase V. The gross enrolment ratio at the governorate level fell in the regions of Faiyum and Qena between 2001/02 and 2005/06, with Qena recording a decrease from 92.2% to 85.3%. Beni Suef registered an increase from 94% to 96.2%. (There are no data available for Beheira.) At the national level, the primary graduation ratio decreased from 98% in 2000 to 94% in 2006, with boys accounting for a higher share of successful primary graduates (96% in 2006) than girls (92%). There are no comparable data for the programme areas.

Other indicators at the overall objective level include repetition and dropout ratios. At the national level, the dropout ratio decreased from 0.87% in 2001/02 to 0.22% in 2005/06. According to a study conducted by the Consultant in 2006, the dropout ratios of the four programme regions were significantly higher than the national level, running at 4% on average and reaching 10% in some particularly marginalised rural areas. There are no data for the dropout ratios prior to the implementation of the programme. Therefore, it is not possible to track any changes. As regards the repetition ratio, there are only data aggregated at the national level, and the same goes for the transition rate from primary to secondary education. In that respect, there is clear evidence of the higher internal efficiency of private schools, where transition rates reach 99.6%, compared with 91.8% for government-run schools.

#### Programme objective level

The programme objective indicator of reducing class sizes to below 40 pupils in at least 80% of all classes was achieved only by one third of the PSCP schools participating in phases IV and V. This means that approximately 60% of all PSCP schools had class sizes of 40 pupils and more. In phase IV (2004/05), the share of classes with more than 40 pupils was 50% in Beheira, 68% in Faiyum and 77% in Beni Suef. In phase V (2006/07), that share was 44% in Beheira, 74% in Faiyum, 73% in Beni Suef and 71%

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<sup>3</sup> The gross enrolment ratio is the share of pupils enrolled at a certain stage of education, as a percentage of the overall population of the age group that is relevant for that stage of education, irrespective of whether or not the pupils are part of that relevant age group. The net enrolment ratio is the share of persons enrolled at a certain stage of education who belong to the relevant age group, as a percentage of the overall population of that age group.

in Qena. The following table provides an overview of average class density in the programme governorates:

Table 3 – Average class density in the PSCP schools participating in phases IV and V

	Beheira	Faiyum	Beni Suef	Qena	Average
Class density Phase IV (2004/05)	44.6	44.4	44.0	--	44.3
Class density Phase V (2006/07)	43.9	43.6	44.7	43.7	44.1

On average, the schools that were participating in phase IV or V of the programme had more than 40 pupils per class. Therefore, the programme objective indicator is considered not to have been achieved. One reason for this is the introduction of grade six in primary schools, which would have required the government to increase the number of classes and teachers by 20%. When evaluating the class size indicator, it is important to note that the target set at the time of programme appraisal was not realistic in the first place.<sup>4</sup> What is more, the class size record would have been much worse, if the objective of increasing the number of pupils at the programme schools had been fully reached. To put it differently – were it not for the construction work that was accomplished, class density would be even higher due to the introduction of grade six.

By contrast, the target indicator of providing at least 0.75 m<sup>2</sup> per pupil compares favourably with an actual value of 0.9 m<sup>2</sup> on average for schools where classrooms were rehabilitated or extended. Schools where classrooms were newly built or replaced provide some 0.92 m<sup>2</sup> on average, narrowly missing their target of one square metre. In view of the above-average results regarding the space per pupil available in rehabilitated classrooms, the outcome may be rated as very positive. Table 4 provides an overview of the average space per pupil available in PSCP schools participating in phases IV and V (2005/06):

Table 4 – Average space per pupil in PSCP schools participating in phases IV and V.

	Beheira	Faiyum	Beni Suef	Qena
Average space per pupil in PSCP schools of phase IV	0.93 m <sup>2</sup>	0.92 m <sup>2</sup>	0.92 m <sup>2</sup>	--
Average space per pupil in PSCP schools of phase V	0.97 m <sup>2</sup>	0.93 m <sup>2</sup>	0.85 m <sup>2</sup>	0.96 m <sup>2</sup>

The next programme objective indicator was to operate at least 80% of the schools in a one-shift mode. This target was exceeded both in phase IV and phase V, reaching 90% and 91% respectively. In that respect, it is important to note the positive trends that occurred – in phase IV, the share of PSCP schools operating in a multi-shift mode dropped from 44.7% in 2001/02 to approximately 10% in 2004/05; in phase V, the figure decreased from 19% in 2002/03 to some 9% in 2006/07.

#### Policy markers

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<sup>4</sup> The PSCP IV Programme Appraisal Report noted that preparations were being made to introduce grade six.

The target group of the programme consisted mainly of children from the country's poorer strata and regions. As the programme helped promote their productive skills, it made a contribution to poverty reduction (policy marker SUA). As has been stated above, the programme also helped improve the school education of girls (policy marker G1). It had no negative impact on the environment. The hygiene campaign improved the immediate environment of the schools and helped prevent diseases (policy marker UR 0). By opening up school boards to parents, teachers and pupils and testing a participatory planning process for the first time (particularly to select school locations), the programme made a contribution to good governance and participatory development (policy markers PD/GG1).

We have arrived at the following conclusions regarding the programme's overall performance (i.e. its developmental effectiveness):

**Relevance:** From today's point of view, the objectives pursued by the programme (providing better access to primary education and improving the teaching and learning conditions) continue to be legitimate priorities of the Egyptian government, as is borne out by the current National Strategic Plan for 2008 to 2012. The expansion of capacities may afford opportunities to reduce class size to a level that is more conducive to teaching and learning. However, both FC programmes failed to adequately consider the quality of primary education. They did not coordinate their activities with other donors which, for instance, run in-service training programmes for teachers. The programme's goal of poverty reduction (in view of the fact that the governorates covered are among the poorest in the country) and its contribution to Millennium Development Goal 2 (achieving universal primary education) are in line with the development policy goals of the German government. Egypt continues to be a partner of German development cooperation. However, the current focus has been shifted to new priority areas including the environment, water management and technical training. The relevance of both phases of the programme is rated as satisfactory (sub-rating 3).

**Effectiveness:** The programme essentially reached the two indicators related to the space available per pupil and the one-shift operation of schools. However, due to the introduction of grade six, it was not possible to reduce the average class size to below 40 in 80% of the classes. But if the two programmes had not been implemented, class density levels would be far worse, and access to education facilities in the target areas would be severely hampered. Also, there were positive effects from the DMS and the hygiene campaign, but the latter was only conducted in one governorate. In view of that, the effectiveness of the programmes is still rated as good (sub-rating 2).

**Efficiency:** Due to positive exchange rate effects, it was possible to build, replace or rehabilitate more classrooms than planned. However, there is still some cost cutting potential as unit costs are rather high by international comparison. Internal efficiency (as measured by the dropout and retention rates) improved throughout the country but due to their location in poor and rural areas, the programme schools are lagging behind the national average by a substantial margin. The efficiency of the programme is rated as satisfactory (sub-rating 3).

**Overarching developmental impact:** In the governorates covered, the programme made an important contribution to MDG 2 (achieving universal primary education) and MDG 3 (promoting gender equality). However, the impact on the enrolment rates in the governorates and programme schools was lower than expected. By national comparison, the dropout rates are rather high. To a large extent, the programme managed to reach out to poor target groups from rural areas. The FC measures helped improve the conditions for learning and teaching, encouraging more pupils to attend classes. Similar effects result from the establishment of school boards. IVP was

introduced through a number of pilot projects and was a novelty for the country. The overarching developmental impact is still satisfactory (sub-rating 3).

**Sustainability:** It is fair to assume that the government will continue to staff the schools adequately, keeping the number of vacancies at a low level. However, in order to raise the quality of education, it is crucial to enhance the motivation (salaries) and improve the qualification of the teaching staff. There are also concerns that, once DMS expires three years after completion of the programme measures, the sustainability of building maintenance and the replacement of broken furniture could decline. This trend can neither be halted by the simple and robust construction methods the programme opted for, nor by the school boards that were set up. In view of this, the sustainability of the programme is rated as satisfactory (sub-rating 3).

The weighted overall rating for both programme phases is 3 (satisfactory).

#### General conclusions and recommendations

The programme's approach focused on construction measures. In order to permanently enhance the quality of education, it would also have been necessary to coordinate the programme with technical cooperation measures (TC) and other donors. Future programmes need to take this into account.

The hygiene campaign in Faiyum and the development of a monitoring system were pursued somewhat half-heartedly. In view of the experience acquired through the programme (insufficient sanitary conditions in all governorates and a lack of monitoring data for evaluation purposes), we recommend intensifying both efforts and incorporating them in the early planning stages of future programmes. In that context, it is crucial to link and match monitoring data with demographic figures to produce a solid information base for ongoing planning processes and the further development of schools.