



Ex-post Evaluation 2010 - Brief Report

Cooperation Project - Chinese-German Training Centre for Printing Techniques (CDAD) - Hefei, People's Republic of China

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Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH
Evaluation Unit

Postfach 5180
65726 Eschborn
T +49 61 96 79-1408
F +49 61 96 79-801408
E evaluierung@gtz.de

Internet:
www.gtz.de

Produced on behalf of the German Federal Ministry
for Economic Cooperation and Development (BMZ)

Compiled by:
Fritz Feder, international consultant
with support from: Ms Ying Xu, national consultant

On behalf of:
The: AFC Consultants International GmbH / GOPA
Consultants GmbH joint working party

This report was produced by independent external experts.
It reflects solely their opinion and assessment.

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Tabular overview

Kreditanstalt für Wiederaufbau (KfW)
FC (E)

Palmengartenstraße 5-9
60325 Frankfurt am Main
T +49 69 74 31-45 12
F +49 69 74 31-45 15
E FZ-Evaluierung@kfw.de

Internet:
www.kfw.de

The evaluation mission

Evaluation team	Fritz Feder, international consultant Ying Xu, national consultant Xian Wu, interpreter
Evaluation period	05 - 29 Oct 2010

The development measure

Financial Cooperation (FC) measures		
Project title FC: Cooperation Project - Chinese-German Training Centre for Printing Techniques (CDAD)	BMZ No. 2003.66.294	
Amount: EUR 6.39 million	Disbursement status: EUR 6.39 million	
Recipient / Project executing agency: CDAD Hefei (Anhui Province)	Project appraisal report: 25 Nov 2003	
Overarching objective: To promote employment in the Chinese printing industry. Project objective: To provide needs-based education and training through expanding and improving capacity by means of this project.		
Timetable	Project appraisal	Final evaluation
Start of implementation: 06/2004	06/2004 – 05/2006	6/2004 – 04/2007
Implementation period: 20 months	23 months	34 months
Start-up: • CDAD Vocational College: 30 Sep 2004 • Equipment delivery: by 10/2005	30 Sep 2004 04/2007	30 Sep 2004 04/2007
Totals costs in million EUR	Project appraisal	Final evaluation
Equipment and machinery for CDAD	EUR 6.388 million	EUR 6.386 million
Technical Cooperation (TC) measures		
TC project title according to contract Chinese-German Training Centre for Printing Techniques (CDAD)	Project number (and previous numbers if appropriate) Project numbers: 1995.2144.4 and 2003.2209.9	
Overall term broken down by phase: Previous project: 10/1986 – 04/1998	Total costs: DM 18.323 million	

(Hefei Schoolbook Printers)	EUR 4.090 million
<u>CDAD Project</u> Phase 1 & Phase 2: 01/1998 – 05/2004 Phase 3: 06/2004 to 12/2007	EUR 0.900 million <u>Total TC contribution:</u> Total contract: EUR 4.990 million Total disbursements (actual): EUR 4.526 million <u>Partner contribution:</u> EUR 8.400 million
Lead executing agency/ agencies: Anhui Press and Publication Bureau, Hefei	Implementation partner: Chinese-German Training Centre for Printing Techniques (CDAD)
Overarching objective, as per the offer: The Chinese-German Training Centre for Printing Techniques (CDAD) in Hefei to serve as a template for the development of printing industry training systems in the People's Republic of China.	
Target groups according to offer: Male and female school leavers who have completed basic or advanced secondary school education; printing workers with professional experience and qualified printing personnel from printing companies.	

The rating

Overall rating <i>On a scale of 1 (very good, significantly better than expected) to 6 (the project/programme is useless, or the situation has deteriorated on balance)</i>	2
Individual rating	Relevance: 2; Effectiveness: 3; Impact: 2; Efficiency: 2; Sustainability: 1

The subject of this joint ex-post evaluation by KfW and GTZ is the ‘*Chinese-German Training Centre for Printing Techniques*’ (CDAD) cooperation project in the People’s Republic of China (PRC). The evaluation was carried out between April and December 2010 by Mr Fritz Feder (international consultant), Ms Ying Xu (national consultant) and Ms Xian Wu (national interpreter) for AFC Consultants International GmbH and GOPA Consultants GmbH, who were working together on behalf of GTZ and KfW. The field mission in China took place between the 5th and the 29th of September 2010. The consultants analysed relevant programme documentation and led focused discussions and structured interviews both in Germany and the PRC. At the conclusion of field evaluation, a presentation of preliminary results took place. This was recorded in a joint protocol with project partners.

As lead executing agency, the Anhui Press and Publication Bureau in Hefei took responsibility from the outset for implementing the CDAD project, which was completed at the end of 2007. The CDAD, which was also located in Hefei and had expanded and developed since the project began in early 1998, served as implementation partner. Project duration extended to nine years in total (January 1998 to April 2007), and was divided into three phases. The involvement of KfW / Financial Cooperation (FC), took place during Phase 3 (FC component duration: April 2004 to April 2007). This comprised the financing of printing presses produced by German manufacturers (Heidelberg, Koenig & Bauer [KBA] and Manroland).

In the wake of drastic economic reforms, the Chinese government became increasingly active from the mid-1990s onwards in the area of vocational training. However, the education offered was too theoretical, and businesses played little part in practical training activities. As a result, the knowledge gained failed to meet the vocational needs of the country’s various business sectors. Secondly, there was a lack of skilled and middle management personnel in the printing industry, both within Anhui and in other provinces of eastern and south-eastern China. This, among other factors, served to restrict growth in this industry sector (the core problem). New Chinese regulations on occupational training, together with the introduction of a collaborative model for training activities, aimed to lift the standard of vocational education and develop highly qualified staff. At the same time a trend became apparent in 1997/98, during the planning phase of the CDAD development measure, which had a significant effect to the contrary; China’s printing industry was developing into an emerging business sector, and was becoming dependent on qualified staff. By the same token, experience with the ‘Hefei Schoolbook Printers’ project (which preceded the CDAD programme) had highlighted the need for further qualification initiatives in this sector. Having identified the core problem delineated above, GTZ decided, on the basis of these insights, to train skilled printing

personnel in line with the German 'dual system' model, and to establish an effective, high-quality vocational training institute for printing trades and tasks which would have impact across a broad front. The target groups for the CDAD development programme were young men and women who had completed their secondary school education, and skilled printing workers, especially from rural regions of Anhui Province.

Original concept planning for the first two phases of the CDAD project, which comprised solely Technical Cooperation (TC) activities, followed the usual objective-oriented project planning (OOPP) principles. With the beginning of KfW involvement in 2004 during Phase 3, the objective system became more diversified. At this time the new contract framework (AURA), which was more tightly focused on anticipated results, came into effect. For this independent evaluation the consultants involved reconstructed a common results chain for TC and FC. This was based on existing hypotheses of cause and effect, and allowed the available objectives and indicators to be integrated in a sensible and practical fashion. The joint FC/TC overall objective is stated as: *'To improve the quality of the training and education of skilled workers in the printing industry in Anhui Province and beyond by developing the print and media sectors, and to ensure, through the appropriate expansion of capacity, that training and education are aligned with demand.'* The overall objective is being pursued through interventions in four areas: (1) the introduction of additional training programmes, (2) the re-alignment of existing training course content, (3) exchanges with German vocational colleges and other training institutions and (4) the involvement of, and cooperation with, the business sector. It was decided to build up a print technology education establishment, which was very much in its infancy in 1998, both from an institutional perspective and in terms of staff and organisation. Capacity was to be created or expanded - rapidly and intensively - in the areas of teaching curriculum, facilities and equipment, administration, student numbers and student accommodation.

The project was not specifically directed toward gender equality, and did not embrace any gender-specific measures. There were no particular developmental objectives regarding the environment, and the issues of democracy, good governance and human rights were not reflected in either project content or objectives. However, the project aimed at an equitable distribution of training opportunities and a high level of stakeholder participation. Of the eight Millennium Development Goals, only Target 1B, *'full and productive employment and decent work for all'*, is relevant here.

From 1998 on, through cooperation efforts, the CDAD was virtually "built from scratch". Lessons and training activities gradually developed along normal lines and, with German support, an increasing range of service delivery modes was created and expanded. These

included: (1) deploying German technical and academic experts, and the professional development of teachers through advanced training in new technology; (2) cooperation with German technical colleges, vocational training institutes and university faculties for printing technology; (3) collaboration - gradually increasing in intensity - with the three leading German manufacturers of printing machines (KBA, Heidelberg and Manroland), in the form of internships and advanced training for skilled workers, the specification of new machines (specification documents for machines to be purchased) and site takeover activities; (4) the development of new training courses and (5) participating in the process of re-designing the organisational structure of the expanded CDAD.

By the time the project ended in December 2007, CDAD had developed into a vocational academy incorporating a production training school with competitive, modern plant. CDAD offered a broad range of basic and advanced technical training qualifications. A third of the teaching staff received initial or further training in Germany from GTZ. Trainees received instruction in a modernised plant facility which included highly sophisticated technology (very large machines). Following project completion, CDAD, on its own account, continued to expand the numbers of teachers and students, and is now well and truly established.

This development programme was assessed in accordance with the five criteria of the *Organisation for Economic Co-operation and Development - Development Assistance Committee* (OECD-DAC): relevance, effectiveness, developmental impact, efficiency and sustainability.

Relevance is rated as **good (rating: 2)**. The development measure conforms to the needs of the partner country (the core problem). It correctly identified development trends in the Chinese printing industry at the start of the project, and tracked them consistently; and it can rely on support being readily available from the responsible public authorities in the PRC (the Provincial Government of Anhui). The provincial authorities continue to view CDAD, even after project completion, as highly relevant. The project fits with the Chinese national education policy and the associated five-year plan. The development measure continues to have relevance to poverty issues, by virtue of its focus on the poor rural area of Anhui, its promotion of employment and income generation, and the consideration given to female students in the range of study disciplines offered at CDAD. The poor integration of some phases of the project into the overall concept for German development cooperation (DC), and the lack of any synergistic effects achieved with other German or international donors has had a negative effect.

Effectiveness is rated as **satisfactory (rating: 3)**. The main reason for this somewhat cautious assessment is that, whilst recognising all the positive steps taken toward achieving

the overall objective, the quality of practical training is still unsatisfactory. In terms of its effectiveness, the project's strengths are the wide range of training qualifications now offered by CDAD, the substantial and continually increasing number of young people from Anhui achieving qualifications, and the official recognition given to those training qualifications. Training and qualification takes place in a "dual" vocational training academy - "dual" in the sense that it comprises both a technical college and a large number of cooperating concerns - which has seen continued expansion over the last five years.

Overarching developmental impact is rated as **good (rating: 2)**. The objective for developmental impact states: *"Graduates of printing technology training courses find suitable work and adequate income, and employment in Anhui Province within this sector is rising. High-quality product enables participating printing companies to achieve increased turnover and improve their profitability and competitiveness."* The majority of those trained at CDAD come from poor rural areas of Anhui Province. After successfully completing their training, they can be very confident of finding related employment within the industry in its key locations, at levels of income which are acceptable by Chinese standards. Staff qualified by CDAD - usually following a one-year or three-year course - help printers, publishers and manufacturing companies to stabilise product quality and annual turnover. No concrete data regarding the companies' turnover, profitability or competitiveness was available to the evaluation team. However, it is reasonable to assume that there were at least some positive developments, even if these cannot be expressed in numbers. The technical curricula are designed to consider environmental factors, and CDAD uses "environment-friendly production processes".

Efficiency is rated as **good (rating: 2)**. At 43% of total costs, the partner counterpart contribution toward financial establishment and development services was, by international standards, unusually high. Furthermore, in the years since project completion in 2007, CDAD has continued to invest in modernising its training facilities and equipment (printing laboratories, PC centres, and new apparatus). By using German personnel (with a suitable combination of skills) on a short-term basis, deploying a local project manager and training skilled personnel from CDAD partners in Germany, staff costs were kept reasonable from the outset. However, better coordination in the timing of vocational training support was needed with regard to the machines shipped from Germany. Towards the end of the project, delays in delivery created asynchronous effects on the plans for student instruction on these machines, causing the project budget to slip and become under-utilised. The result was to limit the efficiency of this development measure. The German printing presses supplied

through FC under Phase 3 accounted for almost 35% of total project costs; however, this is justified under the efficiency criteria.

Sustainability is rated as **very good (rating: 1)**. The positive effects that have been achieved will in all probability continue, and may even develop further. The prevailing financial and educational circumstances are remarkably favourable. As a recognised state education institution, CDAD can look to expand. This is subject to some conditions, but these are favourably influenced by the burgeoning demand for print and media products, and by the boom within the vocational training sector in the PRC. The result is an increased awareness of, and attention to, vocational training policy in China (from the Education Commission, and the Press and Publication Bureau). Demand for skilled workers in the printing industry remains strong, so a high proportion of CDAD graduates are guaranteed permanent employment. From an institutional perspective one of CDAD's advantages is its financial stability, with incomes from training fees growing, wages and salaries guaranteed by the state, and public subsidies available for investment purposes. In Anhui, CDAD cooperates closely with around 60 printing businesses and has looser ties with a further 200. It also cooperates with institutions within the sector in other provinces. CDAD has proven effective across a broad front, both in terms of industry training and in the narrower project context. Financial remedies are needed to combat staff shortages in administrative areas, but CDAD has a good prospect of recognition under the Chinese "Excellence Initiative" scheme by 2015.

In our overall assessment this development programme has been ranked as **good (rating: 2)**.

The CDAD cooperation project is the only project in China over the last 12 years which GTZ and KfW have implemented together. Collaboration with the three German printing machinery manufacturers (KBA, Manroland and Heidelberg) also played a major part here. The synergies between KfW and GTZ in the joint phase of the project could serve as a model for development cooperation in China, and were highly significant to the progress made toward reaching the objectives. Approaches for an overarching concept of "DC from a single source", going beyond the complementarity of GTZ and KfW, emerged from time to time during the project, but ultimately no other instruments of German development cooperation were brought into use. The synergies between German and international DC operations - foreseen in sporadic "Round Table" discussions in Beijing - did not materialise. From its inception, the project was, in effect, exclusively geared to German DC, and CDAD is widely known as a "German project".

From the consultant's viewpoint there is limited scope for offering general recommendations, since the favourable background conditions that exist in the PRC are not available in, or transferable to, other countries. Primary factors in the success of CDAD include (1) the booming economy, especially in the printing industry; (2) the existing political and regulatory basis for vocational training; (3) the extent of business interest in cooperating with educational institutions; (4) the strength of support for CDAD from the Anhui Press and Publication Bureau and from the provincial Education Commission; and (5) the interest of German printing machinery manufacturers in becoming established in the Chinese market.

The following recommendations are primarily directed toward German DC actors (BMZ, GTZ and KfW) and, to a lesser extent, lead executing agencies and implementation partners on the ground – since, in the context of this particular ex-post evaluation, we have few recommendations for the project partners directly involved here.

This DC with China has now ended. After lengthy discussions, a “strategic alliance between the Chinese and German media industries” (a public-private partnership, or “PPP”) - which was intended to create a new business and operating model for CDAD after project completion – failed in 2008/2009, due to a lack of agreement on the German side (i.e. between GTZ and the German manufacturing companies). Based on these events, we recommend to **GTZ and KfW** that: firstly, an appropriate exit strategy for ending project cooperation should be developed with the project partner in ample time; and secondly, steps be taken to ensure the partner can continue alone along the planned route as effectively as possible, without encouraging him in any false or unrealistic expectations.

There was marked success here, in the case of the CDAD, in identifying and recording the initial position regarding vocational training within the printing industry in the context of Chinese economic reforms. This provides a clear indication to all project partners - including **German DC** as well as **implementation partners and lead executing agencies** in the partner country - how important it is to capture the background economic conditions for vocational training initiatives and ensure the involvement of stakeholders at an early stage in the planning of new DC projects. We recommend that a baseline study be compiled at the very start of a project, to provide a reference against which not only GTZ and KfW, but also implementation partners, can systematically monitor changing conditions.

To expand on this point, we also recommend that **GTZ and KfW** establish a functioning M & E (monitoring & evaluation) system at the beginning of the project; this will provide all participants, actors and partners with a continuous plan v. actual comparison of the project's results and its progress toward its objectives, and will also facilitate adjustments to project design if required. The generally positive outcome of this development programme

demonstrates the importance of cooperative dialogue between project partners, in which the validity of the original conceptual approach is constantly under review, and which also permits changes in project direction on a case-by-case basis. Here we recommend that **BMZ** reacts flexibly to any conceptual restructuring or realignment that proves necessary.

At the same time, the CDAD project stands testament to the fact that expanding the project approach of a particular TC project by an FC component (which was not originally envisaged) can lead to a good overall result. In view of these experience, we recommend that **GTZ and KfW**, and, at a higher level, the **BMZ**, review the opportunities for synergies between TC and FC in particular project phases with greater frequency.

Finally, it proved highly beneficial that some sections of CDAD's technical and managerial staff were able to observe printing technology training in Germany at an early stage. CDAD was able to make good use of the knowledge gained in Germany in the planning training courses, development of specialist course content, curriculum planning, timetable preparation, etc.. We recommend to **German DC organisations** that, in the case of similar projects, technical training visits to Germany for knowledge transfer purposes should be included in project planning and arranged at an early stage.

Comparison of planned and actual results



FC overall objective (adjusted):
To improve the quality of the training and education of skilled workers in the printing industry in Anhui province and beyond by developing the print and media sectors, and to ensure, through the appropriate expansion of capacity, that training and education are aligned with needs.

Cross-cutting themes			
Combating poverty (MSA)	Participative development and good governance (PD/GG-0)	Socio-cultural and gender effects (G-1)	Ecological impact (UR-0)
Approach not based on self-help; no direct impact on poverty reduction. MDG target 1B	Good balance of participation in the operating environment - practical work, advice, employment exchanges, research cooperation, advanced training, information exchange	No specific gender equality measures included, but female participation of approx. 60%, due to study courses that appealed to women	No specifically targeted project initiatives. Observed: waste segregation & disposal, course content on environmental protection/ environment-friendly production techniques

- Overall objective indicator 1:**
The CDAD technical and vocational college continues to qualify students to accredited standards and to train printing technicians each year from 2008 on, at least in the final two years of the project.
Status:
- Overall objective indicator 2:**
Each year since 2008, CDAD has been providing professional training to an appropriate, needs-based number of teaching staff, verified by an annual comparison between demand analysis and actual numbers of qualified teachers.
Status:
- Overall indicator 3:**
Each year, in line with demand, CDAD provides further training to approx. four teachers and four instructors to disseminate the CDAD model.
Status:
- Overall objective indicator 4:**
CDAD qualifies students in least five areas of printing technology under its new process model, which involves a high proportion of practical training, and this is evident in the new, updated technical curricula.
Status:
- Overall objective indicator 5:**
CDAD printing facilities, including teaching software, form a central component of the CDAD training model and are used for training purposes for at least 60% of total operational time.
Status:

Intervention area 1:
- Those who have completed training are recognised as skilled workers, and possess the required skills and abilities in printing technology
- The quality of training has improved and its scope has expanded, indicating an improvement in standards which is having a positive impact on the quality of print products.
The vocational qualifications awarded are recognised by the educational and employment systems of Anhui Province, and this is confirmed by appropriate certification
Status:
By the end of 2010, at least 2,750 students have been trained at CDAD by a minimum of 130 instructors.
Status:
All the technical facilities installed at CDAD are being used for training purposes for at least 60% of total operating time.
Status:
The quality of the training received by teaching staff at CDAD has improved continuously since the project started, and this has been confirmed by a group of experts (in a study).
Status:
The number of training programmes based on the CDAD model has increased from three to a minimum of five.
Status:
Using the opportunities provided by the new equipment facilities, the existing programme of training has expanded into a vocational college, which has been in operation for at least two years.
Status:

Intervention area 2:
- Those who have completed training are recognised as skilled workers, and possess the required skills and abilities in printing technology
- The quality of training has improved and its scope has expanded, indicating an improvement in standards which is having a positive impact on the quality of print products.
The vocational qualifications awarded are recognised by the educational and employment systems of Anhui Province, and this is confirmed by appropriate certification.
Status:
By the end of 2010, at least 2,750 students have been trained at CDAD by a minimum of 130 instructors.
Status:
The quality of the training received by teaching staff at CDAD has improved continuously since the project started, and this has been confirmed by a group of experts (in a study).
Status:

Intervention area 3:
- The quality of training at CDAD has improved
- Training at CDAD develops in line with the model (pilot initiative)
Exchanges between CDAD and at least two vocational training institutions continue beyond the end of the project; this is reflected in revisions to the technical curriculum and in modifications to teaching methods and principles, verified by exemplary attendance levels.
Status:
To provide a sustainable basis on which to disseminate and implement the CDAD model, further training has been provided to one teacher and one instructor in each of four education centres or printing companies in Anhui Province.

Intervention area 4:
Through the involvement of business and the use of machinery facilities, training at CDAD (which will serve as a template elsewhere) is strongly oriented toward-practical activity.
All the technical facilities installed at CDAD are being used for training purposes for at least 60% of total operating time.
Status:
Out of 500 companies which have employed CDAD graduates for longer than six months, 80% rate the training received by the employee - based on their performance - as good or very good, with reference to the specific requirements of their area of employment; this evaluation being based on work/performance questionnaires.
Status:

Green:	Target achieved
Yellow:	Progress made/ target partially achieved
Red:	Target not achieved/ no satisfactory sources

Evaluation date September 2010

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Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn/Germany
T +49 61 96 79-1408
F +49 61 96 79-801408
E evaluierung@gtz.de
L www.gtz.de

Kreditanstalt für Wiederaufbau (KfW)

Palmengartenstraße 5-9
60325 Frankfurt am Main
T +49 69 74 31-45 12
F +49 69 74 31-45 15
E FZ-Evaluierung@kfw.de
L www.kfw.de