



Swiss-Indian Chamber of Commerce



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How the project began

In 2008, SICC and the Federal Office for Professional Education and Technology (OPET) launched a joint initiative to implement basic elements of the Swiss dual track Vocational Education and Training System (VET) in India.

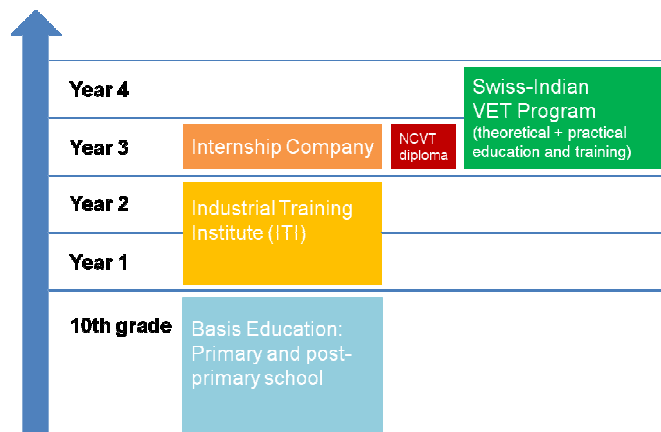
This initiative is part of an overall effort to establish cooperative ties between India and Switzerland, creating a win-win situation for both countries: students in India will have the opportunity to gain high-quality, internationally recognized vocational education and training. Swiss and Indian companies will be able to tap into a qualified technical workforce comprised of "Swiss skilled" workers trained in India. Moreover, the initiative is expected to contribute to India's further industrial development and offer Swiss firms the chance to increase their presence in India.

In November 2008, SICC selected the project team, defined the project plan and signed Memoranda of Understanding (MoU) with companies in the machinery and metal-working industries that are participating in the pilot project: Bobst India, Burckhardt Compression and Rieter India in Pune and Bühler India in Bangalore are participating in the pilot project. SWISSMEM (the Swiss Association of Mechanical and Electrical Engineering Industries) and SFIVET (the Swiss Federal Institute for Vocational Education: the Swiss Federal Competence Center for the training to VET Professionals, development and research in VET field) are the technical partners from Switzerland and in India MoU's are in place with CII (Confederation of Indian Industry), FICCI (Federation of Indian Chambers of Commerce and Industry), the Government of Karnataka and the Government of Maharashtra.

VET complements the Indian training model

One of the outstanding features of the VET project is that it is embedded in the local Indian training system and grows (almost organically) out of it. The VET program constitutes a two-year advanced course for apprentices to take after they have completed a two-year trade certificate course at one of the local ITI (Industrial Training Institutes). The Indian model stipulates a mandatory year-long internship at a company, at the conclusion of which participants are awarded the National Council of Vocational Training (NCVT) Diploma.

Swiss-Indian VET training model:
Completing the existing Indian training model



Executive Partners



SFIVET
SWISS FEDERAL INSTITUTE
FOR VOCATIONAL EDUCATION
AND TRAINING

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation
Federal Department of Economic Affairs FDEA
Federal Office for Professional Education and Technology OPET

While apprentices complete this mandatory internship, they enrol in the VET program at the same time and enjoy complementary theoretical and practical education and training.

The VET program takes four semesters. The course curriculum is designed to include practical training, theoretical training, soft skills, work-related skills, quality and process expertise, English language and cross-trade training. In this sense, it incorporates key features of the Swiss VET polymechanic curriculum covering multi-skills competencies. Emphasis is placed on key competencies needed to ensure production and process quality in the Indian manufacturing and work context.

The ITI teachers and company instructors themselves receive instruction in training techniques, including the latest developments in pedagogy and didactics, from Swiss experts. In turn, the ITI teachers impart the theoretical curriculum to the apprentices to bolster the latter's practical training.

Launch of VET pilot project

The first batch of classes started in October 2009, after meticulous feasibility study and preparation (including training the teachers and instructors), by the project partners. The four partner companies selected and hired the apprentices who had completed two years of training at an Indian ITI. The companies are responsible for the contractual relationship with the apprentices, providing the necessary facilities and equipment needed for practical training, hiring instructors and paying both the ITI teachers who offer the theoretical courses as well as the shop floor instructors for the duration of the pilot project in the locations Bangalore and Pune.

Within the framework of the pilot project, the apprentices now spend two days a week at their respective ITI's learning the theory from their specially trained teachers. The rest of their time is spent at one of the four companies where apprentice training centers with the relevant tools and equipment have been set up. Senior technicians, schooled in Swiss manufacturing approaches, instruct apprentices in correct practices using the latest machine technology.

The Swiss Indian way of delivering education

One of the challenges the project faced at the beginning was how to implement the Swiss way of delivering vocational training.

The Indian system of ITI adapted from the post independence era was based on an institute training model. The curriculum and material are centrally prepared; the detailed training material for teachers and instructors correspond to one single standard across the whole country.

This approach enables teachers to quickly comprehend the topic of the day and deliver it in a classroom or lab in a teacher-oriented way.

The Indian system however does not allow for a student-oriented teaching model which is key to attain a level of quality equivalent to the Swiss model. The project therefore had to ensure the following:

- The material and documentation given to instructors, teachers and apprentices have to match Swiss standards.
- The teachers and instructors have to be trained to apply student-oriented rather than teacher-oriented training methods.
- Instructors have to be carefully mentored while adopting the new teaching mode (as they were not used to teaching).
- Also for teachers a continuous support is essential, although they have partly long experience in teaching.

The project team took all on-site key learnings into consideration and had to actually revamp the training material to comply with the need for more detailed teaching/learning material.

A new curriculum was designed, material was adapted and many teaching aids (incl. electronic and mechanical ones) have been incorporated to ensure an easy delivery of complex subjects within the so called production technologist course.

Improvement of English language skills for apprentices

Many of the ITI's especially in semi-urban areas teach their courses and conduct practical training in the local language. As a result, VET project management has received a similar request from the involved companies to ensure that all apprentices have good basic knowledge in English.

Some of the reasons which are crucial to achieve high quality and productivity are as follows:

- The companies use English as their business language.
- Most documentation, drawings, machinery manuals etc. are in English.
- All the companies' IT processes are in English.
- Clear communication within the shop floor team is crucial to ensuring high quality and zero defect work.
- The ability to read, write, listen and talk in an unambiguous manner is a critical element of the process.

The project responded by having an English-language class during the first semester.

High quality pedagogical materials

One of the key elements this project provides is top quality course materials and training methodologies in order to meet Swiss quality standards. Swissmem produces the officially approved VET documentation for the training of Swiss apprentices in these sectors. Most of the documentation had to be translated from German to English. In 2008-09, this was done in Switzerland. Since January 2010, a team has been set up to do the translations in Bangalore.

After the first round of translation, the documents are sent back to Switzerland for verification by its authors at Swissmem. Based on changes and/or corrections, they are fine-tuned and

stored in a document repository. Another team who focuses on layout and formatting creates a manual from these translations, which is then sent for printing.

This approach has led to a reduction of translation and printing costs, while producing English-language pedagogical materials that have Swissmem's stamp of quality.

Training of teachers and instructors

The new apprentices will start their theoretical courses and practical training in October 2010. Therefore teachers and instructors who haven't participated in the project until now have to be trained. This training will take place beginning of September in Bangalore. An 8-day-course is set up by SFIVET with the following main topics:

- familiarize with a new system,
- situation oriented training and teaching and
- basic knowledge about assessments and tests.

During this course, the two groups will attend separate training. Teachers will hear more about cooperative teaching and how to work efficiently with the new material provided by Swissmem. Meanwhile the instructors will be trained in basics of communication, culture of feedback, how to handle conflicts and disturbances and finally how to build up a successful instruction.

Training of examiners

For the assessments during the courses Swissmem has run a one-week training course for examiners, both in Pune and Bangalore. This training emphasizes on quality and understanding the nuances of assessment and improves the examiner's skill set to comprehensively and objectively assess the work process, the individual steps taken and the final outcome of the apprentice.

There will be a follow-up training for these instructors and teachers in August 2010 where they will have to transfer what they have learnt into practice and demonstrate their ability to assess an apprentice's work. The instructors/teachers will receive a certificate at the end of the training if their performance was successful.

In order to ensure a fair assessment examiners of one company will assess the apprentices of the other company.

For the final assessment at the end of the Swiss VET, SFIVET will provide the Swiss standard training for the examiners to ensure that the qualification procedures in India reach the required level.

The Journey continues into 2010 and 2011

On April 30, 2010 a VET meeting was held at Swissmem in Zurich with representatives from the four current partner companies, other interested companies and the VET steering committee. The partner companies spoke favourably about the project and Swissmem said that the training levels of the Indian apprentices would be comparable to that of Swiss apprentices upon completion of their VET degree. All the stakeholders at the meeting stressed the importance of maintaining the project at current quality levels going forward, and ramping it up to include more apprentices and companies.

These plans were presented to the Swiss Federal Council recently. Their response was very positive and we now have a confirmed program for 2010-2011.

Some of the highlights:

- Increase the total number of apprentices to 200 by October 2011
- Include more companies in Pune and Bangalore
- Include Indian vendors of Swiss companies in the Pilot Project

The organization has since been upgraded to cater for this expansion and more activities shifted to India. All teams are gearing up for the October 2010 batch of new apprentices. Once they are on board we will have approximately 80 apprentices in the pilot project.

Contact

If you have any comments or feedback regarding the VET initiative, please let us know! Thank you.

G P Chandra Kumar
VET Project Director India
ck@nacksventures.com
+91 98450 57778

Joanna Pavel
VET Project Director Switzerland
joanna.pavel@sicc.ch
+41 44 226 90 62