



Knowledge hub
-
Collection of best practices

Summary of the best practice

1. Title of the best practice (e.g. name of policy, programme, project, etc.) *

Further Develop Luban Workshop as an International Famous Brand of Vocational Education;
Construct a Platform for People-to-People and Cultural Exchanges with Teaching Resource
Database

2. Country or countries where the practice is implemented *

China, India, Egypt

3. Please select the **most relevant** Action Track(s) the best practice applies to *

- Action Track 1. Inclusive, equitable, safe, and healthy schools
- Action Track 2. Learning and skills for life, work, and sustainable development
- Action Track 3. Teachers, teaching and the teaching profession
- Action Track 4. Digital learning and transformation
- Action Track 5. Financing of education

4. Implementation lead/partner organization(s) *

Indian Luban Workshop, Egypt Luban Workshop

5. Key words (5-15 words): Please add key descriptive words around aims, modalities, target groups etc. *

vocational education, Luban Workshop, teaching resource database, the platform for people-to-people and cultural exchange

6. What makes it a best practice? *

Originality: The construction of the database is combined with Luban Workshop. Teachers from TLIVCT have jointly developed international standards and core curriculum standards for photovoltaic major with professional teachers from both India and Egypt, shared professional teaching resources and bilingual teaching materials, and jointly developed virtual simulation training platform to participate in the competition. Through the construction of the database, China has built an exchange platform with India, Egypt and other countries in the field of new energy, promoted cultural, academic, and talent exchanges, educational cooperation, and knowledge sharing between countries, and enhanced China's international voice and influence in the field of new energy. Accomplishments: Through the form of "Resource database+Luban Workshop", the team teachers have carried out in-depth educational, cultural and academic exchanges with foreign teachers, learning from each other and making progress together. Up to now, there are 6 Indian and Egyptian teachers and 3 students have been trained, and 215 teachers and students have received overseas training, among which the Indian students won an award in the National Vocational Skill Competition in 2018. The construction achievements of the "Resource database+Luban Workshop" have been highly approved by overseas universities and government agencies.

Description of the best practice

7. Introduction (350-400 words)

This section should ideally provide the context of, and justification for, the practice and address the following issues:

- i) Which population was affected?
- ii) What was the problem that needed to be addressed?
- iii) Which approach was taken and what objectives were achieved? *

To serve China's BRI(Belt and Road Initiative), the primary host of national new energy teaching resource database——Tianjin Light Industry Vocational Technical College (hereinafter referred to as TLIVCT) continuously enhance the international influence of this teaching resource database by applying it to the construction of Indian Luban Workshop and Egypt Luban Workshop. TLIVCT has developed and shared fine English and Chinese teaching resources, set up practical training bases, and held skill competitions to enhance people-to-people and cultural exchanges, thus making Chinese new energy technology and skills, and the standards of industry and enterprise understood and accepted by foreign teachers and students, which helps to enhance the international competitiveness of Chinese enterprises.

The construction and improvement project of national new energy teaching resource database is led by TLIVCT, with Jiuquan Vocational Technical College, Foshan Polytechnic as major members, together with other 22 vocational colleges, 23 leading industries, enterprises and associations from 20 provinces and cities within China. A total of 32,006 resources have been stored in the database, the number of registered learners reached 69,077, and the total number of visits was 21,768,745. Indian Luban Workshop was built by TLIVCT and Chennai Institute of Technology in India in Dec. 2017, and Egypt Luban Workshop was built by TLIVCT and Ain Shams University and Cairo Advanced Maintenance School in Egypt in Nov. 2020.

8. Implementation (350-450 words)

Please describe the implementation modalities or processes, where possible in relation to:

- i) What are the main activities carried out?
- ii) When and where the activities were carried out (including the start date and whether it is ongoing)?
- iii) Who were the key implementation actors and collaborators? (civil society organizations, private sector, foundations, coalitions, networks etc.)?
- iv) What were the resources needed (budget and sources) for the implementation? *

TLIVCT carries out educational and academic and cultural exchanges in the path of “training room construction--resource construction--teacher training--student skill upgrading--service for economic development”. TLIVCT has cooperated with outstanding Chinese enterprises to build 200-square-meter new energy training bases for Luban Workshop in India and Egypt to provide a platform for local students to learn and upgrade their technical skills. Relying on the training base, students can learn advanced technical skills through high-quality equipment and supporting online learning resources. They can learn the wind-solar hybrid power generation equipment technology in English, and the equipment use and safety precautions by scanning the QR code posted on equipment and textbooks to log in the resource database. TLIVCT has also constantly improve and update the resources of the database and jointly built with enterprises, such as adding dual-carbon development, energy storage technology, hydrogen energy technology, etc., which has become the main field of teaching and enterprise training for teachers in India and Egypt. After the global outbreak of Covid-19, considering that teachers and students will study at home, who can't come to school to practice the equipment operation training, TLIVCT used the minimum time to develop bilingual virtual learning platform for the wind-solar hybrid generation equipment technology with some enterprises. Students watch and practice the content of practical training repeatedly through the virtual platform until they master and improve their professional skills.

9. Results – outputs and outcomes (250-350 words)

To the extent possible, please reply to the questions below:

- i) How was the practice identified as transformative? (e.g., impact on policies, impact on management processes, impact on delivery arrangements or education monitoring, impact on teachers, learners and beneficiary communities etc.);
- ii) What were the concrete results achieved with regard to outputs and outcomes?
- iii) Has an assessment of the practice been carried out? If yes, what were the results? *

Relying on Luban Workshops, internationalized school running of TLIVCT is gradually expanded from the initial “bringing-in”. The cooperation platforms for China and countries like New Zealand, Switzerland, India, and Egypt, and the Research Centre for African Vocational Education have been set up. The main content has expanded from vocational education cooperation to assisting developing countries in vocational education and international production capacity cooperation. Meanwhile, equal emphasis has been given to scientific research and practice to explore new measures for higher vocational education to respond to the BRI. New standards of luban workshop’s core function and construction mode have been interpreted. The new path of international teaching and resource construction and talent cultivation have been practiced. Relying on the international teaching resources, EPIP (Engineering Practice Innovation Project) mode is introduced to carry out EPIE teacher training for Indian and Egypt Luban Workshops with the notion of project-oriented and task-driven mode, so as to promote the ability of teachers from foreign colleges and universities. Relying on the database, TLIVCT also applied the photovoltaic technology, SCM control technology and other courses in the teacher training program which covers a total of more than 60 days for teachers from Indian and Egypt Luban Workshop. Through the training and learning, the theoretical knowledge and skills of teachers have been improved. The teachers applied the teaching model to their daily teaching and training in local workshops, which greatly met the training needs of local technical talents in India and Egypt.

10. Lessons learnt (300 words)

To the extent possible, please reply to the following questions:

- i) What were the key triggers for transformation?
- ii) What worked really well – what facilitated this?
- iii) What did not work – why did it not work? *

As the leading member, TLIVCT together with other 22 colleges and 23 enterprises within China have promoted the construction of national new energy professional teaching resources database and the construction of upgrading and improvement projects, which have played an obvious role in online and offline mixed teaching. Resources have been shared overseas with LuBan Workshops, realizing the domestic and international double circulation. The achievements of the teaching team has been reported by many media. It has led the establishment of the national innovation team community in the field of new energy and environmental protection technology, played a leading role in similar majors, and boosted the construction of new energy technology training area of Luban Workshops. It took the lead in setting up luban Workshop Training and employment Base in Egypt, hosted Chinese enterprises' investment promotion conference in Egypt, and served for the training for skilled talents from oversea Chinese enterprises. TLIVCT have strengthened international exchanges, promoted the construction of international disciplines, achieved a high-level international school running, and significantly increased the international influence of the majors and disciplines.

11. Conclusions (250 words)

Please describe why may this intervention be considered a “best practice”. What recommendations can be made for those intending to adopt the documented “best practice” or how can it help people working on the same issue(s)? *

Through the construction of the resource database, TLIVCT cooperate with world-class enterprises and domestic leading enterprises to formulate and implement international teaching standards and industry standards in accordance with the requirements of high-end technical and technical personnel training, and lead the construction and reform of related majors in similar colleges and universities to share with Luban Workshops. The “six steps” and “eight dimensions” construction standards have been systematically proposed, which were adopted by Tianjin Luban Workshop Research and Development Center and became a model for subsequent construction of other Luban Workshops.

12. Further reading

Please provide a list and URLs of key reference documents for additional information on the “best practice” for those who may be interested in knowing how the results benefited the beneficiary group/s. *

Website for national new energy professional teaching resource database:

<http://xnyzyk.hxpxy.com/>