



Online Conference

Bridging Asia-Pacific and Europe: New Qualifications and Competencies in TVET



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Coupling of NQC and TVET Curriculum in SZPT, China

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Outline

- I. Quick Facts of Shenzhen Polytechnic
- II. National Policies on Cooperation between TVET & Enterprises
- III. Shenzhen Policies on Cooperation between TVET & Enterprises
- IV. SZPT Innovation Ecosystem with Sectors & Employers
- V. SZPT's 9 Approaches to Integration between NQC and Curriculum

I. Quick Facts of SZPT

5 Campuses

-covering 2.12 million square meter in total

28,235 Students

-23,443 full-time & 4,792 part-time

16 Schools/Faculties

-79 programs

2033 Full-Time Faculty and Staff

-217 full professors, 657 associate professors and 408 PhD holders.

Mission

-Supply interdisciplinary, innovative, high-caliber, technical and skilled human resources

Leading Status among Chinese TVET Institutions

- Flagship of & Ranking No.1 in 1,423 Higher Vocational Colleges in China
- National Model Higher Vocational Education College
- National Model Entrepreneurship College
- UNESCO UNEVOC i-hub

Vision

-to make a pioneer in TVET innovation and share Shenzhen Solutions with international TVET community

Indicators

- More than 110,000 graduates
- 14 National Prizes of Education Achievements
- graduate employment rate at 96% , average salary ¥ 5,306
- graduate entrepreneurship rate at 12.7% in 3 yrs
- 10% graduates running their own or family enterprises
- over 2,000 technology transfers (over ¥200m income)
- 1,726 patent licenses
- 74 industrial standards



II. National Policies on Cooperation between TVET & Enterprises

2.1 Policies on TVET Governance

1. China's Education Modernization 2035 (2019)
2. **Implementation Program(2018-2022) on Speeding up Education Modernization (2019)**
3. **National Implementation Program for TVET Reform(2019)**
4. **Promotion Measures for Cooperation between TVET Institutions and Enterprises (2018)**
5. **Some Opinions on Deepening Integration of Manufacturing and Education (2017)**
6. Vocational Education Law of the People's Republic of China (2015)
7. Decision of the State Council on Accelerating the Development of Modern Vocational Education (2014)
8. National Plan for Medium and Long-term Education Reform and Development for 2010–2020 (2010)

2.2 Policies on Engaging Employers in TVET



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主题分类: 科技、教育\教育

发文机关: 国务院办公厅

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教育部等六部门印发《职业学校校企合作促进办法》

2018-02-20 10:44 来源: 教育部网站

【字体: 大 中 小】 打印 分享

教育部等六部门关于印发《职业学校校企合作促进办法》的通知

教职成〔2018〕1号



中华人民共和国教育部
Ministry of Education of the People's Republic of China

当前位置: 首页 > 公开

信息名称: 教育部办公厅关于开展职业教育校企深度合作项目建设工作的通知

信息索引: 360A07-06-2018-0027-1 生成日期: 2018-10-25 发文机构: 教育部办公厅

发文字号: 教职成厅函〔2018〕55号 信息类别: 职业教育与成人教育

内容概述: 教育部办公厅发布《关于开展职业教育校企深度合作项目建设工作的通知》。

教育部办公厅

教职成厅函〔2018〕55号

教育部办公厅关于开展职业教育
校企深度合作项目建设工作的通知

深圳 政府在线
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首页

政务公开

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索引号: 043000-10-2013-005968

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发布日期: 2013-03-13

名称: 深圳市人民政府办公厅关于促进职业教育校企合作的意见

文号: 深府办函〔2013〕13号

关键词:

深圳市人民政府办公厅关于促进职业教育校企合作的意见

信息来源: 深圳市人民政府办公厅 信息提供日期: 2013-03-13 【字体: 大 中 小】

2.3 Implementation Program on Speeding up Education Modernization (2018-2022)

Task 3:Further promote integration between industries and TVET

“ Better the operating mechanism of integration between industries and education; stick to market, service and employment oriented direction; optimize program arrangement, vigorously promote integration between industries and education and cooperation between schools and enterprises, launch pilots of integration between industries and education.”

2.4 National Implementation Program for TVET Reform(2019)

1.Accreditation and Motivation of Employers Engaged in Integration between Industry and Education

“Based on national pilots of integration between industries and education, **the accreditation system** of employers engaged in this integration shall be established. The combined motivation mix of **‘Finance+ Budget allocation + Land allocation+ Credit’** shall be adopted to those employers accredited. In addition, **favorable tax policy** would be adopted to those accredited employers ”.

2.4 National Implementation Program for TVET Reform(2019)

2. Encourage large enterprises to become TVET provider

“Encourage large enterprises with relevant teaching resources to become TVET providers..... By 2020, 300 national model TVET Groups (Alliances) will be established, engaging medium and small enterprises.”

3. Launch “1+X” pilot project

1 means TVET diploma, X means qualifications in different sectors.

Top enterprises in different sectors would be selected to develop, assess and offer special qualifications in certain sector.

2.5 Some Opinions on Deepening Integration of Manufacturing and Education (2017)

Four in One Governance Structure: Government planning, Employer acting as a main role, talents cultivation oriented, alignment of supply and demand by social organizations.

Propelling mechanism of integration between industries and education:

1. **Schools**: Guide different schools or colleges to establish education models in line with industrial needs;
2. **Employers**: motivate employers to invest in integration between industries and education by means of supportive land allocation and financing policy;
3. **Local governments**: launch pilot city project on integration of industries and education, support regions, industries and employers with better resources to implement the project first, encourage the construction by evaluating their performance.

III. Local Policies on Cooperation between TVET & Enterprises

3.1 Shenzhen policy on Employers' engagement in TVET

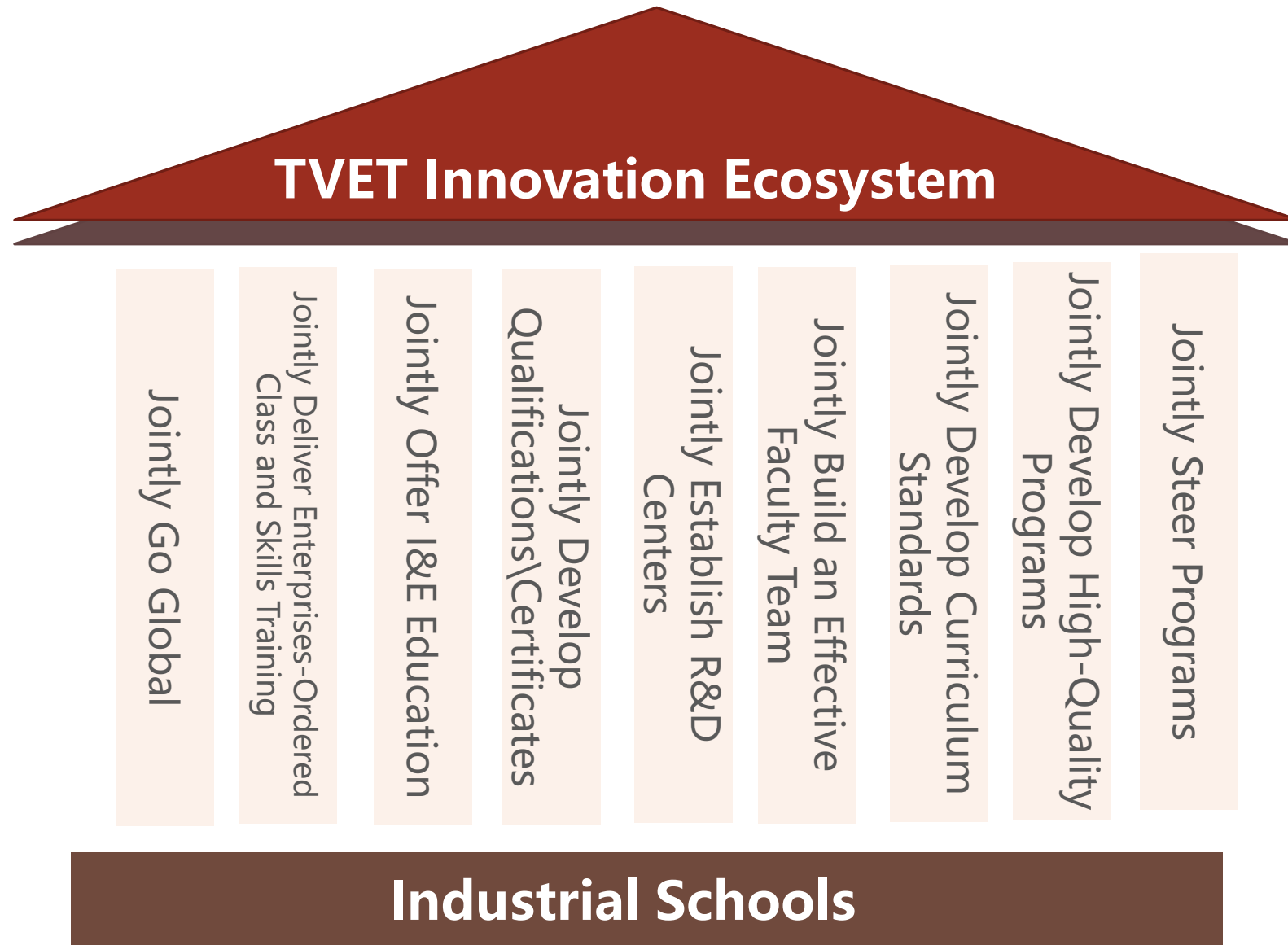
“Opinions on promoting employers' engagement in TVET” by Shenzhen Municipal Government

Subsidy policy:

Students in secondary vocational education can enjoy the municipal government subsidy for their internship in enterprises for **12 months**, students in higher vocational education enjoy the subsidy for **6 months**. The subsidy rate is 650 RMB each month. The employers who offer internship and practice base to TVET students can be awarded subsidy of 300 RMB for each student.

IV. SZPT's Innovation Ecosystem with Sectors and Enterprises

4.1 Innovation Ecosystem with Sectors and Enterprises



4.2 Innovation Ecosystem with Sectors and Enterprises

11 Industrial Schools Established

- Huawei ICT School
- ARM Intelligent Hardware School
- Alibaba School of Digital Trade
- BYD School of Applied Technology
- Ping An School of Finance and Technology



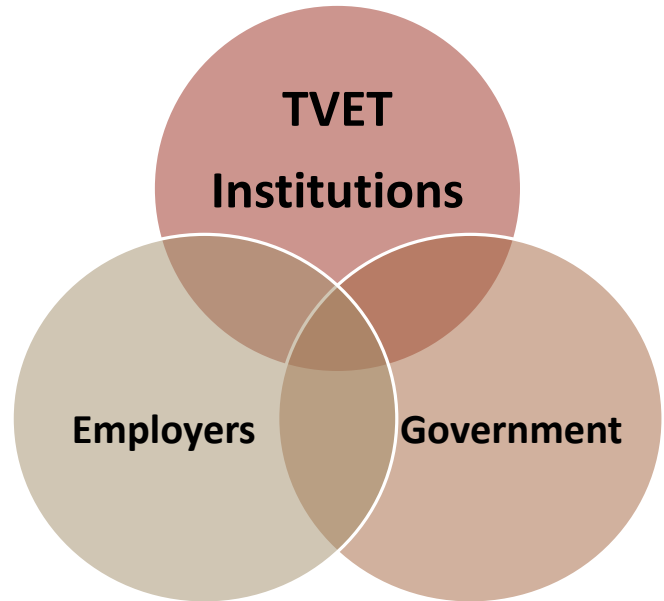
- Yuto School of Graphic Communications
- CMG Maritime Silk Route School
- Tagen School of Civil Engineering
- Shuibei Jewelry Design School
- Meituan Digital Life School

V. SZPT's 9 Approaches to Integration between NQC and Curriculum

V. SZPT's 9 Approaches to NQC Integration

5.1 Jointly steer programs

Program Production-Learning-Research-Application Steering Committee: Chairman and members are composed of industry and enterprise managers or experts, governmental officials, reviewing the program syllabus and curricula syllabus, offering internships and scholarship, advising the development of programs.



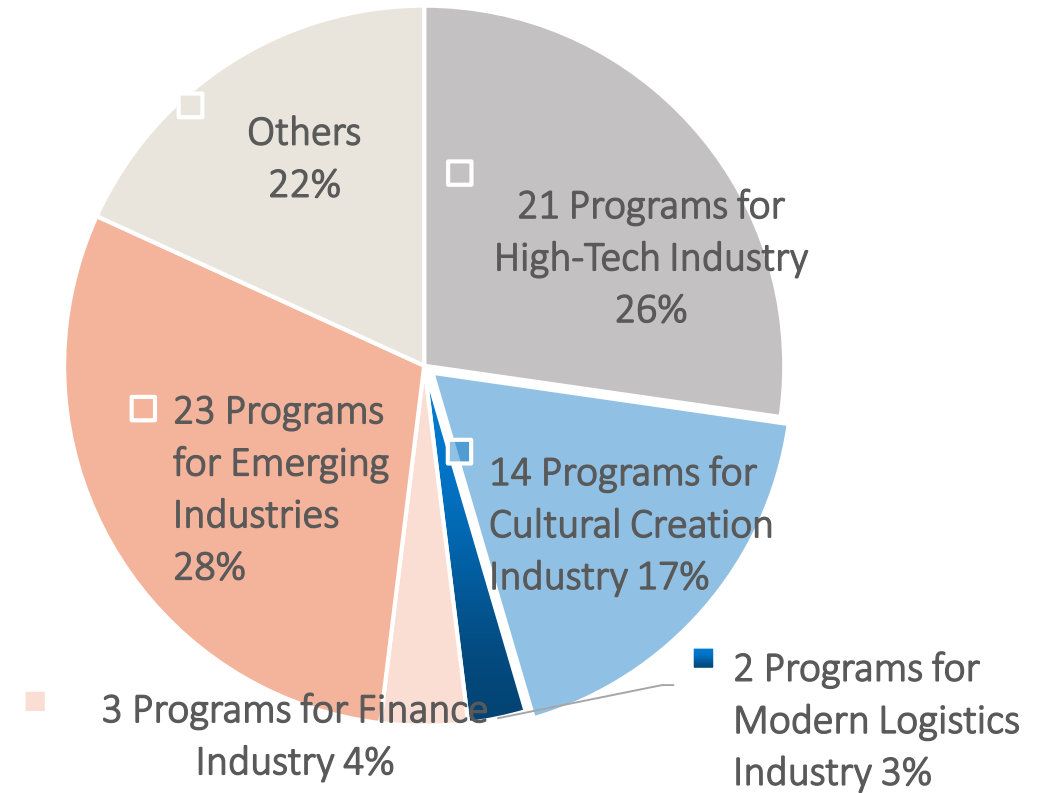
V. SZPT's 9 Approaches to NQC Integration

5.2 Jointly Develop High-Quality Programs



Program Set-up based on the pillar industries and emerging industries

In 2020, **80** programs were offered, among which **40** programs were for four pillar industries in Shenzhen, accounting for **50%**, and **23** programs were for emerging industries or future industries, accounting for **29%**.



Distribution of programs offered based on the four pillar industries and emerging industries in Shenzhen

V. SZPT's 9 Approaches to NQC Integration

5.2 Jointly Develop High-Quality Programs

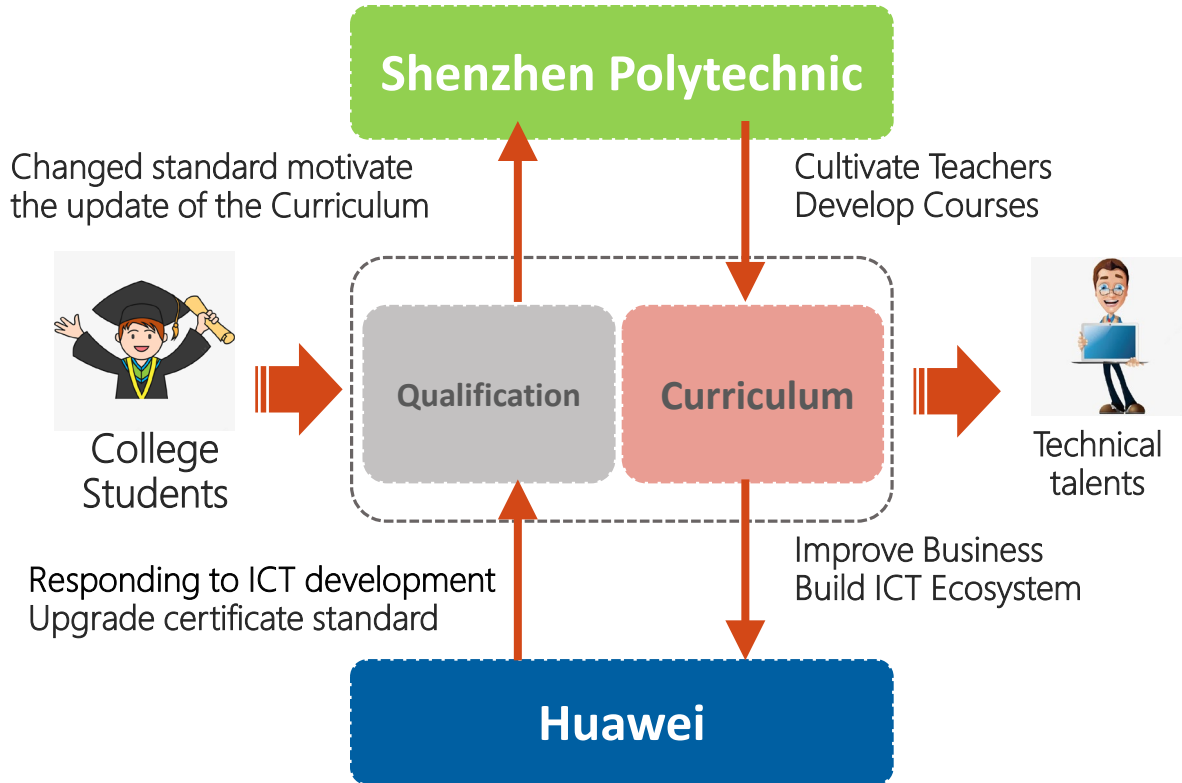
Develop "2+8+N" program clusters and program standards together with Huawei, Ping An, Alibaba and other enterprises

Mode	Professional groups	cooperative enterprise
2	communication technology	Huawei
	electronic information	ARM
	logistics management	China Merchants Port
8	Digital trade	Alibaba
	AI	Iflytek
	intelligent manufacturing	Siemens
	Digital graphic information technology	Yuto
	New energy vehicle technology	BYD
	urban ecological environment	Tagen
	Material engineering technology	Royole
	Smart health Management	Tencent
N	financial technology	Ping An
	Product art design	Shuibeijewelry
	Digital cultural creativity	China Television Media
		

V. SZPT's 9 Approaches to NQC Integration

5.2 Jointly Develop High-Quality Programs

Shenzhen Polytechnic and **Huawei**



**Coupling of Curricula and NQC,
Producing market-oriented graduates**

- Develop program together
- Develop curriculum together
- Train students together

Serve the needs of the ICT industry precisely



National Outstanding Prize of Education Achievement

V. SZPT's 9 Approaches to NQC Integration

5.3 Jointly Develop Curriculum Standards



华为云服务入门教程

21课时 - 29418人学习



思科Packet Tracer 7.2使用教程

9课时 - 7258人学习



华为FusionCompute、
FusionAccess实验视频

50课时 - 42593人学习



华为存储HCNA视频教程

41课时 - 164882人学习



华为FusionSphere OpenStack实
验实战视频课程

10课时 - 89360人学习



华为存储虚拟化Fusion Storage
使用教程

14课时 - 49434人学习



华为云计算HCNA实验教程

63课时 - 296221人学习



华为HCNA-HNTD (H12-211)题
库讲解视频课程

9课时 - 135631人学习



华为模拟器eNSP实战视频课程

12课时 - 493498人学习



华为桌面虚拟化：Fusion Access
使用基础视频课程

21课时 - 73387人学习

Transform technical standards of Huawei, Ping An and BYD etc. **into curriculum standards**, further develop them into learning resources, producing **200 textbooks**

V. SZPT's 9 Approaches to NQC Integration

5.4 Jointly Build an Effective Faculty Team

1. Formulating standards

Recruitment standards & standards for new teachers, program directors and tutors from enterprises

2. Employing enterprise experts as teachers

111 teachers recruited from enterprises in the last 5 years

3. Offering work based training for teachers

2,563 teachers engaging in work based training in the last 5 years

4. Building 21 "Mixed" teaching teams

21 mixed teaching teams with technical experts from enterprises



Huawei network lectures by WANG Longjie on e-learning platform 51cto

very popular with more than 8 million students/trainees

V. SZPT's 9 Approaches to NQC Integration

5.5 Jointly Establish R&D Centers

1. Institute of Advanced Materials

2. New Energy Automotive Technology Research Institute

3. Institute of Applied AI Technologies for Guangdong-Hongkong-Macau Greater Bay Area

4. Intelligent Manufacturing Technology Research Institute

5. Institute of Intelligent Science and Engineering



6. Internet of Things Research Institute

7. New Generation Communication Network Research Institute

8. Institute of Marine Medicine

9. Institute of Urban Ecology and Environmental Technology

10. Institute of Image Engineering and Communication Technology

V. SZPT's 9 Approaches to NQC Integration

5.5 Jointly Establish R&D Centers

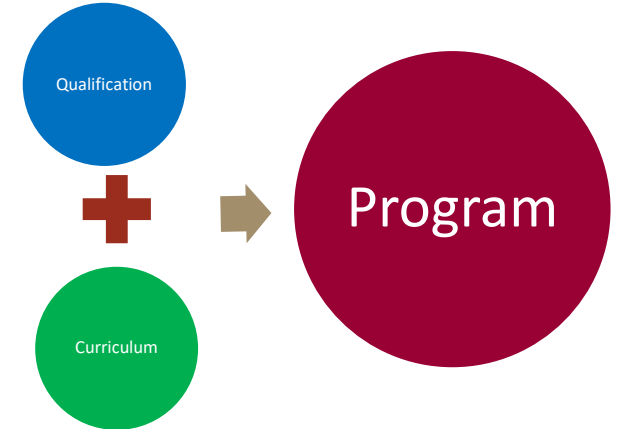
Public Technical Service Platforms



- 1 Software Quality and System Security Testing Center
- 2 Ultra-wideband Mobile Communication Technology Service Center
- 3 Collaborative Innovation Service Center for Informatization in the New Era
- 4 Reliability Detection Center of Electronic information Materials
- 5 New Energy Automotive Electronics Testing Center
- 6 Jewelry Inspection and Technical Service Center
- 7 Modern Printing and Packaging Standardization Development and Application Center
- 8 BIM Public Technology Service Center
- 9 Food Safety Biochemical Analysis and Testing Center
- 10

V. SZPT's 9 Approaches to NQC Integration

5.6 Jointly Develop Qualifications/Certificates



Introduced

71 International
Qualifications

Jointly developed

Developed 10 qualifications
with Alibaba ,BYD, etc.

Engaged

In development of 6 “X”
skills certificates

Embedding

qualification
standards into
program curricula and
quality assurance
system

V. SZPT's 9 Approaches to NQC Integration

5.7 Jointly Offer I&E Education

5 interdisciplinary learning centers established with well-known enterprises e.g. Alibaba, serving for practical teaching and learning, innovation research and development, and business incubation.



Cross-Border
E-Commerce
Learning Center



BIM
Learning-Research-
Application Center



Big Data and
Artificial Intelligence
Learning Center



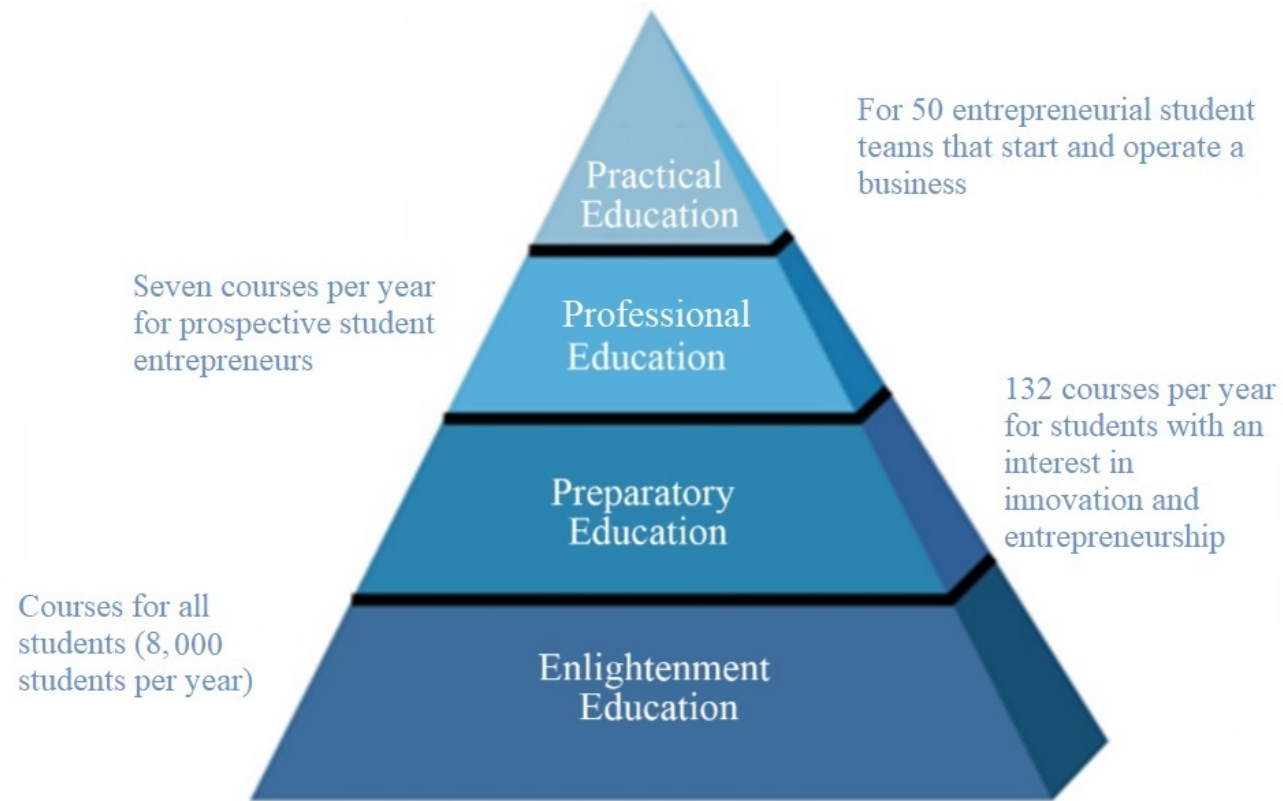
Virtual Reality
Learning
Center



Product innovation
Interdisciplinary
E-Learning Center

V. SZPT's 9 Approaches to NQC Integration

6. Jointly Offer I&E Education



**SZPT
I&E Education Model**

The Progressive Innovation and Entrepreneurship Education Model

V. SZPT's 9 Approaches to NQC Integration

5.8 Jointly Deliver Enterprises-Ordered Class and Skills Training



Modern
apprenticeship

Modern Apprenticeship in collaboration with BYD, Yutong, Tianjian and other enterprises by **setting up enterprise campuses**, recruiting and training more than **8,000** students



V. SZPT's 9 Approaches to NQC Integration

5.8 Jointly Deliver Enterprises-Ordered Class and Skills Training



**Robotics Industrial
Training Institute**



**Uav Industrial Training
Institute**



**Smart Building Industrial
Training Institute**

10 Sectors

Upskilling of labor force for
industrial transformation

180,000 Trainees

Skills training

100,000 People

Qualification assessment

2019

V. SZPT's 9 Approaches to NQC Integration

5.9 Jointly Go Global

6 TVET centers established in four countries



In Malaysia

Set up a TVET Center and 2 Chinese Language and Culture Centers



In Germany

Set up a TVET Center



In Ukraine

Set up a TVET Center



In Bulgaria

Set up a TVET Center



In collaboration with China Merchants Group and other top enterprises

Jointly Go Global with International Enterprises

Skills training for countries and regions along the **"Belt and Road"**



V. Innovation Ecosystem with Sectors and Enterprises

8. Jointly Go Global

Establish TVET Centers to Share SZPT Solutions

- Dec. 2013 Shenzhen Polytechnic-Malaysia University of Science and Technology Chinese Language & Cultural Center established
- Oct. 2016 Shenzhen Polytechnic-Politeknik Sultan Salahuddin Abdul Aziz Shah Chinese Language & Cultural Center established
- May 2018 Partners Agreement between Shenzhen Polytechnic (SZPT) and Universiti Teknikal Malaysia Melaka (UTeM) signed for the establishment of a TVET Center in UTeM



V. Innovation Ecosystem with Sectors and Enterprises

8. Jointly Go Global

Offer Program & Curricula Training to Support Teacher Professional Development



Sept. 2018

7-day skills training program on **Cross-Border E-Commerce** offered in **Institute Sinaran** by SZPT teachers specialized in economics



Oct. 2018

ICT skills training offered in **UTeM** by SZPT teachers specialized in communication technologies

