

Promoting Entrepreneurial Learning in TVET

Innovative Pathways: Showcasing the Future of Entrepreneurship in Digital,
Social, and Sustainable Spheres

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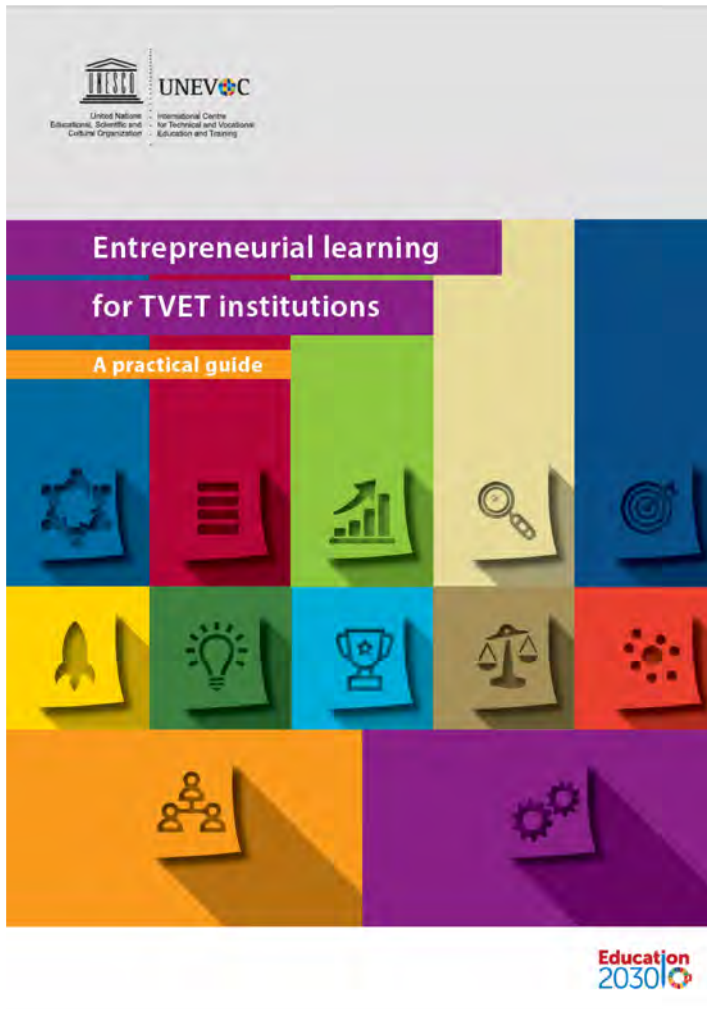
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entrepreneurial learning in tvet



Entrepreneurial learning for TVET institutions: An introduction to the practical guide

<https://www.youtube.com/watch?v=tuY58QuidMg&t=94s>

8 KEY STAKEHOLDERS

Who are the key partners?
What role do teachers play?
What role do managers play?
What can external partners contribute?

4 CURRICULUM APPROACH

How can entrepreneurial learning be integrated into curricula?
What are the competencies and curriculum content, and what are the modes of delivery – organization and methods of instruction?

1 VALUE PROPOSITION

What value does entrepreneurial learning produce for learners in your institution?
What value does entrepreneurial learning produce for your TVET institutions?
A clear, compelling message explaining why entrepreneurial learning is needed.

12 MONITORING KEY METRICS

How can the development of entrepreneurial competencies be monitored?
Which indicators can be used to evaluate the impact?

2 TARGET GROUP

Who are the target groups for entrepreneurial learning?
How can the target groups be defined?
For whom do we create value?

6 KEY RESOURCES

Which resources are possible / needed?
On which resources does the value proposition significantly build?

5 KEY ACTIVITIES

What methods exist to develop entrepreneurial competencies?
Which learning offers should be introduced to meet the target group's needs?
Where does entrepreneurship "live" in courses?

3 ENTREPRENEURIAL COMPETENCIES

Which entrepreneurial competencies should be strengthened?
Which entrepreneurial professional competencies, social competencies, methodological competencies, and self-competencies should be achieved?

9 ASSESSMENT

How can entrepreneurial learning be tested?

10 CHANNELS

How are the benefits of entrepreneurial learning communicated?
How and through which channels do I reach my target group?
How can the TVET institution establish good communication with the stakeholders?
Which communication channels work best?

7 CORE TEAM

Who is the driver of the implementation of entrepreneurial learning at the institution?
Who are the multipliers?

11 ORGANIZATIONAL STRUCTURES

How can the institution support entrepreneurial learning organizationally?

8 KEY STAKEHOLDERS

Key stakeholders include :

1. Industry Partners including businesses, startups, incubation ecosystems and accelerators
2. Entrepreneurial Networks including students, entrepreneurs, investors, and peers.
3. Alumni Entrepreneurs
4. Government Agencies
5. Funding Agencies

Roles played by teachers :

1. Subject Matter Experts
2. Mentors and Coaches
3. Industry Connectors
4. Curriculum Developers

4 CURRICULUM APPROACH

1. Fundamental subject for all students
2. Cross-disciplinary approaches
3. Elective courses
4. Modules and workshops
5. Extracurricular programs

Mode of delivery :

1. Lectures and seminars
2. Experiential learning
3. Mentorship
4. Project-based learning through hackathons
5. Synchronous & Asynchronous

1 VALUE PROPOSITION

The Value of Entrepreneurial learning :

Entrepreneurial learning is essential for empowering our students to thrive in a rapidly changing world, unlocking their potential to innovate, adapt, and create value in an increasingly complex and uncertain future.

More specific values (to students) include :

Visionary thinking
Adaptability and resilience
Leadership and initiative
Employability and career readiness:

12 MONITORING KEY METRICS

We monitor learning outcome through :

1. Formative and Summative Assessments
2. Self-Assessment and Reflection
3. Mentor and Industry Feedback
4. Surveys
5. Program Evaluation and Analysis

2 TARGET GROUP

1. Young students taking full-time courses
2. Adult learning taking part-time courses
3. Alumni
4. Industry partners
5. General public who have expressed interest in entrepreneurial training

6 KEY RESOURCES

Some key areas of resource include :

1. Financial Resource and support (incl. funding/grants)
2. Faculty Training and Development (e.g. Subject Team, teaching material & content)
3. Human Resource (trainers, mentors, speakers etc)
4. Incubation and Acceleration Spaces
5. Technology and Digital Tools
6. Industry Partnerships and Networks

5 KEY ACTIVITIES

Key activities include :

1. Entrepreneurship Courses and Programmes
2. Experiential Learning Opportunities (e.g. internship)
3. Mentorship and Networking
4. Industry Partnerships and Collaborations
5. Entrepreneurship Competitions and Awards
6. Research and Innovation Initiatives
7. Incubation and acceleration support

3 ENTREPRENEURIAL COMPETENCIES

There are many areas but since we are focusing on inculcating mindsets & building of a lifeskill, we concentrate on the following :

1. Creativity and Innovation
2. Risk Tolerance and Adaptability
3. Entrepreneurial Mindset and Leadership
4. Opportunity Recognition and Problem-solving skills
5. Business Planning and Modelling
6. Financial Literacy and Management
7. Digital Literacy and Technology
8. Social and Environmental Responsibility

G ASSESSMENT

We use the following methods to assess the learning of entrepreneurial mindset :

1. Projects & assignment
2. Case studies and analysis
3. Pitching
4. Prototyping
5. Self-Assessment and Reflection
6. Competitions and hackathons
7. Simulation and Gamification
8. Feedback from mentors & Industry Partners

10 CHANNELS

1. Polytechnic-wide subject
2. Student Testimonials and Success Stories
3. Industry Partnerships and Collaborations
4. Alumni Network and Events
5. Social Media and Marketing Campaigns
6. Sharing Sessions and Workshops
7. Surveys
8. Student-Led Initiatives and Clubs
9. Institutional Website and Publications

7 CORE TEAM

The drivers are :

1. The leaders from our Polytechnic
2. Subject Team
3. Entrepreneurship Centre (Temasek Launchpad)

The multipliers are :

1. Students (both full-time and part-timers)
2. Alumni Entrepreneurs
3. Industry Partners
4. Support Staff
5. Government agencies

11 ORGANIZATIONAL STRUCTURES

1. Dedicated Entrepreneurship Hub :
Our "Temasek Launchpad" focuses in accomplishing the institution I&E objectives and goals, as well as providing a focal point for resources, support, and activities
2. Entrepreneurship Curriculum Integration : Entrepreneurship topics are integrated into various curricula across disciplines
3. Interdisciplinary Collaboration
4. Resource provision (financial, human, and infrastructure)
5. Governance and Leadership Support
6. Student Organisations and Clubs
7. Industry Partnerships and Networks:

We have a specific department in-charge of industry partnership which provides us with the contacts and networking

Source: Temasek Polytechnic Singapore

8 KEY STAKEHOLDERS

The key partners are:

- Institutions for the conforming ruling
- Management with the right vision
- Teacher with open mindset
- Professional and companies that can contribute to kind also with competencies or with money

4 CURRICULUM APPROACH

Reality based learning approach.

Integrated curriculum of the discipline in the curriculum starting from working process.

Laboratories run in an enterprise context embedded in the school.

1 VALUE PROPOSITION

The SCHOOL ENTERPRISE MODEL approach explode interest, motivation and visualize the abstract knowledge in a real experience. Knowledge and abilities can become competences in a real context.

For TVET institution it's an improvement of engagement and professional development of teacher working of effectiveness requested by a real business.

"Learning though experience, from making to knowledge."

12 MONITORING KEY METRICS

The main key indicators are:

- Willingness to undertake ventures with uncertain outcomes.
- Track record of overcoming obstacles and learning from failures.
- Frequency of initiating projects or pursuing new opportunities.
- Frequency and quality of innovative ideas or solutions proposed. Clarity and impact of written and oral communication.

2 TARGET GROUP

TVET Students(14-19 years old)

- Migrants
- Disables
- Social background disadvantage
- Dropout
- Neets

- TVET teacher, staff and management

6 KEY RESOURCES

Manager and teacher "risk taker "

Entrepreneur in the business to be developed.

Economic resources to develop the laboratories

5 KEY ACTIVITIES

The method is to learn through experience.

The learning offers need to be a real experience to engage the students.

The entrepreneurship lives essentially in the mindset of adults as "risk taker" in education.

3 ENTREPRENEURIAL COMPETENCIES

- Self confidence.
- Interest and desire to purse a professional career.
- Capability to stay in relationship with clients.
- Organizational skills to manage the productive process.

9 ASSESSMENT

Companies feedback about students in Internship or hired.

Self-Assessments and Reflection: to Encourage the individual to regularly reflect on their own skills and performance.

360-Degree Feedback: Collect feedback from peers, subordinates, and supervisors.

Mentorship and Coaching: Utilize feedback from mentors or coaches who can provide an external perspective.

10 CHANNELS

Trough a Good reputation with word of mouth to implement the attractiveness of educational proposal.

Digital communication to catch the target group.

Highlight the good results achieved though the personal stories.

7 CORE TEAM

Management with the right and coherent vision.
One or more person with entrepreneur skills.
Some teachers and tutors with open mind.

11 ORGANIZATIONAL STRUCTURES

- RULING. To ensure the availability of the right framework by law
- DESIGN. To design the school enterprise model
- TRAINING To train the teachers to build the curriculum and perform it
- SET UP. To set up the equipment in the adequate spaces
- SUSTAINABILITY. To have a sustainable business plan

8 KEY STAKEHOLDERS

DTVET
Principals
Heads of departments
Teachers, Students, Parents
Private sectors
TVET Teachers Training College
Other TVET institutions

4 CURRICULUM APPROACH

To understand the basics in the Economy
To identify their personal potential and opportunities
To develop a variety of entrepreneurial designs

1 VALUE PROPOSITION

Qualified and competent graduate with green and entrepreneurial skills

Decent employment and job creation

12 MONITORING KEY METRICS

The number of teachers who have participated in entrepreneurial innovation processes,
The number of students who have participated in entrepreneurial innovation processes

2 TARGET GROUP

All TVET learners/students, young people outside school
Grassroots

6 KEY RESOURCES

Policies/acts/laws/strategies /guidance
Teachers
students
Facilities and physical structure (Classroom, Workshop)
Budget for project
Training for teachers

5 KEY ACTIVITIES

Learning from each other
Learning by doing
Learning by discovering (under guidance)
Learning in a flexible, less formal environment
Learning under pressure to achieve goals
Learning by problem solving

3 ENTREPRENEURIAL COMPETENCIES

Develop ideas
Implement Ideas
Sustainability

9 ASSESSMENT

There is feedback after the assessment in order to modify learning activities
Peer assessment
Self assessment

10 CHANNELS

Ministry of Information
TVET Teachers Training College
DTVET

7 CORE TEAM

Heads of Departments
Project Team (10 Teachers)
40 Students

11 ORGANIZATIONAL STRUCTURES

Bottom-up activities, initiated by Students
Classrooms designed for entrepreneurial learning: group work, practical activities. learning, projects
Teachers can have their own Business.
Self-directed innovation: learners and teachers work on innovations.
The process of innovation is part of the structure and culture of the TVET institution

Source: Thida Swe

8 KEY STAKEHOLDERS

NGO partners and their end-users

4 CURRICULUM APPROACH

Using design-thinking and human-centric design methods to inspire and engage end-users in co-creating impactful solutions

1 VALUE PROPOSITION

Involving users through co-creation methods, teaches and engages them in learning entrepreneurial skills

12 MONITORING KEY METRICS

Through surveys, questionnaires and focus groups, measured via skills mastered

2 TARGET GROUP

Lulu Lab's target group is 10-24 year old girls and boys, men and women

6 KEY RESOURCES

Creative skills, tech tools, hardware to test and implement solution

5 KEY ACTIVITIES

Co-creating, analysing, designing, testing, implementing and scaling educational solution

3 ENTREPRENEURIAL COMPETENCIES

9 ASSESSMENT

10 CHANNELS

Users are reached through engaging, digital games, that collect data on users learning progress and future learning needs

7 CORE TEAM

Founders Matilde Juul, Graphic Designer, and Sally Gregersen, Innovation Manager

11 ORGANIZATIONAL STRUCTURES

8 KEY STAKEHOLDERS
DTVET
Teachers, Students, Parents
Private sectors
AGTI Association
Alumni
Other TVET institutions
TVET Teachers Training College

4 CURRICULUM APPROACH
Extra curriculum activities
Explore entrepreneurial ideas
(Entrepreneurship Development and Project Management)

1 VALUE PROPOSITION
Qualified and competent graduate with green and entrepreneurial skills

Decent employment and job creation of the youth and adult

12 MONITORING KEY METRICS
The number of teachers who have participated in green and entrepreneurial innovation processes,
The number of students who have participated in green and entrepreneurial innovation processes

2 TARGET GROUP
All TVET learners/students, young people outside school
Grassroots

6 KEY RESOURCES
Science, Technology and Innovation Strategic Plan, STISP (2022-2027)
Departmental Annual Working Plan
Human resource (Teachers, students)
Facilities and physical structure (Classroom, Workshop)
Budget for project
Training for teachers

5 KEY ACTIVITIES
Learning from each other
Learning by doing
Learning by discovering (under guidance)
Learning in a flexible, less formal environment
Learning under pressure to achieve goals
Learning by problem solving

3 ENTREPRENEURIAL COMPETENCIES
Develop ideas
Implement Ideas
Sustainability
Professional , social, personal
Methodological competencies

9 ASSESSMENT
Peer assessment
Self assessment

10 CHANNELS
Ministry of Information
Social Media
Local community
Local administration
Events

7 CORE TEAM
Principal
Heads of Departments
Project Team (10 Teachers)
15 Students

Source: Myingyan, Myanmar

11 ORGANIZATIONAL STRUCTURES
Bottom-up activities, initiated by Students
Top-down activities suggested by the school leadership
Classrooms designed for entrepreneurial learning: group work, practical activities. learning, projects
Teachers can have their own Business.
Self-directed innovation: learners and teachers work on innovations.
The process of innovation is part of the structure and culture of the TVET institution

8 KEY STAKEHOLDERS

Who are the key partners?

- Technicians and professionals (IRAD, PTA, Authers, ...)

What role do teachers play?

- Development of training programs
- Awareness of start-up and resilience in the project

What role do managers play?

- Monitoring and guidance

What can external partners do

- Technical support
- Financial support

4 CURRICULUM APPROACH

How can entrepreneurial learning be integrated into school curricula?

Integrating entrepreneurship courses

Establish days dedicated to entrepreneurial learning applications

What are the skills and content of the program, and what are the delivery methods

- Notions on business and entrepreneurship
- Basic notions of management and micro-enterprise creation
- Job search techniques
- Accounting techniques
- Basic notions of marketing

1 VALUE PROPOSITION

What value does entrepreneurial learning produce for learners in your institution?

- Empowerment
- Development of managerial skills
- Discipline
- Sense of responsibility
- Perseverance

What value does entrepreneurial learning produce for your TVET institutions?

- Visibility
- Amortization of financial costs
- Attracting partners

12 MONITORING KEY METRICS

How to monitor the development of entrepreneurial skills?

- Development, evaluation and remodeling of a document for monitoring the activities of trained young people

What indicators can be used to assess the impact?

- Rate of trained learners
- Rate of interested learners
- Rate of learner success

2 TARGET GROUP

- Young people in school or not. They are identified according to their situation which may be disadvantaged
- We create value for those who do not have the possibility of providing for basic needs in a school environment.

6 KEY RESOURCES

What resources are possible/necessary?

- Soil with humus
- Non-biodegradable or non-biodegradable plastic bags

- Preservatives and water
- Some financial resources

What resources does the value proposition rely on significantly?

- Soil
- Water

5 KEY ACTIVITIES

What methods exist to develop entrepreneurial skills?

- Raise in the learner the difficulty of finding a job
 - Reveal in the learner the usefulness of being one's own boss
 - Develop an entrepreneurial vision in the learner
- What training offers should be put in place to meet the needs of the target group?
- Digital economy (Effective use of digital media)
 - Green economy (Production of perennial crops for sale and reforestation)
 - Processing of crop products

3 ENTREPRENEURIAL COMPETENCIES

Be optimistic

Develop a vision

Know how to take initiatives

Be responsible and persevering

Take risks

Be resilient

What entrepreneurial professional skills, social skills, methodological skills and personal skills should be acquired?

- Identification of a social problem
- Development of a business plan
- Search for financing
- Reinforcement and complement of acquired skills

9 ASSESSMENT

How to test entrepreneurial learning?

- Entrepreneurial learning is assessed on a scale of project success and also provides remedial measures in case of failure

10 CHANNELS

What are the benefits of communicating entrepreneurial learning?

- Personal interest of learners and parents
- Awareness

How and through which channels can I reach my target group?

- Through class groups, parents' association, How can the TVET institution establish good communication with stakeholders?
 - Identify the stakeholders' long-term strategy and then discuss with decision-makers
- What are the most effective communication channels?
- Correspondence, email, telephone

7 CORE TEAM

Who is the driving force behind the implementation of entrepreneurship?

- The institution (Teachers; parents and professionals)

Who are the multipliers

- Youth

11 ORGANIZATIONAL STRUCTURES

How can the institution support entrepreneurial learning at the organizational level?

- By shaping teaching programs
- By organizing entrepreneurial open days
- By organizing the youth skills day

Source: LTB Nkolbisson

8 KEY STAKEHOLDERS

Dual Sector University-Stakeholders range from academic board to Administrative staff in every school
Teachers and Managers –learning and teaching process and compliance should display in their work.
External stakeholders (other RTO) can be consulted for benchmarking
Governing bodies-State and Federal

4 CURRICULUM APPROACH

It's a centralized system in Australia, only few contextualisation is allowed within the scope of standards. There are 10 Jobs Skills Councils representing different industry sector and they pull the qualification together

1 VALUE PROPOSITION

Amidst the rise of AI, T & L should be agile and must have scope to adapt, however the systems are too demanding for this mindset change

12 MONITORING KEY METRICS

Monitoring tool- NCVER can create a tool -reporting system and student satisfaction survey, engagement & Retention report from organisations can help as indicators. Every TVET is required to have self-assurance system to monitor

2 TARGET GROUP

I believe it should start with policy makers, regulators and custodians of VET Teaching and Learning in Australia . Upskilling and reskilling through professional development

6 KEY RESOURCES

Digital tool, Re-training of relevant stakeholders, adding value to operationalization of VET in the RTO's.

5 KEY ACTIVITIES
Industry consultations
Good governance process
Self Assurance
Continuous Improvement

3 ENTREPRENEURIAL COMPETENCIES

Soft skills and Digital skills should be part of every competencies
Transferrable skills

9 ASSESSMENT

Usage of AI and Human critical thinking must be part of assessment

10 CHANNELS

Webinars
Newsletter
Targeted emails
Focus group
Get the 'buyin'

7 CORE TEAM

In an institution, it's a top down hierarchy who can drive and then multipliers can be the teachers and other stakeholders who can promote these through practice and communication via conferences

11 ORGANIZATIONAL STRUCTURES

Developing policies and procedures and assign few key stakeholders to change the documents as and when required, given to the agility of teaching and learning Ecosystem

8 KEY STAKEHOLDERS

- Key partners include enterprises, collaborative institutions, etc.
- Teachers are the facilitators.
- Managers are usually the project leaders.
- External partners are responsible for providing off-campus resources.

4 CURRICULUM APPROACH

- Oriented towards entrepreneurial or maker projects
- In addition to basic innovation skills, professional knowledge and skills are also taught

1 VALUE PROPOSITION

For Learners :

- Practical Skills and Knowledge
- Enhanced Employability and Competitiveness
- Innovation and Creative Thinking
- Access to Resources and Networks
- Leadership and Teamwork
- Resilience and Adaptability

For our institution:

- Reputation and Prestige
- Industry Collaboration and Partnerships
- Innovation
- Ecosystem Development
- Attracting and Retaining Talent
- Financial Sustainability
- Educational Innovation and Differentiation
- Social Impact and Community Engagement
- Long-Term Strategic Growth

12 MONITORING KEY METRICS

- The most recognized official indicators are the results of national-level entrepreneurship competitions.
- For each course, it involves continuous assessment and observation of students during the teaching process.

2 TARGET GROUP

- Students
- Teachers
- Social learners
- Learners from enterprises

6 KEY RESOURCES

- Resources: Human resources, financial resources, knowledge resources, social resources, experience, culture
- For SZPU, financial resources and social resources are the key to sustainability in entrepreneurship education and are essential resources for realizing the value proposition.

5 KEY ACTIVITIES

- Besides classroom teaching, there are entrepreneurship simulations, practical entrepreneurship experiences, and entrepreneurship competitions

3 ENTREPRENEURIAL COMPETENCIES

Entrepreneurial Competencies to be Strengthened:

- Innovation and Creative Thinking
- Leadership and Teamwork
- Resilience and Adaptability

• Practical Skills and Knowledge

Entrepreneurial Professional Competencies:

- Practical Skills and Knowledge

• Innovation

Social Competencies:

- Leadership and Teamwork
- Social Impact and Community Engagement

Methodological Competencies:

- Access to Resources and Networks
- Educational Innovation and Differentiation

Self-Competencies:

- Resilience and Adaptability
- Attracting and Retaining Talent

9 ASSESSMENT

- Results of various student entrepreneurship competitions
- Student employment outcomes
- Teacher teaching evaluations

10 CHANNELS

- Benefits are communicated through collaboration in various teaching and research projects.
- This is also achieved through various types of academic or personal relationship collaborations.
- Effective communication is established through collaboration in high-level teaching and research projects.
- Collaboration in teaching and research projects is the most effective method and channel for communication.

7 CORE TEAM

- The driver: course developers;
- Multipliers: Experts, entrepreneurs, teachers, enterprise mentors, etc.

11 ORGANIZATIONAL STRUCTURES

- Establishing the School of Innovation and Entrepreneurship to support the advancement and implementation of entrepreneurship education organizationally.

Source: SZPU

8 KEY STAKEHOLDERS

- UNESCO Tehran Office
- Iran TVTO
- ITC
- Ministry of Education
- Municipality
- Local Governance
- Local Industries & Enterprises

4 CURRICULUM APPROACH

- Practical and participative methods
- Training games
- Events and festivals + competitions
- Project based methods
- Visits and guest speakers

1 VALUE PROPOSITION

- To equip the youth with future skills
- Handle problems in disaster
- How to put idea into action
- Needs and problem identification

12 MONITORING KEY METRICS

- Tracing and tracking sessions
- Survey
- Collecting data and feedback from city officials and authorities

2 TARGET GROUP

- Boys & Girls
- 12- 15 Years old
- 16-19 Years old

6 KEY RESOURCES

Human Resources:

- Camp manager and head coach, master trainers- 2 for each group, support and administrative staff, media persons,...

Physical resources:

- Training place, training materials and equipment, ...

Financial resources:

- 80% donor + 20% in kind

Intellectual Resources

- ITC&UNESCO Brands

5 KEY ACTIVITIES

- Pre implementation: location and human preparation, promotion, media,...
- Negotiation with partners (Ministry of Education)
- 5 days implementation
- Post implementation: Documentation, reporting, Tracing and tracking sessions

3 ENTREPRENEURIAL COMPETENCIES

- Soft skills
- Effective Communications
- Team working
- Risk Taking
- Problem solving
- Self reliance
- Time management
- ...

9 ASSESSMENT

- Test project for each team
- Entrepreneurial Tests (Who am I?)
- Questionnaires
- Behavior observations via teaching team
- Business Model Canvas (Generation and presentation)

10 CHANNELS

- 2 meetings with School officials and managers
- Negotiation with city officials
- Showcasing the previous experiences as media

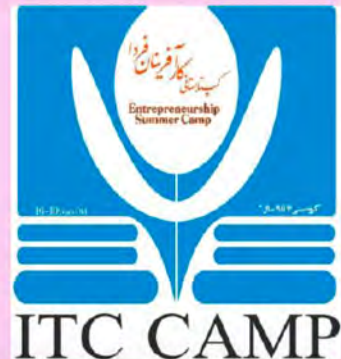
7 CORE TEAM

- 8 Master Entrepreneurship trainers
- 1 head Coach



11 ORGANIZATIONAL STRUCTURES

- Providing training and career counselling sessions
- Each month, one refresher training course for camp graduates
- Vocational and technical skills workshops in TVTO centers





<https://unevoc.unesco.org/home/Learning+Lab+series+on+Entrepreneurial+Learning+in+TVET>

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