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Vocational Education in Applied Technology Schools**

D2.2 – The definition of teachers’ role in TVET: Guidelines for the teachers’ capacity building.

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Helwan University (HU), Egypt	Beneficiary	Leader WP2 Impact and dissemination
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List of Abbreviations/Acronyms:

FEI	Federation of Egyptian Industries
MOETE	Ministry of Education and Technical Education
PLC	Professional Learning Communities
TVETA	Technical and Vocational Education Teacher Academy

1. Introduction

The Advanced Competencies of Teachers to Improve Vocational Education in Applied Technology Schools (ACTIVE-ATS) project is the Capacity Building project funded by the European Union's Erasmus+ Capacity Building - Vocational Education and Training (VET) programme. The project intends to increase the capacity of VET providers in the fields of management, governance, inclusion, quality assurance, and innovation. The goal is that they will be better equipped to engage with private sector and enterprises to explore employment opportunities and jointly develop responsive VET interventions. The ACTIVE-ATS project's one main objective is to strengthen TVET teachers' and trainers' capacity in Egypt to work in competence-based TVET, which is implemented in cooperation with the world of work. The project will enhance especially the teachers' and trainers' competencies in pedagogy, student-centered approach, but also technical speciality in work-based learning.

The task of creating the '*Guidelines for the teachers' capacity building*' is the Deliverable 2.2 under the project Work Package 2. Under this Work Package ACTIVE-ATS project has conducted two reports: *The definition of teachers' role in TVET: Actions to include in the implementation of WP3 and WP4 (D2.3)* provides the conceptual framework based on Egyptian and international studies and literacy on the competence based teaching in TVET and teacher's role in it. The second report, *Analysis reports and presentation materials (D2.1)*, focuses on the results of the surveys for TVET teachers and interviews of stakeholders conducted in summer 2023. These reports in English will be benefited in writing online articles in Arabic on the competence-based pedagogy and to be published on the project websites. Hence, the current report capitalizes on the outcomes of the other two deliverables in identifying teachers' role in the TVET sector and providing guidelines for the teachers' capacity-building process during or beyond the project. The guidelines of the report address to system, institutional and individual level. The report focuses on the pedagogical capacity-building process, which is the core theme of the ACTIVE-ATS project.

In this report we'll present first briefly the definition of teaching competencies according to the definitions in the Finnish vocational educational system and make the short conclusion of the teacher's role in the system. This provides overview on the individual skills needed in TVET teaching. (More references on the teacher's skills and role in the competence-based teaching are presented in the ACTIVE-ATS report *Pedagogical Enhancement Development Programme, D3.1.*) In the following next sections, we have identified the competencies and capacity building mechanisms on the system and institutional level in the Egypt TVET context. We integrate the individual pedagogical competencies needed in TVET teaching to this mechanism on one table. In the end we summarize the guidelines for the teachers' capacity building.

2. TVET teachers' competencies in the frame of capacity building mechanism

2.1 Teaching Competencies in Vocational Education in Finland and a teacher's role

For the project report (D2.3) we studied different international models and based on it we selected to describe here the pedagogical competencies based on the Finnish model. The study adopts the Finnish model because it consists of particular comprehensive recognition of the different

pedagogical competencies for TVET sector teachers, especially based on one study (Tapani & Salonen, 2019). In this study the following teaching competencies were highlighted in the Finnish VET system:

Table 1: Teaching Competencies in Vocational Education in Finland

Sub-category (skills)	Generic category (competencies)	Main category (scholarship)
<ul style="list-style-type: none"> – teaching skills – regeneration of pedagogical skills, using innovative teaching methods and trying new ways of teaching – being familiar with the curricula and qualifications – transforming skills: teacher-counsellor, teacher-guide – understanding the diverse life worlds of students – educational skills – recognising individual learning opportunities – facilitating skills – expert in a trade or vocation (subject matter knowledge) – innovative, entrepreneurial, creative teacher 	Pedagogical competency	
<ul style="list-style-type: none"> – nurturing skills – supporting individual learning pathways (study personalisation) – supporting learners’ initiatives and self-efficacy – identification and recognition of competencies – study counsellor, teacher guide – knowledge about the educational system as a whole – positive attitude towards learning opportunities – empathy skills – dialogue skills – coaching skills 	Guidance and counselling competency	Scholarship in teaching and learning
<ul style="list-style-type: none"> – creating and ensuring a positive learning atmosphere – skills to support the students’ self-esteem – digital teaching skills – creating a sense of belonging 	Interaction competency	
<ul style="list-style-type: none"> – management – taking care of student well-being – skills to adopt new roles – self-reflection – ability to multitask – ability to cope with fragmented work 	Competency in pedagogical leadership	Scholarship in authentic learning and development

<ul style="list-style-type: none"> – cooperation skills (will and attitude to ensure cooperation) – multi-professional networking – multi-sectoral networking – enabling authentic learning – helping stakeholders with guidance and documentation – organizational regeneration – greater participation in social practices – taking care of partnerships – shared expertise (e.g. team teaching, pair teaching) – bridge building skills – consulting skills 	Partnership competency	
<ul style="list-style-type: none"> – marketing skills – economical understanding – knowledge about competent employees – understanding of quality – reflection and resilience skills – attitudinal skills for mental development – developing learning environments – developing working life – transforming society 	Innovator competency	
<ul style="list-style-type: none"> – documenting the student's learning process – sharing assessment knowledge in authentic learning environments – willingness to help working life partners with assessment 	Assessment competency	Scholarship in evaluation and monitoring

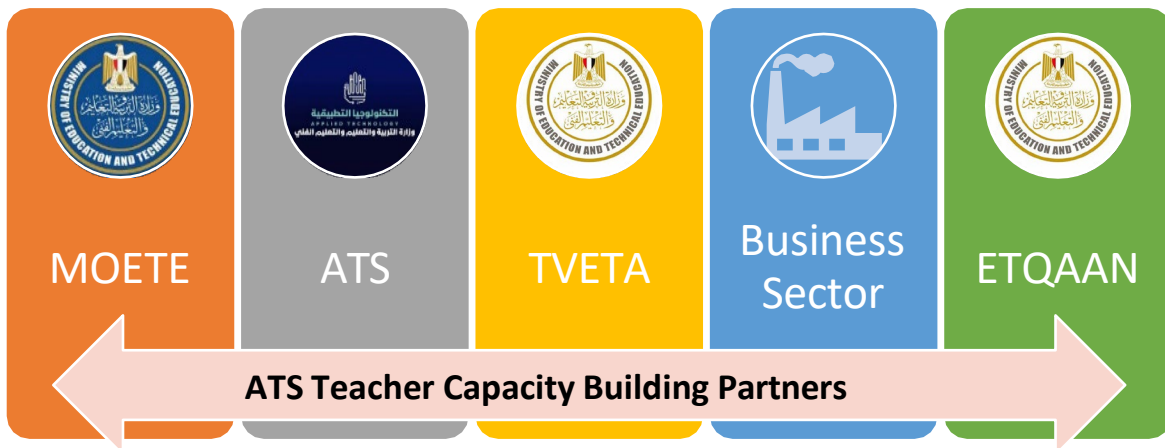
Source: Tapani & Salonen, 2019.

As a conclusion based on the competences needed, teachers in TVET play a pivotal role in preparing students for the workforce, ensuring that they have the necessary skills and knowledge to succeed in their chosen fields. The teachers are responsible for designing and delivering courses, assessing student progress, mentoring and counseling students, collaborating with industries, and pursuing ongoing professional development.

2.2 Competencies and Capacity Building Mechanisms

Within the TVET sector in Egypt embracing the ATS schools' model, there are a few active players in the field that can affect and contribute to ATS teachers' capacity-building process. These bodies/organizations include (but are not limited to) the Ministry of Education and Technical Education in Egypt, the Applied Technology Schools Unit, the newly established Technical and Vocational Education Teacher Academy (TVETA), the Education and Training Quality Assurance Agency (ETQAAN) and other key players from thousands of companies and industries supporting TVET sector teachers' professional development process and that can be summarized in the following diagram:

Figure 1: ATS Teacher Capacity Building Partners



The needs-assessment study for teachers’ pedagogical skills at the Applied Technology Schools (ATS) has identified different approaches and resources for the teachers’ capacity development process that can be through a few mechanisms, namely: a) face-to-face direct/physical training, b) online training using one of the commonly used platforms like “TEAMS” or “Google Meet” or “Zoom” for example, c) Using massive resources uploaded on the national education portal known as Egyptian Knowledge Bank (EKB), d) Teacher’s book provided by MOETE for teachers in all subjects and last but not least, e) using professional learning communities (PLCs) to connect with other teachers and professionals in the same field of across other types of schools (dual-system, National and international programs schools’). The following diagram illustrates the proposed capacity-building mechanisms for TVET teachers:

Figure 2: Capacity Building Mechanisms for TVET Teachers



With this diverse pool of capacity-building mechanisms, teachers can devise their own professional development plan and have a sustainable and comprehensive process of professional development. The following Matrix provides an overview of the types of pedagogical competencies and professional development mechanisms convenient for each group of competencies:

Table 2: Pedagogical Competencies and Capacity Development Mechanisms

Sub-category (skills)	Generic category	Training	Self-learning tutorials	Teacher books	Online training	PLC
<ul style="list-style-type: none"> – teaching skills – regeneration of pedagogical skills, using innovative teaching methods and trying new ways of teaching – being familiar with the curricula and qualifications – transforming skills: teacher-counsellor, teacher-guide – understanding the diverse life worlds of students – educational skills – recognising individual learning opportunities – facilitating skills – expert in a trade or vocation (subject matter knowledge) – innovative, entrepreneurial, creative teacher 	Pedagogical competency	√	√	√	√	√
<ul style="list-style-type: none"> – nurturing skills – supporting individual learning pathways (study personalisation) – supporting learners' initiatives and self-efficacy – identification and recognition of competencies – study counsellor, teacher guide – knowledge about the educational system as a whole – positive attitude towards learning opportunities – empathy skills – dialogue skills – coaching skills 	Guidance and counseling competency	√	√	√	√	√
<ul style="list-style-type: none"> – creating and ensuring a positive learning atmosphere – skills to support the students' self-esteem – digital teaching skills – creating a sense of belonging 	Interaction competency	√			√	√
<ul style="list-style-type: none"> – management – taking care of student well-being – skills to adopt new roles – self-reflection – ability to multitask – ability to cope with fragmented work 	Competency in pedagogical leadership	√	√	√	√	√

<ul style="list-style-type: none"> – cooperation skills (will and attitude to ensure cooperation) – multi-professional networking – multi-sectoral networking – enabling authentic learning – helping stakeholders with guidance and documentation – organisational regeneration – greater participation in social practices – taking care of partnerships – shared expertise (e.g. team teaching, pair teaching) – bridge building skills – consulting skills 	Partnership competency	√			√	√
<ul style="list-style-type: none"> – marketing skills – economical understanding – knowledge about competent employees – understanding of quality – reflection and resilience skills – attitudinal skills for mental development – developing learning environments – developing working life – transforming society 	Innovator competency	√	√	√	√	√
<ul style="list-style-type: none"> – documenting the students' learning process – sharing assessment knowledge in authentic learning environments – willingness to help working life partners with assessment 	Assessment competency	√	√	√	√	√

Adapted from: Tapani & Salonen (2019) Identifying teachers' competencies in Finnish Vocational education

Based on the previously recommended set of professional development and capacity-building mechanisms, Egyptian teachers working at Applied Technology Schools, school managers and the TVET system stakeholders can use the following guide with the aim to develop pedagogical competencies of individual TVET teachers and to develop the institutional competencies in TVET schools.

3. Guidelines for the teachers' capacity building

The following guidelines are to assist in assigning opportunities and resources to the process that aims to ensure a sustainable and constructive capacity-building pathway for the teachers at ATS schools. To implement the activities suggested in the guidelines and to achieve the goals, it requires good collaboration and knowledge transfer practices and their development between all TVET actors. As noted, the capacity building requires multifaced channels of training and continuous learning possibilities, and also dissemination activities of the achieved goals and good practices of them.

1. Teachers' Cadre and Promotion Scheme

Different organizations, bodies, and individuals working in the TVET sector and schools (including ATS) need to consider teachers' capacity-building within the official structure of the teacher's cadre and promotion scheme. It starts with the recruitment, selection, and hiring process of teachers based on the required competencies (pedagogical and technical ones) as well as the progress follow-up and promotion scheme within ATS schools.

2. **Teacher Professional Development Modular Bank**

MOETE hosts a [national portal for teachers' professional development programs](#) that can be a very effective tool for self-learning and personal professional development in many fields. Teachers need to be oriented on how to surf the portal and engage in the services it provides.

3. **Updated Information**

Teachers of ATS schools need to be on top of the information and have an updated overview of professional development and capacity-building opportunities offered by different partners. Hence, this guide provides a comprehensive list of different resources associated with TVET teachers' capacity-building and resources in [ANNEX 1](#). Moreover, a project handbook has been developed within the ACTIVE-ATS project partners (including MOETE) on how to maximize return on project activities. More information about ACTIVE-ATS could be retrieved from the [project Website](#).

4. **Result-based Management System for TVET Teachers**

Teachers at ATS need to be accountable for results. In other words, they need to change their perspective from what they "teach" to what "students learn" in a transformation from what is known as teacher-centered education to a student-centered learning pedagogical approach. School monitoring and evaluation indicators and standards accordingly should investigate the competencies that students learn rather than everyday school and classroom activities. An eye on labor market needs and competencies that students should acquire would consequently help. Teachers' pedagogical competencies acquired throughout any capacity-building process should reflect on students' ability to learn and perform based on the competency-based curriculum framework for the TVET sector in Egypt.

References

Analysis reports and presentation materials. ACTIVE-ATS Deliverable 2.3, September 2023.

Pedagogical Enhancement Development Programme. ACTIVE-ATS Deliverable 3.1, September 2023.

The Definition of Teachers' Role in TVET: Actions to Include in the Implementation of WP3 and WP4. ACTIVE-ATS Deliverable 2.3. July 2023.

Tapani, Annukka & Salonen, Arto (2019) Identifying teachers' competencies in Finnish vocational education. International Journal for Research in Vocational Education and Training (IJRVET) Vol. 6, Issue 3, December 2019, 243-260.

Annex 1: Resources for TVET Teacher Capacity Building Organizations in Egypt

Institution	Contact information
Ministry of Education and Technical Education	https://moe.gov.eg/en/educationalplatform
Applied Technology Schools Unit	/https://tech.moe.gov.eg/tech
TVET II	TVET Egypt Support to the Technical and Vocational Education and Training Reform Programme
FEI	http://www.fei.org.eg/index.php/en/
TVETA	TBC
MOETE Education Platforms	https://moe.gov.eg/ar/educationalplatform
The Electronic Portal for Teachers' Professional and Technical Development in Egypt	/https://cpd.moe.gov.eg
Discovery Education Platform	/https://discoveryeducation.ekb.eg
Study Platform	Homepage - EKB Study
TVET Channel	https://tech.moe.gov.eg/tech/gallery/357
TVET Education Strategy (Arabic)	https://tech.moe.gov.eg/tech/article/list/372
TVET Live Streaming	/https://stream.moe.gov.eg
Egyptian Education Management Information System (EMIS)	/https://emis.gov.eg
Technical Support for the Comprehensive Technical Education Initiative with Egypt (TCTI)	Technical Support for the Comprehensive Technical Education Initiative with Egypt (TCTI) - giz.de