

The role of the technical education and apprenticeship in enhancing the innovation intensity of the economy -
Vocational Education Training from the Public Institutes (IEK) , the Apprenticeship and the Open Software/Hardware in the New Curriculum programs

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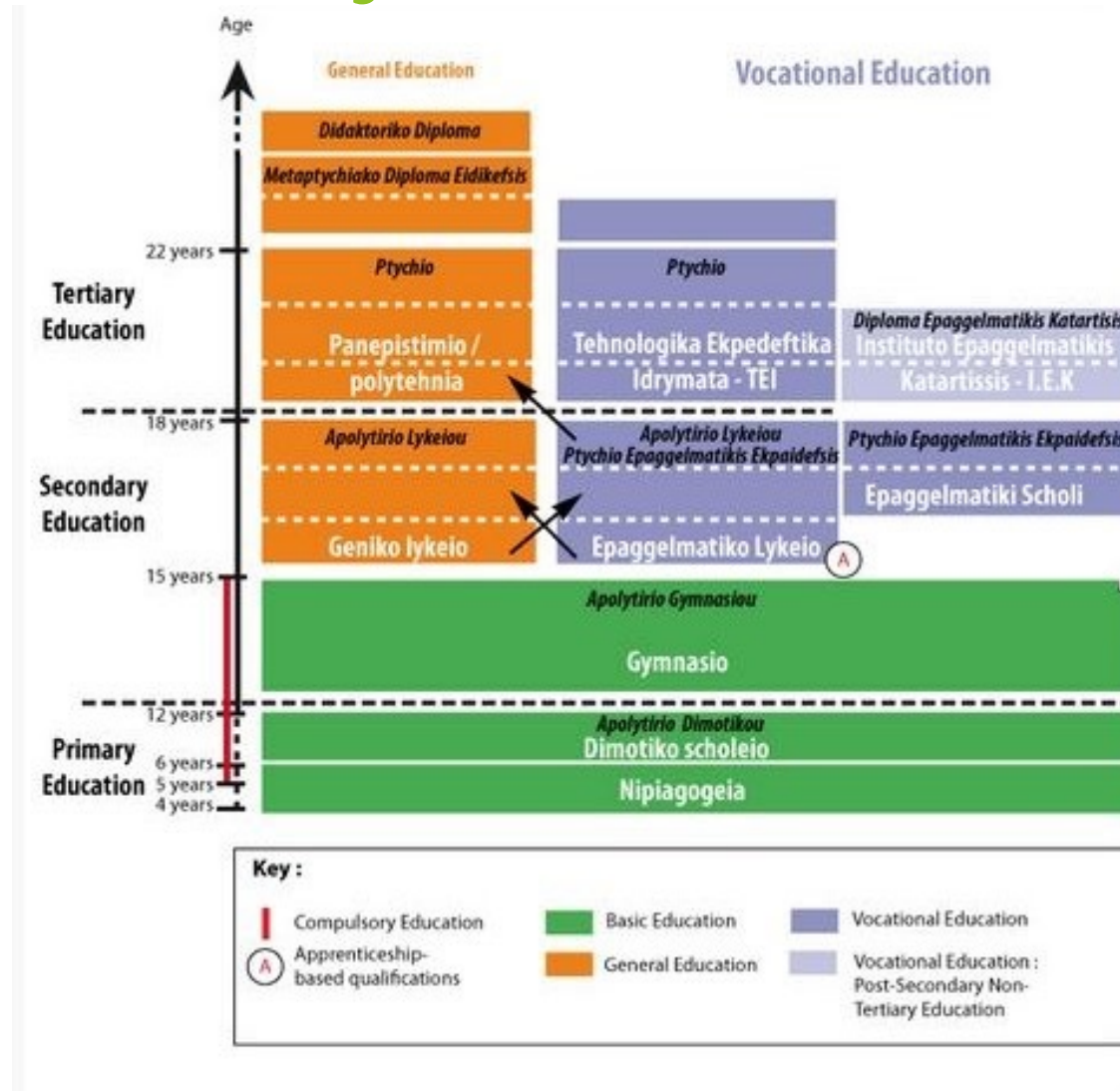


VET -Vocational Education and Training

- ▶ VET is a key element of lifelong learning systems equipping people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labor market. It responds to the needs of the economy but also provides learners with skills for personal development and active citizenship. VET contributes to enterprise performance, competitiveness, research and innovation and is central to employment and social policy.
- ▶ VET systems in Europe can rely on a well-developed network of VET providers. They are based on governance structures with the involvement of social partners (employers, trade unions) in different bodies (chambers, committees, councils, etc.). VET systems consist of initial and continuing VET:
- ▶ **Initial vocational education and training (I-VET)** is carried out at upper secondary level or post secondary non tertiary education , before entering working life. It takes place either in a school-based environment (with the majority of learning taking place in a classroom) or in a work-based setting, organized as close as possible to real-life experience (either in schools, training centers or companies, with apprenticeships schemes as the most typical example). This depends very much on the education and training system in each country, but also on the structure of its economy.
- ▶ **Continuing VET (C-VET)** takes place after the initial education and training, or after entry into working life. It aims to improve or upgrade knowledge and/or abilities, acquire new skills, retrain for a career move, or to continue personal and professional development. C-VET is largely work-based with the majority of learning taking place in a workplace.



Greek Education System



Technical Training in Greece

- ▶ Initial vocational education and training (I-VET)
- ▶ EPAL (ΕΠΑ.Λ.) Vocational Lyceum
- ▶ I.E.K. Institutes of Vocational Training
- ▶ K.E.E. - (New proposition -I.E.K. run from Universities only for EPAL Students)
- ▶ EPAL are Upper secondary vocational education schools.(15-18 years old) which gives both mainstream education classes and vocational and technical classes, and also offers workshops. This 3-year course allows pupils to move on to higher education following an examination.
- ▶ I.E.K. are Post secondary not tertiary education schools (18+), which provides initial or complimentary training alternating between theoretical classes and classes in workshops. The training is validated by diplomas in vocational training recognized by the Member States of the European Union. It is open to school-leavers over the age of 18 coming from high schools or vocational schools as well as adults. 15% are University or TEI students or graduates which want to get into a new profession.



Specializations for EPAL

Sector	Specialization
Agriculture, Food and the Environment	(a) Plant Production Technician (b) Animal Production Technician (c) Technician Food and Drink Technology (d) Florist and Landscape Architect
Business Administration and Economics	(a) Business Administrator and Financial Officer (b) Tourism Business Employee (c) Marketing and Advertising Employee (d) Warehouse and Supply System Employee
Structural Engineering, Environment and Architectural Design	(a) Structural Engineering & G.I.S.
Applied Arts	(a) Graphic Arts Technician (b) Silverware Technician (c) Maintenance of Art & Restoration Technician (d) Textiles Designing and Manufacturing Technician (e) Decorating & Interiors Designer (f) Woodcarving & Furniture Technician

Sector	Specialization
Electrical, Electronics and Automation Engineering	(a) Electronic Networks, Telecommunications and Computational Systems Technician (b) Electrical Installations and Networks Technician (c) Automation Technician
Mechanical Engineering	(a) Mechanical Engineering Technician (b) Heating and Hydraulic Installations, Oil and Natural Gas Technician (c) Ventilation and Air Conditioning Cooling Technician (d) Vehicle Technician (e) Aircraft Component Technician
Maritime	(a) Commercial Navy Captain (b) Commercial Navy Engineer
Computing	(a) Computer Application Technician (b) Computer & Networks Technician
Health - Welfare - Wellness Sector	(a) Nurse Assistant (b) Medical-Biological Laboratories Assistant (c) Physiotherapist Assistant (d) Dental Technician (e) Radiology Laboratories Assistant (f) Pharmacy Assistant (g) Beautician (h) Hairdresser

Specializations for I.E.K. -1

SECTION	SPECIALIZATION
COMPUTING	NETWORKS & TELECOMMUNICATIONS TECHNICIAN
	COMPUTER TECHNICIAN
	SOFTWARE TECHNICIAN
	I.T. APPLICATIONS TECHNICIAN (MULTIMEDIA/WEB DESIGNER-DEVELOPER/VIDEO GAMES)
CHEMICAL APPLICATIONS	PHARMACEUTICALS & RELATED PRODUCTS TECHNICIAN CLOTHING AND FOOTWEAR TECHNOLOGY DESIGNER - FASHION DESIGNER
CLOTHING & FOOTWEAR	CLOTHING AND FOOTWEAR TECHNOLOGY DESIGNER- FASHION DESIGNER
MECHANICAL ENGINEERING	HEATING INSTALLATIONS, OIL AND NATURAL GAS TECHNICIAN
	COOLING AND AIR CONDITIONING INSTALLATION TECHNICIAN
	MECHATRONICS TECHNICIAN
	RENEWABLE RESOURCES ENERGY TECHNICIAN
ELECTRICAL, ELECTRONICS & AUTOMATION ENGINEERING	AUTOMATION TECHNICIAN
	ELEVATORS TECHNICIAN
	ELECTRICAL INSTALLATIONS TECHNICIAN
	MEDICAL INSTRUMENTS TECHNICIAN

SECTION	SPECIALIZATION
BUSINESS ADMINISTRATION & ECONOMICS	BUSINESS ADMINISTRATION & ECONOMICS ASSISTANT
	BUSINESS ADMINISTRATION & ECONOMICS ASSISTANT IN THE MARITIME INDUSTRY
	BUSINESS ADMINISTRATION & ECONOMICS ASSISTANT IN THE TOURISM INDUSTRY
	TRADE, ADVERTISEMENT & MARKETING ASSISTANT COMPUTERIZED ACCOUNTING & TAXATION ASSISTANT
	SECRETARIAL ASSISTANT
NUTRITION AND DIETTOLOGY	NUTRITION AND DIETTOLOGY ASSISTANT
FOOD AND BEVERAGE TECHNOLOGY	FOOD AND BEVERAGE TECHNOLOGY CONTROLLER ASSISTANT
AGRICULTURE	FOREST PROTECTION TECHNICIAN
	TECHNOLOGICAL APPLICATIONS AND INSTALLATIONS IN LANDSCAPE AND ENVIRONMENT PROJECTS
ARTISTIC STUDIES AND APPLIED ARTS	PHOTOGRAPHY TECHNICIAN
	INTERNAL DECORATION & OBJECTS DESIGNER
	MUSIC TECHNOLOGY
	SOUND TECHNICIAN
	TECHNICIAN OF ANIMATION AND ELECTRONIC GRAPHIC DESIGNER
	DIRECTION
	GRAPHICS TECHNICIAN
	WORK OF ARTS & ANTIQUITY PRESERVATION TECHNICIAN
	HANDMADE JEWELRY AND JEWEL DESIGN TECHNICIAN
	PAINTING PRESERVATION TECHNICIAN

Specializations for I.E.K. -2

SECTION	SPECIALIZATION
SPORTS	REPORTER
	SPORT REPORTER
TOURISM	HOSPITALITY TECHNICIAN
	BAKERY & CONFECTIONERY TECHNICIAN
	CHEF
HEALTH	PHYSIOTHERAPY TECHNICIAN
	PHARMACY ASSISTANT
	ERGO THERAPY ASSISTANT
	RADIOLOGY ASSISTANT
	MEDICAL LABORATORIES ASSISTANT
	DENTAL TECHNOLOGY ASSISTANT
	CHILDCARE ASSISTANT
	NURSING ASSISTANT
	NURSING ASSISTANT TRAYMATOLOGY
	AMBULANCE CREW RESQUER
	NURSING SURGERY ASSISTANT
	OBSTETRICS ASSISTANT
	VARIOUS
HAIRDRESSING TECHNICIAN	
FOOTWARE & NAILS TECHNICIAN	
SECURITY	
AUTOMOBILES & MOTORCYCLE DRIVING INSTRUCTOR	
MUSEUMS AND ARCHAEOLOGICAL SITES GUARD	
FLIGHT DISPATCHER	
SPORTS COACH	

IEK New Program of studies (Curriculum)

- ▶ 65 New Programs of studies are designed to give students an updated syllabus that can enhance their knowledge, abilities and skills.
- ▶ <http://www.gsae.edu.gr/el/toppress/1427-odigoι-spoudon-eidikotiton-iek-tou-n-4186-2013>
- ▶ Emphasis is given to Digital Skills while all IEK use Electronic notes on E-learning platforms (e.g. Moodle, Open e class).
- ▶ Program of studies in technical subjects like I.T. has more than ½ of the hours taught subjects in Open Software and Hardware technologies e.g. Java,
- ▶ Automation Technicians & Computer Technicians, uses Arduino, Raspberry Pie.
- ▶ Internal Decoration & Object Designers use 3D Printing.
- ▶ All specializations have 3 hours per week Practical Use - Examples of their specialization, that can use projects, team working, case studies etc. aiming to apply the theoretical knowledge acquired.

Apprenticeship

- ▶ An apprenticeship is defined as an educational system in which learning time alternates between a workplace and an educational structure, while the apprentice is linked to an Apprenticeship Agreement with the employer, receives a pay or allowance, in accordance with applicable law, and has insurance coverage. The employer undertakes to provide the apprentice with training in the workplace, according to a defined program, which, combined with the learning program in the educational structure, leads to the certification of the knowledge and skills acquired by the apprentice and leads to a specific qualification.
- ▶ EPAL Apprenticeship : After 3 years of study at EPAL, lasts 9 months , 4 days /week at Workplace, 1 day/week (203 hours) at EPAL. After Examinations awarded NQF/EQF: Level 5
- ▶ IEK Apprenticeship : After 2 years of study at IEK, lasts 6 months (960 hours) 4 days /week (768 hours) at Workplace, 1 day/week (192 hours) at IEK. After Examinations awarded NQF/EQF: Level 5
- ▶ Wage fee for < 25 years old = € 17.12 (75% on the lowest unskilled worker € 22.83)
- ▶ Grant amount to € 11.00 - Direct payment. Employer's charge of approximately € 9.35
- ▶ Wage fee for > 25 years old = € 19.64 (75% on the lowest unskilled worker € 26.18)
- ▶ Grant amount to € 14.00 - Direct payment. Employer's charge of approximately € 9.35



Internship for Students/Graduates of I.E.K.

-Work Based Learning

- ▶ Internship or Apprenticeship is compulsory for IEK students in order to graduate.
- ▶ Internship can start at the end of 2nd Semester, while Apprenticeship at the end of the 4th Semester. Only insurance is given in case of accident.
- ▶ IEK Internship (Work Based Learning): After the 1st year of study at IEK, student can get an Internship which lasts 6 months if it is for 8 hours /day or 9 months if it is for 6 hours/day. (960 hours)

The internship used to subsidy amounts of €800, for every student who began his/her internship from 1st October 2008 and completed it by 31st December 2013. This program has stopped and since then no subsidy is given...

Internship is very attractive for many companies trying to get students to join their workforce with the promise that they might get a permanent job at the end of internship.

In some specializations like chef's, companies offer money in order to attract students to go into internship with them.

Others prefer to go straight to work and if they get more than 120 stamps in jobs related to their studies, then they do not need to go for Internship.



Benefits of Apprenticeship / Internship

- ▶ Overall, IEK offers professionally trained students with modern skills that can blend with companies during their Apprenticeship or Internship.
- ▶ The trainee students:
 - 1) Acquire an initial work experience related to the subject of their studies.
 - 2) Get a smoother transition learning production, businesses and organizations.
 - 3) More substantial assimilation of scientific knowledge through application to real working conditions.
 - 4) Get information on labor market trends and the skills required.
 - 5) Develop a professional conscience and a workplace seriousness.
 - 6) Improve their communication skills, collaboration and initiative.
 - 7) Get familiar with the working environment and the requirements of the professional space, as well as on labor relations and benefits.
 - 8) Completing the Practice Exercise have a full picture of the job finding process (interviews, CVs, etc.)
 - 9) A better professional integration into the institution that have been practiced.
- ▶ The collaborating institutions employing the students have the opportunity to use the current knowledge, skills and ideas of young and competent people without significant financial costs and at the same time they create infrastructure for their future human resources needs. The duration of the Apprenticeship / Internship, is a test (probationary) period for the future selection of permanent staff.

Thank you 😊

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