

Technical Vocational Education in Greece: A review of the 1998 reform.

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Technical Vocational Education (TVE) in Greece was almost exclusively an activity of the private sector of education until mid 70's. In 1976 public schools for Technical Vocational Education were formed and, with time, became the schools for the vast majority of technical vocational students. These post-compulsory education level schools were organized in two distinct paths. The first was a lower level TVE school with study duration of two years. It included the Technical Vocational Schools (TES) and was classified as level 2c in the ISCED 97 classification scheme¹ (comparable to the lower secondary school). No provision for further (technical or vocational) education was foreseen for the leavers from these schools on the basis of their diploma². The other path was an upper level TVE school with study duration of 3 years and it was classified as level 3b in the same ISCED scheme (comparable to the upper secondary education). It included the Technical Vocational Lyceum (TEL), the Unified Multbranch Lyceum (EPL) and other special schools. These schools were under the supervision of the Ministry for Education. The Organization for the Workforce Employment (OAED) operated Apprenticeship Schools, formally classified in the lower TVE level, where teaching was equally divided between school and enterprises where students work as apprentices. There were also other technical vocational schools, mostly unclassified, under the supervision of other ministries³ and

¹International Standard Classification for Education revision of 1997 from UNESCO (151EX8 Annex II). In relation to the Greek education system this taxonomy corresponds levels 0 through 6 to no education, primary education (dimotiko), lower secondary (gymnasium), upper secondary (lyceum), post-secondary non-tertiary (e.g. IEK, if they were classified), tertiary education (first degree or diploma and 'master') and doctorate correspondingly. For levels 2, 3, 4, 5 there is a further differentiation to (a) general with possibility of further education, (b) technical with conditional possibility for further education and (c) technical without formal possibility of further education (not applied to level 5). In European Union another taxonomy is often used for TVE according to a 1984 directive with levels 1 (assistant), 2 (technician) and 3 (expert).

²But they could use the leaving certificate from lower secondary school, a requirement for the enrollment to any of the formal lower level TVE schools and enroll to any upper secondary school (lyceum). They could also enroll in the second class of the upper TVE school (TEL) for a relevant to their diploma specialty.

³E.g. assistant nurses by the Ministry for Health, apprenticeship schools by the Ministry for Communications, probation officers by the Ministry for Justice, etc.

various private schools in one of the previous categories. There was no continuation link between the lower and the upper TVE levels whose operation was often confused with the corresponding initial training and also with the re-education and retraining, even with the (informal) continuous training for the acquirement of new skills. This confusion is still present and affects the organization⁴ and operation⁵ of the technical vocational education. That organization remained intact in its philosophy until 1998. With the 1998 education reform⁶ the technical vocational institutes (TEE) were introduced in a unified path of TVE organized in two consecutive cycles, a clear improvement over the previous scheme. The 1st cycle with study duration of two years concludes with a lower technical or vocational diploma in the education level 2b (assistant). The continuing 2nd cycle with study duration of one year concludes with a diploma of an ISCED level 3b (technician). These types of TVE schools replace completely all the previous types of the classified technical vocational schools. Within this 1998 reform all previously officially classified lower level TVE schools⁷, in the public or in the private sector, were transformed into 1st cycle TEE and they must operate with the new upgraded structure. The schools under the supervision of other ministries may be upgraded into TEE of the 1st cycle operating under the joint supervision of the Ministry for Education and the host ministry, if the supervising Ministry forms new curricula, approved by the Pedagogical Institute. New TVE schools (TEE) may be formed but the corresponding Ministerial decision regulating the operational requirements is still pending. Referring to the operation of TVE before and after the 1998 reform, we note the following:

1. Specialties. The lack of institutional Technical Vocational Initial Training⁸ in

⁴For an extended review see: ‘Vocational Training in Greece: A summary’, Iraklio 1996, and ‘Vocational Training in Greece. Part 2.- Two Case Studies’, Iraklio 1997. Studies realized within the EU financed project ‘Crivet Unemployed. The effectiveness of labour market oriented training for the long-term unemployed’ - a Targeted Socio-Economic Research (TSER) project (see in <http://www.cordis.lu> with keyword crivet).

⁵See more in ‘The Laboratories of the Unified Multibranch Lyceum’ Iraklio 1994, an assessment study commissioned by the Greek Organization for Vocational Education and Training (in Greek). A part of it may be found in ‘Informatics in the Greek Unified Multibranch Lyceum’ proceedings of the 2nd Panhellenic Conference for the Didactics of Mathematics and Informatics in Education, Nicosia 1995 (also in Greek).

⁶Law 2640/OJ206A/3-9-98 – ‘Secondary Technical Vocational Education and other provisions’.

⁷The upper TVE level schools (TEL and EPL) had already been abolished and replaced by general education upper secondary level (lyceum) schools (Unified Lyceum – EL) with Law 2525/OJ/Unified Lyceum (Eniaio Lykeio), access to tertiary education, assessment of education and other provisions.

⁸Technical Vocational Training (initial and continuous) was introduced institutionally in Greece by Law 2009/OJ18A/14-2-92 and Law 2150/OJ98A/16-6-93. Its operation was initially regulated by Presidential Decrees (PD) and the Ministerial Decisions (MD) from the Ministries for Education and for Employment (for initial and continuous training respectively). See for example PD370/OJ210A/5-12-

Greece imposed the necessity for the operation of a great number of specialties (over 200 in total) within the framework of TVE under the scheme before the 1998 reform (old scheme). Overlaps and confusion, especially referring to vocational rights, were common. That history still affects the operation of TVE also under the new scheme. Together with new and modern specialties⁹, there still exist traditional or declining specialties or specialties whose place is within the framework of training (initial or informal)¹⁰. The disadvantage of the old system of the non-correlation of the two levels of TVE of the old scheme has been remedied in the new scheme.

2. Curricula and Books. In the old schemes, the existence of a curriculum was rather an exception mostly restricted to a syllabus, in many cases outdated¹¹, and often repeating the table of contents of a technical manual. In the vast majority of the courses taught there were no student's books¹². The Technical or Vocational Profile, the objectives, the aims and the pursued skills were made compulsory under the 1998 reform and have been already prepared, at least for the (new) specialties whose the support from the Pedagogical Institute had been programmed and their design has been concluded¹³. Streamlined textbooks with modern contents accompanied by teaching helps and learning resorts are required and produced specifically for the TVE schools.
3. Teaching staff. The diversification on the qualifications, education level and status of the teaching staff is striking. Formal qualifications include graduates from Universities, from other tertiary education establishments (Technological

94, and the MD Z/3378/OJ356B/17-5-93, 115372/OJB/11-11-94, 115373/OJ854B/16-11-94, 107797/OJ306B/19-4-95, 108009/OJ308B/19-4-95, 108473/13-5-95, 111456/8-7-96, and 111457/8-7-96.

⁹E.g. CRC-machine tools technician or technician of mechanical farming.

¹⁰E.g. car-body repair mechanic, assistant cabinetmaker or hairdressing assistant.

¹¹For the case of Informatics see 'Problems with the introduction of Informatics in the schools' Proceedings of B' international conference on 'Informatics in Primary and Secondary Education, EPY and Ministry for Education, Athens 27-28/11/1989.

¹²I refer to textbooks officially approved by the Pedagogical Institute and given gratis to the students within the framework of 'a free for all education ('dorean paideia') existing in Greece.

¹³The implementation of the new scheme started immediately from the school year 1998-99 (see MD YA Γ2/5316/OJ1184B/16-11-98, Γ2/5823/OJ1184B/16-11-98, Γ2/5317/OJ1184B/16-11-98, Γ2/659/OJ205B/11-3-99, Γ2/485/OJ155B/24-2-99, Γ2/967/OJ215B/12-3-99, Γ2/438/OJ115B/17-2-99, etc). This rather hasty implementation, together with the existing political situation and the prior implementation of the reform in the general lyceum, imposed some concessions, some of them expected during a transition period, and disclosed the chronic problems of TVE in Greece. Even during 2000-01, third year of the reform a significant number of specialties still operate within the context of the previous scheme.

Education Institutions-TEI), from ASETEM-SELETE¹⁴ and also from secondary TVE schools, levels upper (category TE1) and lower (category DE1). The study subjects of the teaching staff cover almost all known areas. Categories TE1 and DE1, although at first they were appointed as assistants for the practice work, later they assumed the full responsibility of the laboratory or workshop teaching. This point is still under a transition period with the objective of having only highly qualified tertiary education graduates as TVE teachers and gives rise to operation problems¹⁵. There are no data on the actual competence of the teaching staff and its teaching sufficiency. The 'yearbook' method of appointment of the teachers¹⁶ and indirect evidence from other works¹⁷ indicate that here is an area for great improvement.

4. Students. The lower level TVE schools (TES) were chosen exclusively by students seeking a Technical Vocational Education, often to continue a business in the family. In the upper level (TEL and EPL) student motivation was divided between those who wanted to study for a vocation and those who chose TVE as an alternative path to higher education. Due to social attitudes, in both levels, TVE was chosen by students with low marks in middle school, a fact making teaching a very difficult task¹⁸. According to available statistics, this year (2000-01) the number of students in TVE raised to match that in general education as compared with a corresponding 3 to 7 previous ratio. It is still a question if this is due to a change of attitude due to the improvement of TVE or to a more selective general education that keeps the more gifted with the rest pushed out.
5. Equipment and Infrastructure is a problematic situation. In many cases equipment and the infrastructure relevant to practice work was missing. Sometimes, 'heavy' or expensive equipment is not used because of lack of space, lack of skilled

¹⁴A post secondary unclassified special school for the formation of TVE teachers especially in the engineering sector.

¹⁵The rather political puzzle of 'teaching assignments' i.e. which teacher category takes precedence on the teaching of the different courses. This precedence depends heavily on the obsolete by now but still vivid classification of the course as technical or practical and as theoretical or general (usual).

¹⁶To be completely replaced by selection examinations from the year 2003.

¹⁷See for example reference in note 5.

¹⁸The formation of public TVE schools in mid 70s was ministerially presented as an alternative to those who could not follow an academic education career. This stigma of academic failure is still widely associated in Greece with the students of the TVE schools. The reform tries to reverse the widely adopted feeling that the students in TVE schools are 'children of an inferior god' (see the relevant comments on the curriculum organization).

personnel¹⁹, pending a repair or other operational reasons. Maintenance (preventive or occasional) was not foreseen in an institutional way. The new scheme includes provisions for the remedy of this situation but it is still under implementation²⁰.

6. Counseling and Guidance. Only recently counseling and guidance related to the vocation is introduced in a systematic way together with the operation of the ‘observatory of the transition to the labour market’²¹. Apart from facilitating the social acceptance of TVE, these measures are expected to improve the student profile, especially their motivation, within each TVE specialty, leading to a more effective technical or vocation education.
7. Recognition and Vocational rights. In most cases vocational rights were not explicit, pending ministerial decisions. This is a common situation in the old scheme and in the 1998 reform. Under the new scheme, the diplomas in the 1st and in the 2nd cycle are planned to be certified with respect to its education level by way of prefect wide (for the 1st cycle) or nationwide (for the 2nd cycle) common leaving examinations on the core subjects of each specialty. However this provision is not implemented yet.
8. Further Education. Apart from the possibility to continue from the lower level (1st cycle) to the upper level (2nd cycle), the 1998 reform includes provisions to further technical or vocational education, in a post-secondary or a tertiary level, for the diploma graduates of the 2nd cycle. This provision was implemented for the first time in the year 2000-01 in a rather unsuitable way and is going to change from next year²² when the second cycle diploma will enable the owner to enter the workforce, and also, to continue studies in the same or in a higher level.

The implementation of the 1998 reform of TVE in Greece started immediately after the passing of the relevant legislation without any necessary preparation time. The elapsed

¹⁹The actual qualifications of the teaching staff (see previous point 3) rarely include a sound competence for practice work teaching using modern methods and equipments.

²⁰See more in P. G. Michaelides, ‘Practice work in TVE schools in Greece’, work presented in the Pedagogical Institute of Greece Conference on ‘TEE – Role and Perspectives’, Delphi 30-31 October 2000.

²¹See more details in the Pedagogical Institute site <http://www.pi-schools.gr>.

²²Diploma graduates of the 2nd cycle took nationwide examinations on language and mathematics for selection to a non-university tertiary (TEI) department. Before their enrollment they should successfully complete a 6-month study program on mathematics, physics etc. This procedure challenges the upper secondary education level of the TVE schools and is to be abolished. From next year the enrollment for tertiary (university or non-university) education studies for the diploma graduates of the 2nd cycle TVE schools will be based on the certifying nation wide examinations (see previous point 7) without any preparatory course.

three years of its transitional implementation were characterized by a flooding of operational problems²³ that concealed other aspects essential for assessment and feedback actions. However, even from this 3-year 'transitional' operation, some comments on the main features of the 1998 reform have already emerged²⁴:

9. Organization. In both the two consecutive cycles of TVE, the objects of study are organized into 15 sectors with two or more specialties in every sector²⁵. Enrollment to the second cycle is open only to those holding a lower cycle diploma of a relevant specialty within the same sector²⁶. Due to the history of TVE in Greece, this, right in its principle, organizational scheme, suffered from some disturbances. These include the large number of sectors, the grouping, in some cases, of rather unrelated specialties within the same sector, etc²⁷. The Pedagogical Institute, responsible for education and the OEEK, the organization responsible for the initial training, must rectify this weakness with coordinated actions. The separation in two consecutive cycles for all the sectors exhibits an administrative simplicity imposes however a great challenge on the curriculum and its effective teaching. Consequently, its existence must be well justified. For most of the sectors of the Greek economy, there is no need for the lower level and a three-year upper secondary TVE specialty is a better choice. For other sectors, the operation of lower level TVE schools may, perhaps, be adapted to the needs of the economic refugees living in Greece. In some other cases, the existence of a distinct 2-year lower level and another 3-year upper level may be a better choice.
10. Curriculum. The courses taught are divided in two classes, courses specific to the sector or the specialty (specialty courses) and courses of a rather broader nature (general courses). In contrast with the old scheme curriculum, where the teaching objectives were exhausted to the acquirement of some technical skills and to the

²³E.g. lack of books, lack of instruction and advice to the teachers, ignorance of the new orientation of TVE, lack of equipment, etc.

²⁴What follows are personal opinions based on the active monitoring of the operation of TVE in Greece during these years.

²⁵The 15 sectors are: the Engineering (the most popular with the TVE students) the electrical, the electronics, the arts and crafts, the textile and wear, the silver-, gold-smith and horology, the musical instruments, the construction, the finance and administration, the agronomics, food and environment, the health and providence, the chemist of laboratorial applications, the nautical and marine, the informatics and computer networks, the cosmetology and the cosmetology and hairdressing. For these 15 sectors 150 specialties in total for the two cycles are anticipated of which about 90 operate already throughout Greece.

²⁶It is also open to those holding corresponding technical or vocational diplomas from the previous TVE schools.

²⁷See also the previous comment in 1.

memorization of technical or vocational facts, the curriculum of the 1998 reform includes also to a large extent subjects from a broader to the study specialty area²⁸ and focuses on the development of more general cognitive skills²⁹. The purpose of these courses is to provide the TVE students with a general background of dexterities enabling them to participate in a modern society³⁰ and to provide them with the necessary background knowledge and skills enabling them for further education to a higher level, apart from their general usefulness. During the first year, the specialty courses are common to all the specialties within a sector. These courses are traditionally classified as usual courses and as courses with practice (laboratory or workshop) work. For the latter ones, the study program must describe also the minimum requirements in equipment, classroom, practical activities, etc. Although in many cases, courses are organized with the teaching of the ‘theory’ and the ‘practice’ interwoven, this matter must be regulated firmly on the basis of pedagogy principles alone taking into account the widely diverging requirements (in equipment, supervision, classrooms, safety, etc) of the practice (laboratory or workshop) work between the different courses³¹. The stipulation of ‘Laboratory and Workshop specifications’ is a matter of urgency.

11. Syllabus and Books. With the formation of new modern curricula (see previous point 2) the syllabus was also updated and greatly improved. New books are specifically prepared to be used as teaching books. They are accompanied by guides for the teacher, laboratory and drill guides (if applicable) and other material and other resorts supporting teaching. Their use revealed points for improvements such as error correction and synchronization between the syllabi between courses with interdependency. Another complain however was that their level was too high for the students in the TVE schools. It is a matter of further investigation if this is an actual drawback or it is due to teaching deficiencies (see also next

²⁸These include courses on the work context, computer usage and applications, learning of a foreign language, as well as courses on language, mathematics, physics, history etc. to about 1/3 of the curriculum.

²⁹TVE teachers are explicitly instructed to try and achieve the teaching aims by involving the students in problem solving and decision making activities. Even the practice for the acquirement of technical dexterities is advised to be with moderate only instruction permitting the student to exhibit his/her own initiative and ingenuity.

³⁰This is a very important point because, in most developed societies, about 7 out of 10 of the young enroll in TVE.

³¹This resolution was introduced for administrative easiness focusing on the type of practice work encountered in the engineering section with the heavy equipment. It resulted to a politically sensitive subject relating to the rights of ‘teaching assignments’ for the different courses (see also footnote 15).

comment on the teaching staff).

12. Teaching Staff competency. The operation of the new TVE curricula revealed that although in general the teaching staff responded adequately to the higher demands of the reformed curricula in a number of cases there was a real problem. The syllabus was of too high a level for a significant percentage of the teaching staff, especially for the courses in the engineering sector that refer to modern equipment and techniques. An even higher percentage lacks the necessary skills for a modern TVE teaching (see also last comment in point 3 previously). It seems that there is a need for an extensive in service training.

Despite the problems mentioned earlier that are expected to be rectified in due time, the 1998 reform of TVE schools in Greece exhibits clear improvements over the old scheme. The most prominent improvement is the possibility of further education, a feature compatible with the quest for personal development and an essential constituent of an education for all providing all the citizens with the means for an active participation in the modern society. This feature is enhanced further by an improved curriculum organization. The provision for general courses of a broader nature may be used also to deal with the basic aspects of some concerns of the modern society such as the environmental impacts from the use of technology, the sustainable development, the energy consumption etc. I note that under the previous scheme, in the lower level TVE schools (TES) with the majority of the TVE students there was no provision at all for this kind of courses, while in the upper TVE schools (TEL and EPL) this type of course was predominant. As a consequence in both levels there was an imbalance towards opposite ends between the technical or vocational dexterities acquired and the more general education, necessary for future citizens³². The new scheme tries to restore the balance. It remains to be proven from its application.

³²In Greece the leavers from the lower TVE schools, although their social acceptance is lower, they have much higher employment rates than the leavers of the upper level. Also, their higher levels of employment are within their vocation as opposed to the upper level TVE leavers where their employment is to a large extent in areas unrelated to their TVE education (see the results from the observatory of the transition to the labour market in the Pedagogical Institute of Greece website <http://www.pi-schools.gr>). This is in contrast with the findings from other developed countries and may be due partly to this imbalance.