DEVELOPING AN EFFICIENT LOCALLY MANAGED MODEL OF VOCATIONAL EDUCATION AND TRAINING

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DEVELOPING AN EFFICIENT
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In order to be effective and efficient, vocational education and learning should be linked to labour market needs to train future workers and contribute to the structural and synergic growth of the socio-economic system. This is the focus of this publication, which is the second of three publications containing the major outcomes of the project DELMVET (acronym of Developing an Efficient Locally Managed Model of Vocational Education and Training).

The first chapter focuses on the desired feasibility for the opening of two new post-secondary vocational profile, “Vehicle diagnosis by using ITC” and “Multimedia ITC” in the Durres Region. This recommendation is the result of the evaluation of the Albanian VET system and it could be a possible solution for filling existing gaps among the labour demand and supply. The substantial shift of the vocational education approach, which should become more “demand-driven” in order to convey students the competences requested by the actual labour market, is a crucial aspect recurring throughout the lines of this document. Therefore, teachers should also be trained to structure the new didactic programs according to the new methodologies and technologies available.

The second chapter gives an insight of the knowledge acquired and their certification, underlying that the Lifelong Learning approach involves everyone. In line with one of the core aspect of the project DELMEVET, this process benefited of the sharing of best practices from the Italian experience to promote the exchange of instruments and tools among Adriatic Region countries.

The last chapter is an interesting contribution on new instruments offered by web 2.0 technologies. Distance Learning is a new methodology, which is very useful for both, making learning more flexible and adaptable to students’ needs and to delete geographical borders through the creation of a virtual space accessible by participants anywhere in the world.

As a matter of fact, the documents included in this publication aim to underline the need of a VET system able to face the challenges imposed by the continuous shifts in the labour market, where technology is essential to be competitive in the global economy. Furthermore, possibilities to increase employment opportunities come from an active involvement of all actors included in the process. Finally, the importance of mobility and experience exchange among the countries of Adriatic Macro Region is another strength that must be taken into account.
I. FEASIBILITY STUDY FOR TWO NEW PRIORITY PROFILES

QPBE, Albania
VET and local labour market needs in the Adriatic Ionian Macro Region

Developing an Efficient locally Managed Model of Vocational Education and Training
1. INTRODUCTION

The aim of this study is to advocate the general feasibility for the opening of two new vocational post-secondary courses in Durres. According to local labour market needs, “Vehicle diagnosis by using ICT” and “Multimedia ICT” are the new recommended priority profiles that offer a demand-driven vocational education. This Study indicates also the paths to follow for the implementation of both new profiles, including: curricula approval, teacher’s training and didactic means, workshops, laboratory and respective equipment, financing needs.

The study underlines the importance of enterprise-based schemes in vocational education and training and the relevance of a strategy for skill development. It should be kept in mind that the demand of labor is derived from sound policies that promote investment and job creation to support local communities: education and/or training alone never create jobs. When it comes to demand-related issues of education and/or training, there is always an interesting case of interdependence between supply and demand. Normally, one would argue that levels of unemployment cannot be remedied by improving supply. Providing youngsters with “employable skills” when no work is available, is both economically and socially unproductive. What is important is the development of industry-specific education and/or training for employment programs. If improved demand in specific sectors becomes a condition for structural growth, there will be a strong case for more employment, and therefore for more education and/or training offered by public and/or private providers.

Now, what does this mean for all interested factors in Durres area? Education and/or training in different new courses should not be seen as a means in itself, but rather as a way to find decent work, income and job satisfaction for many target groups: boys and girls, school-leavers and out-of school youth, unemployed and underemployed, etc.

Future jobs and prosperity in Durres area are likely to come from skill-intensive growth, but only if the programs are geared toward real employment opportunities. Therefore, a major planning and training effort in close collaboration with the private sector is required. The major pillar of the proposed way of looking at the future of the VET in Durres Region is the strong “employment drive” of any kind of courses that should be offered and in its reverse logic: the obvious absence of programs in areas where employment linkages are not evident.

In sum, the prime focus in this report argues for a shift from a supply-driven to a demand-driven perspective which is not only the main objective but also a condition without which VET is never meaningful.
2. ANALYSIS OF ALBANIA VET SYSTEM

Progress towards achieving Albania’s aspired economic development requires also a higher and differently skilled workforce. Working in the modern services and manufacturing sector requires higher skill levels than working in subsistence agriculture. As Albania's economy continues to become increasingly sophisticated and based on services and manufacturing, the demand of labour force, which show employability and work readiness, will rise further. The skills gap is severe in the private sector and the deficit is highest in the technician cadre, though there is a shortage of skills in all occupational categories (managers, professionals, technicians and artisans). The occupational competence challenge in Albania may in fact be described as the missing middle. In the public sector, the deficit is more serious for professional cadres. In the private sector, the occupational competence deficit is acute in the key sectors of the economy, namely construction, tourism, manufacturing and modern agriculture.

In addition, the kind of knowledge and skills required to support the evolution towards a more sophisticated economy requires “key competencies/catalytic skills” to the workers on any level and in any profession or occupation. The lack of key competencies is particularly harmful for the development of various economic sectors where communication skills and other social abilities are important. It also prevents artisans and technicians in all areas to work effectively and to adapt and remain productive in a steady evolving economy.

Being insufficiently addressed towards employment, the VET system in Albania does not meet labour market requirements yet. This discrepancy hinders the progress of enterprises and modern transformation.

Several institutions and statistical instruments monitor labour market in order to understand its developments. In this context, National Employment Services (NES) with its “Skills Needs Analysis” should be mentioned as a good contribution. Vocational as well as technical managerial education is provided respectively in 41 public schools and 9 private schools, located mostly in main urban areas of the country, with only three in rural areas. After the last changes to the respective law in June 2011, the structure of secondary vocational and technical education system took the form 2+1+1 (four level system) according the period duration. It could be described as follows:

**Level I - Basic vocational** is oriented towards a wide-range of vocational/occupational profiles and it lasts two years. It is equivalent to AQF/EQF level 2. It awards a certificate of basic vocational training (partly-qualified employee / assistant) and allows for transition in Level II of VET or to join the labour market. The Frame Curricula contains general education subjects (around 40%), vocational theory subjects (around 30%), required vocational modules, (around 30%), and optional practical modules.

**Level II - Vocational education** is oriented towards vocational/occupational
profiles and it lasts one year. It is equivalent to AQF/EQF level 3. Upon completing this level, a certificate of vocational competency for a qualified employee is awarded. At this point, transition to Level III of VET or access to the labour market is possible. The frame curricula comprises general education subjects (around 30%), vocational theory subjects (around 20%), and required vocational modules (around 50%). Optional practical modules are offered as well. A 1-year bridge-course focusing on general education is offered to pupils that opt to complete the general “State Matura” (SM) and pursue university or post-secondary studies. It is equivalent to the level III of the ACF and the ECF. It provides a certificate of vocational preparation of qualified workers. It allows the transition to Level III of the AP or in the labour market;

**Level III - Technical/managerial education** is also oriented towards general vocational/occupational profiles; this level lasts 1 year and it is equivalent to AQF/EQF level 4. Upon completion of this vocational education level, pupils take the vocational state exam and the integrated vocational exam. At graduation of level III, a certificate of technician/manager in the relevant profile and the Vocational State Diploma are awarded. Graduates may join the labour market or pursue university or post-secondary studies at Level III (ISCED 3A), oriented according vocational profiles, with one year duration. It is equivalent to Level IV of the AQF and the ECF. In the end of this study level, the pupils are subject to the state vocational examination. It provides the technician certificate, the state vocational maturity certificate and allows the transition to the labour market and tertiary education;

**Level IV - Post-secondary vocational education** is an upgraded level oriented towards professional “hands-on” specialization. It lasts 1-2 years, following the conclusion of secondary education (either general or vocational). It is equivalent to AQF/EQF level 5. At the end of level IV, graduates are awarded with the professional diploma (in the specialized vocation) and are qualified to enter the labour market.

### 2.1 Post-Secondary VET in Albania

Albania must face many socioeconomic challenges and government response has been a systematic intervention in all levels of education, research and employment policies. This intervention has been evident in national sector strategies. Government policies related to employment and to the education and training sector are enacted through the legislative framework, active labor market programs and projects, vocational training programs, as well as the ongoing process of harmonization with European Union policies in these areas. Hereunder follows an elaborated selection of different official documents and author's studies dedicated to the VET system in Albania. *Secondary and post-secondary VET* follows the 9-year basic education track
and has as its main goal to enable learners to develop vocational/occupational skills and practical knowledge. This type of education gives craftsmen and technicians the necessary skills for a specific job, but also allows students to carry on with higher education.

Vocational Education and Training Law 2002 (amended 2011) establishes the fundamental principles and organization of the VET sector, based on the cooperation between governmental institutions, social and other stakeholders in the VET sector. The Albanian VET system includes all types of vocational institutions supporting and providing all types of curricula from upper secondary VET level I, II, III to post-secondary VET programs, in line with the Albanian Qualifications Framework (AQF) for levels 2, 3, 4 and 5.

The accumulated credits awarded in a course of the education subsequent to high education may be transferred to the first cycle university education, in accordance with the criteria set out by the higher education institutions.

At present, post-secondary VET Programs are provided by both the higher education sector and the vocational education and training sector. Their relationship is not governed by any regulations yet. In fact, a new change to existing law 2011 on VET is expected, which will unify vocational education and vocational training in one hand, the Ministry of Social Welfare and Young.

The National Strategy on Science, Technology and Innovation is closely linked to Higher Education and addresses gaps and challenges to the Albanian research system, which hinder innovation and further economic development. Indeed, human capacity and competency is one of the key challenges in carrying out and managing fundamental and applied research.

The policy solutions to these challenges consist in establishing centres of excellence in science and doubling the number of researchers through brain gain and similar mechanisms. Since research and innovation are also laboratory of new ideas, their development is as important as education and vocational education, because new ideas generate new products, new services and new jobs. Then, this will create new growth and socio-economic prosperity on the long term.

The VET Law creates opportunities for providing a “double” (dual) professional education, which integrates vocational education with training in companies that operate in the respective profile of VET. Such method can be applied both in the secondary and post-secondary VET programs. The VET Law also provides the legal support to companies and their involvement in the public VET system. Private or public companies should provide an opportunity for the institutionalization of internships of VET students.

In the framework of decentralization, VET institutions benefit of a larger autonomy, which allows them to make a more flexible use of their resources. The VET Law prescription make the VET system more flexible and demand-driven and it is focusing on the establishment of multifunctional VET Centers. They will be the entry gate to the labor market and also an important hub linking VET graduates and potential employers and businesses through internships, dual-form VET programs and practical work. Thus, schools and centers are transformed into multifunctional VET Centers able to offer their services to the market. Multifunctional VET Centers will provide a range of diversified VET programs with
different duration periods for different categories of students and customers, in an effort to practice their capacity. 

VET providers are seen as the breeding ground for the introduction of new technologies and innovation responding to new trends (e.g. technology-driven green jobs). Innovative post-secondary VET programs use also modern pedagogical methods (e.g. projects in companies) which enhances creativity, innovation and entrepreneurship among the VET graduates in all secondary and post-secondary levels. Particularly the widespread “skills gap” of the Albanian youth hampers the growth and modernization of the Albanian economy in general.

A semi-autonomous status of the vocational education schools as far as curricula, funding, staff and management are concerned shall be delivered effectively after the conclusion of the relevant legal framework and the establishment of the responsible execution and supervision bodies. The VET Law provides for the establishment of advisory boards at public VET providers, defining their main duties and composition.

Training and qualification of teachers remain a priority for the VET development and consolidation. VET teachers’ training for vocational education schools faces special problems. The aim is to provide a double qualification – a high degree of practical vocational skills and academic competence in education as well. As part of their autonomy, vocational education schools can organize training and qualification courses aimed at the professional development of teachers.

One of the strategic goals covered by the VET Law is also the increased diversification of VET programs through the introduction of post-secondary VET programs.

The National Strategy for Vocational Education and Training and Lifelong-Learning 2013-2020 is focusing on the following four strategic priorities:

- Reform of the VET institutional system in order to increase its efficiency and effectiveness;
- Improve the attractiveness and access of VET and Lifelong –Learning (LLL) for all the relevant stakeholders;
- Address labor market needs and demands with the adequate VET supply;
- Develop and strength the capacities for monitoring and evaluation of VET and LLL

The VET & Lifelong Learning Strategy 2013-2020 is still awaiting the final approval from the Albanian Government.

The shared governance of the VET system between MoES and MoLSAEO might be considered overlapping; High centralization, minimal participation of the private sector, minimal inclusion of local government stakeholders, artificial and arbitrary separation between national and local VET providers weaken the actual VET system. The recent fusion of these two Ministries in the Ministry of Welfare and Youth is a great improvement towards a unique management of both parts of VET.

Post-secondary VET programs for graduates of gymnasia and VET programs are still in a very first stage of development, mainly provided by professional colleges at public universities with the University of Durres being the frontrunner. Private sector companies represent the major stakeholder and partner in the VET
system for decisions and implementation. The current Albanian VET Law 2011 recognizes businesses as training providers, decision-makers in occupation standards and curricula development, financing resources and, according to the VET Law for enterprises included in VET, they are also worthy of state support. Nevertheless, the implementation process remains unclear due to the lack of complementary regulations. Furthermore, strategies of Education, VET, and Employment recognize the active role of the private business sector and their inclusion in the process through employer organizations, Chambers of Commerce and Industry, even if the active participation of enterprises in VET is still very low. **Trade Unions** are considered an important stakeholder in VET policies as well. This is the reason why this stakeholder is represented in all important decision-making and consulting bodies. Although there are more than sixty trade unions, the Union of Independent Trade Unions of Albania and the Confederation of Trade Unions of Albania is the largest. Albania has still a low membership compared to the regional countries: less than 15% of employees is represented. Even if trade unions are part of different commissions and councils, their role is consultative and less action taking. Trade unions do not seem to be active on VET issues, but more interested in working conditions and salaries. The introduction of post-secondary VET programs started only in 2007, so it is still in the initial phase. Until now, all post-secondary VET programs are developed and implemented within the **higher education sector**. There is no “fully-fledged” post-secondary VET program established as part of the VET sector yet.
3. OBJECTIVES, EXPECTED OUTCOMES AND THEIR FEASIBILITY

Actually, the supply with VET graduates to regional labour market is various in profiles and considerable in numbers. However, since the scope of our study is the feasibility on opening the two recommended new vocational post-secondary courses, we would pay attention only to the profiles “Auto mechanical” and “IT & Communication”.

The supply of high vocational school “B. Çela”

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<tbody>
<tr>
<td>1</td>
<td>Auto mechanical</td>
<td>235</td>
<td>255</td>
<td>561</td>
</tr>
<tr>
<td>2</td>
<td>Electro mechanical</td>
<td>252</td>
<td>196</td>
<td>336</td>
</tr>
<tr>
<td>3</td>
<td>Thermal hydraulic</td>
<td>88</td>
<td>82</td>
<td>114</td>
</tr>
<tr>
<td>4</td>
<td>IT &amp; Communication</td>
<td>0</td>
<td>68</td>
<td>123</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>575</td>
<td>601</td>
<td>1134</td>
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For the auto mechanical profile, the supply of high vocational school “B. Çela” is about 80 graduates per year on 561 students in four-year education (scholastic year 2011-12). In the same period, the supply of this school was nearly 75 graduates of ITC, on 123 students of respective four-year education. It is interesting to underline that many students finishing general high studies do not register to University studies; therefore, it is likely that they could attend a one year-course of vocational post-secondary education because they want to learn a profession with good possibilities to find a job. On these premises, we could foresee that approximately 100 youngsters could be interested in the new vocational post-secondary course dedicated to “Vehicle diagnosis by using ITC, while the respective figure for the potential group interested to follow the new vocational post-secondary course dedicated to “Multimedia ITC” could be approximately estimated up to 80 youngsters. According to Labor Market Survey published in the first publication “Toward a VET cross border network in the Adriatic Ionian Macro Region”, there is the opportunity for nearly 80 new jobs requiring mechanic able to use the IT for defect diagnosis, and about 53 new jobs requiring media ITC specialists.

In conclusion, these results certify considerably the desired feasibility for the opening of two new above mentioned courses. Each course may have 15-20 students wishing to attend a one-year course of post-secondary education in “Vehicle diagnosis by using ITC” or “Multimedia ITC”. Therefore, these new courses would be useful because they offer a demand-driven vocational education with high chances to be employed after the end of the vocational education, which proves not only the feasibility but also the sustainability and the utility of these courses in the Durres Region.
4. THE METHODOLOGY AND IMPLEMENTATION APPROACH

The methodology for implementing this project is based on a close cooperation between partners. Working groups are established for every specific objective of the project and they will be composed by representatives of partners involved. Before starting the development of occupational standards for the two qualifications, it is necessary to evaluate the level of qualification of the target group for the training. As mentioned, the target group is composed by technicians who already have a qualification and would like to improve it in a higher standard which meet the requirements of the labour market. At the beginning, the needs assessment process takes in consideration the evaluation of the market based on the experience and feedback from the interested organizations and association. Then, an assessment of qualification level of future participants in the training is conducted in order to identify how to fill best the gap between knowledge and skills missing.

Three working groups are established to achieve this objectives:

- the first works on the first specific objective and focuses on the development of occupational standards and the curricula of the training. Representatives of associations/Business representative, experts of Occupational Standards & Vocational Qualifications Sector, Frame curricula & Teacher Training Standards Sector are involved.

- the second working group works on the second specific objective which means the implementation of the post-secondary training course. Its tasks are the identification criteria for participants and for the trainers for the course. The latter will be a combination of trainers from Public training Centres and Businesses in order to cover both theoretical and practical aspects of the program. This working group covers also the technical aspects of the training organisation, such as location, training materials and equipment. The representatives of business association, who facilitates the organisation of the practical training in businesses, play a crucial role.

- the third working group focuses on the third specific objective which is linked to training evaluation and certification; a close cooperation with NAVETA- Assessment-certification & Accreditation of VET providers Sector is encouraged. At the end of the course, participants will get a certificate in case of a positive evaluation of their final exam/testing.

To increase the sustainability of the project outcomes, all steps of activities will be documented in order to have the possibility to implement such procedures for other occupations in the future.

During the whole life of the project, the outcomes will be distributed to all partners involved to ensure the right flow of information and the effectiveness and efficiency of the project. This role will be played by the QPBE, the Consultant. The project have also a Quality Assurance responsible team, which takes care of the quality of the results during its whole life. A representative of RED and one
of the QPBE will compose such team.
In the implementation of this part of the project some general outcomes are expected, such as:
- a good and documented practice of cooperation between public institutions in VET and social partners in the development and organization of training courses;
- the development of occupational standards of the two selected profiles and that has been documented
- Chamber of Commerce of Durres/ regional enterprises will implement projects with VET stakeholders in the VET area.

It is very clear that a successful realization of the project requires an active partnership of interested actors. It is the duty of the Consultant to combine on time their involvement in all activities and questions. Except for the specialists included into three workgroups, the active participation of some other actors is indispensable. They are:
- Durres Chamber of Commerce and Employer's Associations, that should play an important role in the active involvement of businesses in critical phases of the project such as developing occupational standards and qualification level, training program/curricula and training implementation (practical part of it) and evaluation.
- Public VET schools that will implement the training courses for the Durres Region. They will cover the theoretical part of the training and will cooperate closely with the Chamber of Commerce of Durres through its members (businesses, who will offer the practical part of the training).
5. THE TWO CURRICULA

First and foremost, modern curriculum development in vocational education and training should be based on the relevance of vocational training in the labor market. In a way, curriculum development is a means to these specific ends, never a means in itself. Most importantly, it is clearly an ongoing and open process, which needs to be carried out by all actors concerned. Not only teachers, but also the private sector should be involved using different methods such as DACUM or Focus Groups or other means. Modern learning is permanent learning; modern curriculum development is permanent curriculum development and curriculum revision.

Therefore, the curriculum development of the working group guided by key expert 2 came out of real working processes and real labour situations in occupational fields. In fact, the new profiles shaped out during an intensive preparation time were presented after the Labor Market Survey conclusions. Both two new courses are provided in different modules, in accordance to the existing Albanian Qualification Framework (AQF).

For each module is defined duration, preferred level to accept, results of learning, content and evaluation procedures, guides for module application, and indispensable conditions to module realization.

The following detailed description of curricula for both profiles has the intention to demonstrate an important part of the feasibility for the opening of both of them. They are the premises for the preparation of “Teacher’s Manual” and for training of future teachers’ courses, immediately after the official curricula approval.

a. Curricula for the profile “Vehicle diagnosis by using ITC”, level IV

The respective Guidelines for this profile give detailed descriptions on goals, requirements for attending this profile, the professional competencies of students finishing the course and the future opportunities for the graduates. They contain also some specific orientations and rules on the learning plan and process, evaluation, exams and the certificate to be issued. According to its Guidelines, the main goal of vocational education for this profile is “preparation of students with necessary professional competencies to be employed in businesses directly related to the profession of auto-mechanical in functions of diagnosis and management of car services, mainly for light vehicles”.

The duration of its scholastic year is fixed to 35 weeks, 5 days a week and 6 hours a day, in total 1050 lessons of 45 minutes.

This curriculum contain 11 theory-practice modules:

Module 1 - “Principles of management and economy for a car service”
Module 2 - “Diagnosis in vehicle electrical systems”
Module 3 - “Diagnosis of engine mechanisms and systems”
Module 4 - “Diagnosis of power transmission elements in a vehicle”
Module 5 - “Diagnosis of vehicle damping system”
Module 6 - “Diagnosis of vehicle steering system
Module 7 - “Diagnosis of vehicle steering system”
Module 8 - “Diagnosis of vehicle secondary systems”
Module 9 - “Diagnosis of vehicle cover system.
Module 10 - “Diagnosis of vehicle moving system
Module 11 - “Training bases on work competencies”

b. Curricula for the profile “Multimedia ITC”, level IV

The respective Guidelines for this profile give detailed descriptions on goals, requirements for attending this profile, the professional competencies of the students finishing the course and the future opportunities for the graduates. Except for the respective curriculum, the Guidelines contain some specific orientations and rules on learning plan and process, evaluation, exams and the certificate to be issued.

According to its Guidelines, the main goal of vocational education for this profile is “the development of student personality in accordance with the environment and his preparation to be employed in businesses directly related to work in a studio, television, graphic design, advertising and so on”.

The duration of its scholastic year is fixed to 35 weeks, 5 days a week and 6 hours a day, in total 1050 lessons of 45 minutes.

The respective profile-curriculum contains 14 theory-practice modules:

Module 1  - “Principles of design, commercial design and search engines in Internet”
Module 2  - “Photo Art; Knowledge of basic principles of professional photo”
Module 3  - “Workings, photos, images in Adobe Photoshop program and their conversion ”
Module 4  - “Audio-technical, Adobe audition. Registration and elaboration in computer of sounds, mixture, adding effects”
Module 5  - “Video”
Module 6  - “Video elaboration, cuttings and montage. Adding effects and sounds in a video. Movie maker”
Module 7  - “Adobe illustrator. Construction of a company identity from logo to posters of different measures”
Module 8 - “Adobe in design. Basic know-how on Page Maker, Quark Express and formation of magazines, books and so on”
Module 9  - “Multimedia equipment.
Module 10 - “Practice in the ground”
Module 11 - “Web design, HTML and CSS”
Module 12 - “Adobe Dreamweaver”
Module 13 - “Communication multimedia equipment”
Module 14 - “Business week. Realization of real business projects”

An agreement between Durres Regional Council and Durres University “A. Moisiu” ensures the disposal of lectors for theoretical part in the case of need for both courses.
5.1. The orientation to a one-year-course

Both courses follow the orientation to a one-year-course. This means that both courses are dedicated to youngsters that have decided not to attend the university studies, but to begin a job as a graduated with an “Advanced Degree in Vocational Basics” certificate. According to the law on vocational education, they have the right to attend another one-year-course, with the possibility to gain 120 credits and to possess a “Professional Diploma” in the respective field of their education. Then, this diploma enables both entering the labor market and the transfer of gained credits at the first cycle of university studies for the respective field of vocational education. This new development with post-secondary vocational education would influence many youngsters that consider a post-secondary diploma as more of worth in life than a university degree thanks to its high utility both on the domestic and foreign market.

The recent law on vocational education defines that all the students that have finished their 4 year-studies in high general or vocational schools have the right to attend one of these two new courses. The students should be physically and mentally able to face out the level requirements of this vocational education course. Meantime, even the students with limited capacities have the right to be enrolled, because the school creates suitable conditions and adapts the program for them.

The Guidelines for the course “Diagnosis of vehicles by ITC” define that could also attend this course:
- Individuals who have successfully finished the high vocational studies for the profile “Auto-mechanical”
- Individuals who have successfully finished the 3 year high-vocational studies for the profile “Auto-mechanical” and have also fulfilled the high school diploma
- Individuals who have worked in the car-service sector able to demonstrate capacities corresponding to the sector level IV.

For the course “Multimedia ITC” is particularly important the condition of basic knowledge of English language and of “Microsoft Office” basics, as well.

5.2. The evaluation, the exams and the final certification

Teachers evaluate students’ performance through selected methods and instruments. It is expressed by notes (4–10) for theory/practice modules during the scholastic year and in final exams as well. At the end of the one-year vocational education, level IV, students have to succeed the following exams:

- The vocational-theoretical exam
- The vocational-practical exam, which should be a practical task on:
a. work organization and diagnosis of some defects in vehicles (automotive course);

b. creation of a company identity + construction of a company website + construction of a clip, publicity or a short video (multimedia course).

For a successful conclusion of the course, graduates take a certificate on vocational capacity, recognized in the Albanian territory. Compiled in accordance with the Ministry approved model, this certificate contains:

- Student's data on the school, the end-year of studies and the obtained qualification
- Data on votes for vocational modules and for the two final exams
6. THE PATH TO FOLLOW
FOR THE CURRICULA APPROVAL

I. The application of Durres Regional Council as the Lead partner for the project *DELMVET 283/2009* in the framework of *Adriatic IPA Program* has been strongly supported and encouraged by three Ministries: the Ministry of Education and Science, the Ministry of Integration and the Ministry of Finance. The announcement as a winner, obviously determines the official acceptance of the Albanian Government for the implementation of all expected aspects of the project and even for the opening of two new post-secondary profiles in the high vocational school “B. Çela”. This formal approval serves urgently to the school to begin relative registrations in two new profiles.

II. There exist two legal possibilities to certify the standard of a new vocational program:

a. The way supported by the articles 26 and 42 of the Law n.9741, date 21.5.2007, “For the university education in the Republic of Albania”, amended, which enables the opening of new post-secondary vocational programs in the universities. The University “Aleksander Moisiu” in Durres, supported by the donor “Swisscontact”, followed this way to open a two-year post-secondary vocational program. It is worth to highlight that this way was dictated even from the lack of the relative law in that time (amended only in 2011). It is interesting to note that the practice of the relative agreement predicted the practice just at the school “B.Çela”.

b. The way supported by the articles 4-point *s*, 6-point *b*, 7-point *a*, and 9-points *a* and *b* of the Law n. 10434, date 23.6.2011, “On the vocational education and training in the Republic of Albania”. This Law acknowledges to high vocational schools the right to open new post-secondary vocational programs, at the condition that they should be accredited by the NAVETA.

In these circumstances when:
- there is a sufficient legal base for the opening of both new profiles;
- both new curricula, compiled by experts and discussed with docents of the university UAMD, are available to NAVETA,
- one-year-courses are practice- dominated (70%), which will be delivered in the well- experienced school “B.Çela” for the theoretical part,
- additional financing for the salaries of teachers is not required,
- relative equipment of auto-workshop and of media-laboratory, supported by a grant of IPA Program (donor) are already tendered,

the Consultant suggests that the approval for the opening of two new vocational programs follow the way supported by the existing law on VET. This is the shortest way for the opening of both new profiles within the half of February 2014, the deadline of implementation of the DELMVET project.
7. TECHNICAL APPRAISAL

7.1 Construction appraisal

An agreement between Durres Regional Council and the high vocational school “B. Çela” ensures that both new courses will take place in two separate premises owned by the school. The blueprints for the location and space of classrooms, a proposal for equipment for the two technical workshops as well as a short description of the overall objective of the institution were available to the Consultant. Since the conclusions of LMS favored the opening of both new courses within this school, the Consultant visited its site, spoke with the teachers of technical subjects, took photos and asked questions while being on the venue. The following photos (a science lab, a technical workshop, an IT room) show modern standards and an existing excellent situation demonstrating the complete availability for new classroom. A box with the main findings on the actual conditions of all school premises can be found in the box below:

- Construction of all buildings is completed.
- Classrooms and workshops are equipped with the necessary electrical outlets.
- Each technical workshop has sufficient space for installation of equipment.
- All technical workshops have separate rooms for teachers, storage rooms for material and an integrated separate classroom.
- Separate buildings with special science laboratories, classrooms, student housing (200 places), an administrative building and a library are in place.
- Computer room with 20 PCs and a server is operational.

It seems though, as if some construction issues can still be improved and some suggestions for this could be made. Nevertheless, generally speaking, the building premise and relative space for both new courses is just ready to be completed with new equipment.
7.2 Equipment proposal

The proposed equipment to be purchased for an optimal development of the course “Vehicle diagnosis by using ITC” and also for the course “Multimedia ITC” was prepared by the second working group guided by key expert 2, in collaboration with respective school teachers and a lot of businesses of the relative field. At the end of the consultation, the interested parts made respective equipment proposals for each course. (Annex 2,3).

7.3 Cost estimation

The providing of both new courses is financially supported by the project. This support also includes: teacher’s training, preparation of teacher’s manual, the equipment purchase and the workshop’s rehabilitation. The agreement between the Durres Regional Council and the high vocational school “B. Çela” ensures the payment for the teachers during one scholastic year and relative covering of current costs for the training process. Meantime, the approval of the Ministry for the opening of both new courses increase the sustainability of financial aspect.

In conclusion, Durres Region provides a real product of post-secondary vocational education and training that could call to Government for reforms of VET system. In fact, the continuity of this project for the future could be based on a local VET pilot scheme for Durres Region and a legal regulatory framework. In fact, the study mentioned above states the feasibility and the sustainability of both profiles, proving an efficient model for the future development of Albanian VET system.
Annex 3: Proposal for equipment for” Multimedia ITC course
VET and local labour market needs in the Adriatic Ionian Macro Region
Developing an Efficient Locally Managed Model of Vocational Education and Training
Annex 2: Proposal for equipment for “Vehicle diagnosis by using ITC” course

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Annex 3: Proposal for equipment for “Multimedia ITC course”

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II.

TEACHERS’ TRAINING ON NEW CURRICULA AND TEACHERS’ MANUAL

QPBE, Albania
VET and local labour market needs in the Adriatic Ionian Macro Region
Developing an Efficient locally Managed Model of Vocational Education and Training
1. Introduction

The activities and studies described in this Paper, as an integrated part of the implementation of the project DELMVET, takes into account the conclusions and recommendations related with previous activities and studies. The working-paper should cover various topics including: fundamentals of teaching, using activities in learning, classroom management, topic and lesson planning. These activities succeed the recent certification by NAVEA confirming that both “one-year-course” curricula (“Diagnosis of vehicles by ICT” and “Multimedia ICT”) satisfy the defined standards of the Albanian Qualification Framework. The completion of the installation of the equipment in respective workshop and laboratory open the way to the opening of the two new profiles in the high professional school “B. Çela”.

2. Some important matters of the accreditation

Every public or private service providing vocational education or training should guarantee that its supply satisfies quality standards which enhance capacity, technical skills and employability to its beneficiaries. The accreditation of a VET provider as an entity, of human resources capabilities and of delivered programs is nowadays the chosen mechanism that guarantees all interested parts of VET system performance. The accreditation of human resources, meaning teachers and instructors involved in VET-activities is an important matter and it is one of the theme of this working paper. Since the intent of DELMVET is to strengthen the VET system even in Durres Region through the exchange of experiences and the dissemination of best practices, a comparison of accreditation models in force in Italian Regions and Albania is provided, regarding the certification of VET teacher skills.

The Marche Region has initiated the accreditation process in 2001 with the approval of the Regulation establishing the respective System and dispositions, named DAFORM. Its portal supports the management of the entire accreditation processes in a telematic way. In 2005, it was considered appropriate to provide for the integration of the DAFORM in order to respond to a set of requirements for the maintenance and development of the quality of VET-supply through certification of skills of the operators working for respective institutions already accredited. The certification of skills is an individual right, therefore the certification process is initiated exclusively by the interested individual. The possession of an employment relationship with a VET-provider may not in any way constitute a condition necessary for the commencement of proceedings.

The minimum standards of competence for which a single operator may apply for certification are:

- Identification of needs articulated into general analysis and diagnosis of the needs;
- Planning of vocational courses and single modules
- Management of the didactic process, intending the analysis of individual
needs, facilitation and assessment of learning
- **Development and planning** structured into: defining the strategy, access to finance, promotion of the VE or VT supply
- **Organizational Management** articulated into the units: organizational development, protection of health and safety, planning and coordination
- **Managing information resources** structured into: management of IT resources, traceability of the processes
- **Management of the economic resources** intending economic feasibility and financial reporting
- **Quality system management** articulated into the units: monitoring and evaluation of vocational services, and management of the accreditation of internal quality-standards

All vocational courses attended by individuals are object of skills certification:

- In vocational education and training courses, also not concluded (formal lessons);
- In work situations, even outside the field of education and training (non-formal lessons);
- In personal life experiences and social relationships (informal lessons), but valuable in accordance with the modalities defined by the present Regulation.

The certificated skills are valid until the relevant standards are in force as part of the accreditation system of Marche Region. The subjects in possession of certified skills are registered in a specific List which is normally updated every six months.

Vet providers must use human resource with certified competencies for all teachers delivering more than 240 hours of lessons per year, considering the sum of contracts. Experts who do not have the certifications cannot overcome the maximum of 240 hours.

The laws “On vocational education and training in the Republic of Albania” and “On pre-university education system in the Republic of Albania” define the paths of skills-certification to be followed by the teachers and instructors involved in VET-activities in the country.

According to the cited laws:

✓ **“Teacher”** is the qualified person with pedagogical and professional skills and who engages in VET, mainly dealing with theoretical aspects of the learning process; he must have a second-cycle diploma of university studies in the field of education.

✓ **“Instructor”** is the qualified person with pedagogical and professional skills who engages in VET, mainly dealing with practical aspects of the learning process.

✓ **“Qualification”** is the specification of standards in knowledge, skills and broad competences, drafted to fulfill a determined goal, which validity has been recognized or has been officially recognized for this scope. The
qualification means that knowledge and skills of this individual have value in the labour market and in his further education and training. Qualification is given when a competent organ defines, through an evaluation process of quality and therefore guarantees that the individual has achieved the specified standards. Teachers’ professional-development is planned in accordance with central/local education policies and the institution itself, as well. The relative trainings are delivered by public/private agencies under the “demand-supply” system. There are three qualification categories for teachers, respectively named, qualified, specialist and master.

✓ “Albanian Qualification Framework” (AQF) is a national system for the classification of qualifications according to a criteria set for specific levels of obtained learning that aims at integrating and coordinating national sub-systems of qualifications, and also the improvement of transparency, access, progress and quality of qualifications related to the labour market and civil society.

✓ The “Double Form” is a type of vocational education and training supply that combines education and training in a VET institution with work and practical skills in a commercial society, through an agreement between the participant, VET institution and the commercial society.

✓ “Accreditation of VET courses and programs” is the process of certification of competence and credibility and also acknowledgement of certifications that contain the earned credits.

✓ “Licensing” is the judicial act that gives to the VET provider institution the right to offer the type of activity, according the pre-defined conditions and requirements.

✓ “Acknowledgement of the previous learning” informal and formal is the process, through which previous competences of a person, gained in the informal system and non formal one can be taken in consideration through an evaluation that leads to the issue of a formal qualification certificate.

✓ “Post Secondary Education” represents an educational level offered to pupils that have finished secondary education, but with study programs of non university level.

✓ Each VET institution is responsible for the assessment of candidates according to criteria defined in the National Qualification, because its Director has the right to assume a teacher at full or part-time.

✓ The National Agency for Vocational Education, Training and Qualifications (NAVETAQ) performs most of the institutional duties related to VET, including the development of frame-curricula, occupational lists and standards, assessment and certification of students, accreditation for VET providers, etc. It supports further development of VET in Albania, mainly with regard to institutionalization and quality assurance of the VET system. NAVETAQ deals with many problems currently influencing the VET system, which is still facing problems of collaboration and effective partnership with the private sector.

It is easy to see a similarity and contiguity of Albanian accreditation system to Italian one. However, it is still necessary to link and integrate the AQF implementation process with the EQF developments. It is clearly stated that this exercise should
make clear the relevance of qualifications to employment and learning, meeting the needs of learners, the economy and education and training institution. The AQF is regarded as a tool that will provide mobility between different levels of education, incorporating adult learning in the framework of lifelong learning and stimulating better cooperation with business at various levels of education.

3. Objectives, expected outcomes and their feasibility

The objectives to reach by activities of this project-part were mainly three:
- Two trainings, in Albania and in Italy, for the teachers who will deliver two new post-secondary vocational programs in the High Vocational school “B. Çela”
- The compilation of Teacher’ Manual for two new post-secondary vocational programs, respectively “Vehicle diagnosis by ITC” and “Multimedia ITC”
- The certification of the teachers who will deliver two new post-secondary vocational programs in the High Vocational school “B. Çela”

The expected outcomes related to these objectives should be considered:
- Upgraded of teachers skills in using ITC during the implementation of two new post-secondary vocational programs, “Vehicle diagnosis by ITC” and “Multimedia ITC”;
- Understanding by future teachers of the principles of writing the manual of a post-secondary vocational education;
- Awareness and understanding of most important issues related to the accreditation of VET providers, curricula and teachers;
- Starting the creation of the network with foreign VET providers in Adriatic area;
- Starting the basis for the creation of a vocational post-secondary system in Durres Region.

The feasibility of the outcomes was due to two successful training sessions in Albania and Italy, to the experience exchange with Italian partners of IAL Marche srl and to the commitment of the teachers taking an active part in all activities developed in this project-part. As a final result we have even two teacher’s manuals and a team of 6 teachers very well prepared to deliver the selected two new post-secondary vocational programs.
4. THE TEACHERS’ TRAINING

4.1 The challenges for VET teachers

According to relative laws, the vocational high schools have the competence to organize training and qualification courses aimed at the professional development of their teachers. This right and responsibility should remain a primary strategy for the consolidation of these institutions. In fact, VET teachers training and qualification in Albania faces special problems. On the one hand, many difficulties are created by the complex aim to provide a double qualification, that is a high degree of practical vocational skills as well as academic competence in education. On the other hand, the implementation of the National Qualification Framework succeeded only with a wide involvement of all stakeholders in VET and labor market. Unfortunately, though the role of industry is particularly important for the success of the AQF implementation approach, the domestic industry is still weak or not so much interested in VET system.

As many foreign studies demonstrate, the employability is definitely enhanced if post-secondary VET programs have a mixture of lecturers with an academic and a professional profile. This also means that the teachers with a professional profile should combine education with work in a company to be aware of the latest developments in the profession concerned. In Albania, these opportunities depend in a large extent on the capacity of school directors to make cooperation agreements with companies (by law not compulsory for the latter). The collaboration with industry and business in designing the programs, curricula and learning outcomes is still not strongly targeted in Albania. The key argument to improve is the need to have more highly educated and trained technicians required by industry, who respond to the explicit needs. The collaboration with industry and business would also help educators to adapt their curricula and meet the professional standards. As a matter of fact, they frequently convert every unit of the professional standard into learning modules neglecting all principles of didactics, or fall back on their traditional knowledge based on “academic” curricula. Because of the scarce resources, the donor’s support to teacher performance-improvement has played a significant role in Albania. The Government of Austria through Kulturkontakt supported until 2013 the implementation of the ALBIZ project to develop:

1. school management plans,
2. training of teachers and instructors,
3. development of teaching materials
4. fostering the effective interaction between the schools and the business sector.

The development of professional standards and design of qualifications as well as curriculum are key-implementation activities for the post-secondary
VET. A step-by-step approach could be better for Albania, still with scarce resources. This means to develop professional standards, related curricula and assessment instruments and structures for a small number of selected priority post-secondary VET programs. The project DELMVET supports the opening of only two programs, while others could be opened in the near future. We hope that the respective good trend observed will be the pacemaker for the emerging of post-secondary VET system in Durres Region.

4.2 Report. The teachers’ training in Albania

General Information

Training seminars on methodology of Technical and Vocational Education (TVE) curriculum development, for two 1 year post-secondary courses on TVE curricula group members, are conducted in conformity with the Terms of Reference of IPA-DELMVET project, undertaken by Durres Region Council.

The objectives of the training seminars were:

a. to introduce a new concept of post-secondary VET Curriculum
b. to define a new structural and methodological model of these VET Curriculum, more flexible and oriented to labor market needs
c. to equip VET curriculum group members with the necessary knowledge and skills to undertake the process of curriculum reform
d. to provide upgrading of teachers skills and define next steps for the implementation of the new post-secondary VET Curriculum for two pilot qualifications.

The program of the training seminars was focused on the theoretical and practical aspects, necessary for fulfill the above mentioned objectives. The program of the seminars was flexible in order to respond to the needs of the participants. At the end of each of the seminar, participants gave their opinion on a written form regarding the content, moderation and logistics of the seminars. In general, their opinions were very positive towards the seminars, while the agenda of the second seminar changed in response to their proposals.

A variety of training approaches are used during the training seminars to facilitate the understanding of new concepts and methodologies by the participants and to involve them in the practical activities, putting into practice what was explained before. Visuals and illustrations were broadly used. Written materials (in hard copy or electronic format) referring to the issues of the training seminars were distributed.

Six teachers were trained in the two seminars, 3 teachers of “Car diagnoses”, 2 teachers of “Multimedia” and 1 director of school. Training seminars in Albania were carried out in the seminar and workshops room of High Vocational School,

The activities were strongly supported by Durres Region Council and “B. Cela” school director, who facilitated the work of the consultants providing its offices and facilities for their preparative work. The technical and logistical support of all above mentioned organizations contributed to the success of the training seminars.

The main outcomes of the training seminars were:

✓ Orientation of teachers to a proper implementation of provided curricula for two new post-secondary courses.
✓ Collection of teaching materials especially in very technical area
✓ Teacher’s exercise on how to use ICT in teaching process
✓ Consensus for the VET curriculum designed by working group; possible suggestions and improvements
✓ Definition of a new structural and methodological model of post-secondary VET curriculum
✓ Knowledge and skill basis for the success performance of the curriculum model
✓ A working plan for the development of the new VET Curriculum in some pilot profiles.

All the participants were highly committed to actively participate and contribute to the success of the training seminars and the future curriculum development initiatives. Some of them were not able to fully attend the seminar, but they did the best to fill the gap caused by their absence in some training sessions. A certificate of attendance was delivered to all the participants in the training seminars.

◊ Training Evaluation Report of the first session

Module 1, 2 - CNC Programming, Simulation and Using ICT in teaching of other subjects

◊ Time and Place of the first Training Session

Date: 23 - 25 November 2013; Place: High Vocational School “B. Çela”, in Durres City
Date: 26-27 November 2013; Place: Vocational Institute, Harry Fultz, in Tirana City

The training was conducted as a five days training-session.
Training Session Goals

The aim of the training is to convey the skills to the expert teachers on how to use ICT software to program work piece contours for CNC processes. In the course of training the participants learned the special ICT tools and accessories used in CNC milling. To make them familiar with the present state of CNC, milling video films were shown to illustrate the manufacture of work pieces having complex shapes such as bevel gears, turbine blades, molds etc. Participants received CD with the CNC software for milling and turning which will enable them to independently deepen their programming skills and introduce the module CNC programming and simulation at their school.

Target Group and Number of Participants

The target group was composed by 6 technical teachers of the High Vocational School “Beqir Çela”, appointed to launch two new post-secondary vocational programs dedicated to ICT use in diagnosis of vehicles and multimedia applications.

Training Session Context

Three-day training sessions for module were prepared and conducted for the defined target group. The training would enable the teachers to prepare a plan for the work sequence involved in machining work pieces having more difficult shapes. According to the contours and measurements in the engineering drawing, they will write the CNC program and afterwards simulate the machining process on the PC. With the subject knowledge and the skills acquired from the training, they will be able to include the topic of CNC milling, programming according to ISO and simulation of the machining processes to their field of teaching and develop lesson plans and project work accordingly. This is the first module in a set of 2 modules planned for the VET teacher’s team.

Course methodology

Since practical training in a workshop was not possible due to the absence of CNC machines in the schools, the trainer provided adequate illustrations which allowed the participants to understand the differences in planning of the work steps, the special tools used, the speeds and feeds applied in CNC milling. Furthermore, special programming tools required for milling jobs such as cutter radius compensation, circular interpolation and change of tools were also discussed. Samples of worksheets were included in the training manuals and typical tasks for programming according to the engineering drawing were given to the participants to be solved individually or in small groups. In addition the trainer provided samples of jobs which had been previously manufactured on CNC milling machines so the participants would better understand and
appreciate the benefits of the new technologies. Participants played an active role during the whole training period.

◊ **Competencies developed**

After this training, participants are able to carry out the following activities:
- Add the module CNC milling to their mechanical profile
- Write CNC programs of more difficult shapes and simulate the machining process with the appropriate simulation software
- Develop lesson plans and teach CNC milling in their classes
- Identify project work and typical CNC manufacturing tasks for training, supervise and guide students in the skills of CNC programming and simulation of CNC milling processes.

◊ **Resources**

The training was organized in a multi-purpose training room where educational videos were shown on a smart board; each of the participants had access to a PC where he/she could work with the CNC software and do programming as well as simulation of the machining processes.

◊ **Training Session Evaluation**

The following contents were provided:
- ✓ Specific commands such as cutter radius compensation and circular interpolation used for programming CNC milling operations as per ISO
- ✓ Writing of CNC programs for the manufacture of work pieces by milling according to ISO
- ✓ Simulation of the machining processes for milling operations with the help of the CNC software
- ✓ Elaboration of didactics and methodology in CNC technology

The training session was delivered according to the program. Evaluation questionnaires completed by participants and informal discussion with them indicated a high level of satisfaction with the session's delivery and the achievement of the stated objectives. The course evaluation questionnaires indicated a high level of participant satisfaction.

◊ **Qualitative Evaluation of Data Collected**

The evaluation questionnaire included 14 questions designed to collect data on different aspects of the training session: some were focused on gathering data related to the effectiveness of the training session in achieving its stated
objectives, and others were focused on gathering data related to the quality of the learning and experience provided during the training session. Responses indicate that on average approximately 100% of participants agreed that the stated objectives of the training sessions were achieved and were highly satisfied (i.e. very good and good) with the quality of the learning and experience provided during the training sessions.

From the analysis of the evaluation forms it was obvious that:

- the workshop was conducted professionally and participants were very satisfied with the information, materials and knowledge received and the skills they acquired;
- training materials and exercises were well prepared and adequate for the training objectives;
- presentation and workshop activities in the training were well balanced and adequate for reaching training goals;
- the participants are able to integrate CNC technology to their curriculum, develop lesson plans accordingly and teach their students in programming and simulation of CNC machining processes with the software given to them.

◊ **Conclusions and Recommendations**

The training took place as planned, all contents were covered and the time table was respected. The participants took an active part in all exercises and training activities. Remarks and feedback from the participants revealed that they have widened their subject knowledge and their computer skills and they would be able to add CNC technology milling at school level.

Based on the information gathered in the evaluation forms it can be concluded that this training was successful, and met expectations of participants and project requirements. Participants appeared keen on implementing the areas covered in their institutions.

Some participants mentioned that they should be provided with CNC machine tools at their VET schools so that they could add workshop practice to the curriculum and manufacture CNC-jobs in reality.

Furthermore, an excursion to the University of Tirana VET School “H.Fultz” would be very advisable, as there is a manufacturing section having CNC machine tools which could be seen in operation.

The authors of this report, in close contacts with the participants of the seminars, TVE authorities and DRC representatives, have generally noted as follows:

- Albanian VET Curriculum reform is a big challenge for all the actors operating in the field;
- There is a distinguished will and commitment by all the actors in VET reform to build up post-secondary VET system;
- There are human and financial resources available to fulfill this long term task;
- There is a need to clarify the TVE system structure as a prerequisite of curriculum reform;
• There is a need to review the actual nomenclature of vocational qualifications (profiles) in order to adapt it with the changes in the labor market and the VET system structure;
• The VET Curriculum reform should be considered as part of a broader reform, including teacher training, legislation, school infrastructure improvement etc.

Regarding the task for 2 post-secondary VET Curriculum reform, the authors of this report recommend as follows:

• To implement the curriculum concept, structure and methodology designed by NAVETQ during the training seminars and to improve it during this process of development;
• To clarify some normative data regarding the VET curriculum;
• To define the theory-practice education part of VET curriculum and to develop the respective subject programs, with a focus to “applied subjects” when possible;
• To introduce a gradual modularization of TVE curriculum, starting with the practical part of it, as it is presented in the curriculum model defined during the training seminars. This will ask for development of the modules in the profiles they are missing;
• To create a network of TVE curriculum group members, coordinators and consultants (including stakeholders), as the basis for the actual curriculum initiatives and for the establishment of future curriculum development institutions (agencies);
• To collect information and data on the actual VET curriculum and other curriculum products and experiences (European ones in particular), as potential inputs;
• To collect information and data on the actual and future developments of Durres labor market and professions;
• To start the process in a limited scale (roughly in 2 profiles) in order to better use the actual resources and the outcomes of the two training seminars;
• To provide technical support to the curriculum groups during the teacher Manual development process (that will be as “learning by doing” process for them).

The authors of this report believe that in “B.Cela” VET school there are enough potentials and resources to undertake a successful and long term post-secondary courses, which fit with the 5th level of NQF. The last training activities regarding the curriculum methodology, conducted by the authors of this report, represent one first step in a long and difficult process that should be overcome by Durres VET actors.
4.3 Report - The teachers’ training in Italy

◊ Time and Place of the Training Session

Date: 21st January 2014; Place: COOSS Marche, Ancona
Date: 22nd January 2014; Place: Ial Marche srl, Ancona
Date: 23rd January 2014: Teachers followed different courses according to their competences.

Multimedia: Ial Marche srl, Ancona
Vehicle diagnosis: Repair shop “Frulla”, Senigallia

◊ Training Session Goals

The aim of the training is the comparison of Italian and Albanian experience in order to realise at best the development of the two priority profiles in the Durres Region.

On the first day, Ial Marche and COOSS Marche experts explained the legal framework of VET system in Italy, bearing in mind the continuity between European guidelines and their application in Marche Region. In fact, the close relationship among VET and local territories was underlined in order to increase the positive impact of vocational courses on the employment rate. A particular focus on IFTS vocational education was provided.

The training followed, on the second day, with an in depth presentation on project management and training methodologies. Elements of Project Cycle Management were analysed, stressing the importance of the coherence of every phase for the success of the course. Participants discussed a concrete example of vocational training course planned by Ial Marche, using it as a benchmark for future possibilities in the Albanian context.

Finally, teachers followed two different courses according to their professional experience. “Multimedia and ICT” teachers experienced different tools that could be used in their courses in Albania. In addition, improvements in terms of subject and hours dedicated to a single topic where given through a proactive discussion among all actors involved. “Vehicle diagnosis” group visited the firm “Frulla” in Senigallia, which is both a repair shop and a dealer. This direct experience was very interesting since it gave the opportunity to see the practical use of machineries and software necessary to reach high quality results.

◊ Target Group and Number of Participants

Technical teachers working in “B. Çela” VET school participated to the training. The director of the school attended every session and, on the third day of training, participated to the “Multimedia and ICT” course and then to the “Vehicle diagnosis by using ICT”.
Training Session Context

The three-day training sessions were prepared for a target group composed by technical teachers of VET schools belonging to both new profiles. Since this new courses are about to start, the training enabled teachers to increase their skills in project management taking into consideration the legislative framework of Albanian pilot model. Furthermore, the comparison with the Italian experience highlighted strengths and weaknesses of both VET systems, giving interesting cause of reflection.

Course methodology

Trainers provided interesting slides in order to facilitate the understanding of their intervention. In fact, the training was held in Italian language. They used an active and participatory approach, following participants’ questions to adapt contents to their real necessities. On the third day, different instruments and tools were provided according to the curriculum.

Competencies developed

After this training, participants are able to carry out the following activities:
- Planning and management of a vocational education course
- Budget preparation and cost evaluation
- Programming of different modules and timetables

Resources

The training was organized in classrooms equipped with projector to show power point presentations. Participants received also paper material to make their training easier and incisive. On the third day, teachers were divided in two different groups according to their field of competence. “Multimedia and ICT” profile used also Photoshop and the Adobe package, while “Vehicle diagnosis” group visited “Frulla” repair-shop, receiving paper material on their daily work activities and instruments employed.

Training Session Evaluation

The training session was delivered according to the agenda. Informal discussion with Albanian teachers indicated a general satisfaction for the training provided; in particular, the ICT group appreciated the specific tools used by the trainer and the useful sharing of best practices. The experience in the repair shop “Frulla” was considered an interesting cause for reflection.
Conclusions and Recommendations

The training was delivered as scheduled and all contents were covered. Participants played an active role, asking specific questions that created a positive dialogue with trainers. In fact, trainers used an “ex cathedra” methodology to present theories, but they showed also real cases to activate proactive dialogue with participants. The general feedback is positive since every actor involved in the training session (coordinators, trainers and trainees) was collaborative and open to discussions and confrontation. As far as “Multimedia and ICT” curriculum is concerned, teachers noted the necessity to improve their tools in order to give students the best instruments to learn and practice their future competences. Furthermore, the field-trip to the repair shop “Frulla” was particularly interesting for the “Vehicle diagnosis” profile, as they saw concretely how contents provided in classroom are put into practice in the everyday work.
5. THE TEACHERS’ MANUAL

5.1 The Teachers’ Manual preparation

During the two “Teachers’ Training” sessions was kept in consideration the idea to accumulate rough teaching materials which will serve as the base for teaching manual preparation. Most of the materials are in foreign language as English and Italian, but the working groups have translated some modules and the rest are on the way.

It was planned to work carefully, select and compact all useful teaching materials offered during training courses and print them as a handbook for internal use only. For each of the 2 courses manuals of 120-140 pages were printed and these teaching materials will be handed out to the students as an helpful instrument to remember the developed session. They will also contain the pictures of used machinery with a brief explanation of their function.

The process is not completely finished, but there are disposed materials for the 60% of the courses. All material of manuals along with their respective curricula for two new programs will be object of study, adjustment and completion of collaboration through teacher’s team and the specialists of NAVETAQ.

5.2. The Teachers’ Manual for the program “Vehicle diagnosing by ICT”: an exchange of good practices

The preparation of this manual has benefited of the experience of IAL Marche srl, an Italian private agency operating in the field of VET. Its experience on a similar vocational course is provided below after a brief presentation of the sector involved.

Italy is the first country in Europe in terms of number of vehicle for domestic use, about 37 million in 2012. Even if the world crises has reduced the inclination to buy new vehicles (-48% of car registration in 2013), it remains an important market in terms of employment rate.

In general, the education and training process for the auto-mechanic profile starts from the high school period. Indeed, students interested in vehicles attend a technical institute, where they learn the most relevant skills useful in the world market. So, the approach of a technical school is aimed at “a logical and appropriate use of instruments to achieve a concrete result”.

Every Italian technical Institute lasts five academic years, divided in two years of common subjects followed by a 3-year period where students learn the specific subjects of their profile.

At the end of their learning period, students attending the mechanic profile will be able to:
• contribute to the ordinary maintenance of mechanical and electronic systems;
• install and manage simple industrial plant;
• integrate basic knowledge of electrotechnics, electronics and information technology with physics, chemistry, economics and management inputs.

Students will have also a good knowledge about national law and rules for the occupational safety and environmental conservation. Therefore, the technical profile coming from this education path has good knowledge on “general mechanics”, which needs to be completed with a vocational course aimed to prepare students to specific jobs.

The Decree n.495/1992 of the President of the Republic states the necessity of attendance of vocational education courses for the profile “Technical Responsible for periodical inspection of motor vehicle”. The Marche Region has adopted the Decree through the D.G.R. n. 610/2005 in order to convey to participants the formal license to practice this job.

This course is compulsory and the potential beneficiary are employed or unemployed people in possession of a degree in engineering or high school diploma released by technical institutes. Students who have followed at least 90% of presence on the total amount of 36hours will be allowed to participate to the final exam.

An example of this educational path is shown below, according to Ial Marche srl experience. It is divided in six modules; a brief summary of contents and aims is provided.

**Module 1, “The legal framework of the periodical inspection framework”**
- knowledge of compulsory and discretionary equipment of vehicles and the different documents;
- inspection of vehicles, knowledge of administrative procedures and fines;
- application of legal framework.

**Module 2, “Theory applied to the inspection process”**
- knowledge of instruments and software used for the test;
- acquire mechanical and electronical fundaments.

**Module 3, “Practical training for the use and interpretation of figures and instruments”**
- practical training of elements and instruments used for vehicle test;
- interpretation of data.

**Module 4, “The certification”**
- basic knowledge of ISO certification
- application of modules and principals to management process and customer care
Module 5, “Environment and security in test centers”
- prevention principles and instruments for health preservation and security systems in work environment;
- characteristics and size for the safety of inspection centers

Module 6, “Final Exam”
- assessment of student competences through 12 hours of practical and theoretical exam
- Students who pass the testing will receive the qualification certificate.

The monitoring process starts at the beginning of the course, with an assessment test of participants’ competences and expectations and then during and at the end of the course. A follow-up is preview in order to monitor also the future development of the final profiles. Indeed, it is very important that the education path will be adapted to participants’ needs.

The methodology used is both theoretical and practical. Frontal lessons are used as means to explain theories and stimulate discussion and confrontation among students. Nevertheless, participants take part also to practical lessons in mechanic’s workshop where they can practice what they have learned in classroom, following the methodology “training on the job”.

In conclusion, the Italian experience is different from the Albanian one in terms of planning and contents. Nevertheless, both educational paths are a useful cause for reflection to build a common framework for the future development of VET system in the Adriatic-Ionian Macro Region.

5.3. The Teachers’ Manual for the program “Multimedia by using ICT”: an exchange of good practices

The preparation of this manual has benefited of the experience of IAL Marche srl, an Italian private agency operating in the field of VET. Its experience on a similar vocational course is provided below after a brief presentation of the sector involved.

The economic crisis has a very hard impact on young people unemployment rate. In 2012, 20.5% of youngsters in the age between 18-29 years old were unemployed. Facts underline the urgent need to invert the course, since investments on young people means the future improvement of our society. According to several studies carried on by the Ministry of Labor, the Information Communication Technologies (ICT) sector will employ 10% of young future workers. This human capital is strategic for the future development of our
economy, since ICT has changed the way we communicate; their use is also essential for every economic activity. 

An example of this educational path is shown below, according to Ial Marche srl experience.

The course is divided in basis, cross-cutting and vocational modules. Basis modules (B) provide necessary information according to local legislation; cross-cutting (C) ones focus on competences relevant in several contexts, while vocational modules (V) give students the ability characterizing the specific professional profile. In order to clarify this distinction, the area competence area will be indicated.

The 30% on the 400 total amount of hours will be dedicated to training “on the job” in order to convey a real and concrete knowledge of the world market. Participants are included in real firms where they can “put into practice” the competences acquired in classroom. A “final orientation” module will follow the training; its aim is to analyze students’ feedbacks and facilitate their access in the labor market.

Module 1, “Analysis of competences and potentiality”(C)

- Assessment of participants competences
- Results orientation and vocational guidance
- Module 2, “Methodologies and instruments for Problem Solving” (C)
- Acknowledgment of critical situations,
- Problem-solver methodologies and strategies
- Risk assessment

Module 2, “Methodologies and instruments for Problem Solving” (C)

- Acknowledgment of critical situations,
- Problem-solving methodologies and strategies
- Risk assessment

Module 3, “Planning and management of web oriented application”(P)

- Knowledge of servers, web sites
- Customer care and structural requirements of web products
- Hardware and software components

Module 4, “National law for privacy settings” (T)

- Principals guiding the national legislation
- Copyright registration
- Customer care for e-commerce transition

Module 5, “Databases and Microsoft SQL Server” (P)

- Data management, tables relations
- Knowledge of Microsoft Access and SQL Language
- Query creation

Module 6, “My SQL Server” (P)

- Knowledge of phpMyAdmin e MySQL
- Web development in Microsoft .Net and in PHP
- CMS JOOMLA
Module 7, “Adobe Dreamweaver, HTML5, CSS3” (P)
- Development of complex web pages
- Personalisation of interface
- Organization of contents for a web page
- Knowledge of Adobe Dreamweaver, HTML5 e CSS3

Module 8, “Multimedia and web pages” (P)
- Media Queries and query in Dreamweaver
- Opacity, Border Radius, Shadows
- How to use transformation

Module 9, “JavaScript for the client personalization” (P)
- Internet browsers and their characteristics
- Compatibility of components

Module 10, “Web development in Microsoft. Net” (P)
- Knowledge of Microsoft Visual Studio.Net
- Web oriented personalized application through the Microsoft ASP.NET language

Module 11, “Web development in PHP” (P)
- Realization of web application through PHP language
- Controlled access to web pages

Module 12, “CMS JOOMLA” (P)
- Knowledge of web sites realized with Joomla, configuration and management
- Update and security of the web site

Module 13, “E-commerce with OpenCart and Prestashop” (P)
- Knowledge of principal instruments of web marketing
- Construction of web sites for e-commerce and their potentiality

Module 14, “Health and security in work places” (B)
- Profiles involved in the security of workers
- Risk assessment
- Damage, prevention and protection concepts

Module 15, “Final orientation” (T)
- Evaluation of final competences and their occupability in the local labor market
- Increase students’ awareness of their potentiality
The final examination will consist in a practical test, where students should demonstrate the abilities learned during the course and also in an interview on the main competences of this professional profile. Students who succeed the final exam will receive the specialization certificate.

The methodologies used in this course will be both theoretical and practical. “Action-learning” process and “problem-based learning” are the principal methods used in classrooms, in order to stimulate a dynamic involvement of participants. The organization of workshops, instead, will stimulate the “cooperative learning” to enhance creativity and operative behavior.

In conclusion, the Italian experience is similar to the Albanian one in terms of contents of professional modules. The target group is also quite similar, even if, in the example above, participants should meet also occupational and territorial criteria. Therefore, these two courses create a common vocational profile that met labor market requirements.
6. THE CERTIFICATION OF THE TEACHERS PILOTING THE TWO NEW COURSES

6.1 The collaboration with enterprises

◊ Integration of Practical and Theoretical Activity

The requirement of work based experience is extremely difficult to provide for the majority of VET providers, almost impossible in some cases. This is rightly considered to be an essential part of competence based qualifications, but currently in the engineering curriculum it is just not happening. This is the major challenge to overcome. The small size of most economic units in Albania does not provide an easy access to work experience, but without it the curricula standards are been negated and learners are missing an important component of their development. Local outcome is really not satisfactory and means that there is no “national” outcome for the curriculum. Another study should be undertaken for the work experience outcomes indicated in the curriculum and a series of national alternative assessments should be written to allow Albania to have a recognizable “national” qualification.

◊ Quality Assurance

The requirement for a Common Quality Assurance Policy for the whole future VET system and the introduction of Self-Assessment by individual VET institutions should also take into account the General Education content of the curriculum. The areas where a Common Quality Assurance Policy could operate have already been identified, but it is worth reiterating them here as they form the fundamental basis of the Qualification Framework which is designed to be compatible with similar frameworks in other countries. It is therefore essential that a Quality Assurance Policy clearly identifies the requirements of the Albanian Qualification Framework and that this policy will be published and available to all interested parties and social partners to ensure transparency of the system and to include:

- The rules under which Standards and Qualifications are developed, with a definition of the roles and responsibilities of the developers and of the Committee which approves the new material according to the description of the standard level of the Albanian Qualification Framework;
- Introduction of a policy which defines the requirements that all institutions delivering VET qualifications must meet. (The Self-Assessment policy should ensure that each year substantial progress is made towards meeting the requirements). A “license” to deliver a particular program should be accompanied by criteria where the institution identifies approaches promoting the development of students’ competences.
6.2 The teachers’ certification

◊ **Accreditation of teacher-training sessions**

The two sessions of teachers training were based on national standards provided by NAVETQ. Nevertheless, up to now there is no national institution who accredit training institutions for VET teacher, the Education Authority was questioned to give the permission to establish both post-secondary programs and, at the same time, to recognize this teacher-training, according to other similar projects.

◊ **Quality assurance**

Half of the post-secondary VET institutions carry out internal quality assurance and mostly because they are obliged to do so. Furthermore, in all countries (except one) there is always some kind of external quality assurance, which is an independent agency as defined by the European Association for Quality Assurance in Higher Education. Most of the countries have accreditation but in three instances, the accreditation is ex-ante which means the post-secondary VET programs have to be accredited before being introduced. Also in this case, accreditation is not always carried out by independent agencies.

◊ **Efficiency**

Even if a lot of efforts were made, this is an area where improvements are still possible especially as far as internal quality assurance and independent bodies for external quality assurance and accreditation are concerned. Post-secondary VET is contributing to efficiency in higher education as it may help to reduce drop-out rates of students at other levels of higher education as in most countries there is articulation between secondary VET-courses and post-secondary VET. The titles, degrees, certificates or diplomas awarded are quite different in nature and in terminology. The great variety of terms used fails to enhance the transparency and readability or user friendliness of the awards granted.

◊ **Vocational Practice Instructor**

Vocational Practice Instructors (higher technician) are regarded as the “Master of Practical Competence”. They impart mainly professional but also practical subjects to students in VET institutions or in internships and to apprentices and employees in companies. They prepare the practical lessons of the VET curriculum according to the program, blending together teaching and learning resources. In classrooms, laboratory or workshop they teach students job-related skills, or they follow the syllabus for the relevant subject (e.g., textile crafts, home economics, short-writing and word processing, engineering works
and technical drawing, etc).
Vocational Practice Instructors support students in order to solve practical problems and verify their knowledge; they also prepare the lesson and check their own planning comparing the expected learning achievements with the learning objectives. In addition, they should attend conferences and meetings in the VET institution, and communicate regularly with companies in order to link the VET institution to the labour market.

The teachers that will deliver the selected post-secondary programs in the school “B. Çela” are all professional engineer or computer technician. They also have the third category of teacher-qualification and a work-experience of over twenty years. Their piloting of the two new programs would serve as a helpful experience for all issues related to the teacher certification in Albanian system of vocational post-secondary education.
III.

DISTANCE LEARNING BY DEGREES OF FREEDOM

COOSS Marche, Italy
Developing an Efficient Locally Managed Model of Vocational Education and Training
1. Introduction: a modular approach for a cross-border distance learning teaching model

Designing a distance learning course, entails simultaneous management of multiple factors ranging from the contents to be taught to their implementation, down to the smaller details concerning the technological infrastructure. All this must be set into a virtual space where the main actors can adequately work: learners, teachers, tutors operate in an environment whose background continuously evolves, as it is tightly connected to the advances in Information and Communications Technology (ICT). Relying on a guide model that can aid an Educational Institution in planning and managing a DL course, guaranteeing high quality of the educational experience, equal to that “in class learning”, is no minor task. Of course, this model cannot be totally comprehensive, with respect to all the “variables” that play in distance learning. Above all, this model, does not want to be “academically relevant”, nonetheless, its aim is to offer a modular approach of experimental nature. It is the result of a research-action process, to simplify the shift of contents from an articulated taxonomy to a “digital” system. This, to adequately control the “independent variables” and possibly managing variables, as well as put forward some ideas and practical suggestions in order to take advantage of the potentialities offered by web 2.0 technologies.

This report also wants to be a possible answer to the need of both national and cross-border users. So, within a vast literature on e-learning and by analysing the experiences on the field, this document attempts to identify the most feasible aspects and paths, both in economical and methodological terms.

The structure of the project, repeats some characteristics that are generally common and typical in Distance Learning, but also offers some distinctive features that have been identified by subdividing the coordinates of the model into four main profiles: competencies, tutor, environment and assessment. These, in turn, are influenced by each other, determining three main “degrees of freedoms” (df), which become the methodological reasoning that supports the whole educational project.
2. THE MODEL: AN OVERVIEW

2.1 Designing for Distance Learning by Degrees of Freedom

Designing a distance learning course entails simultaneously managing a multitude of aspects which belong to different dimensions: ranging from the contents of the learning objective, to the technological features; and from the composition of the learners group to the teaching method. The matter is: “When planning such distance learning courses, can we freely vary the factors or are there constraints that narrow down the range of options?”

Psychometrics defines **Degrees of Freedom** (df), as the number of values in a set that are free to vary, leaving the total sum of the population considered, unaltered. To clarify the concept, consider a simple example: let’s imagine a group of 3 people, whose ages we do not know exactly, but we do know the average age is 20 years. If we were to try indicating a hypothetical age for each person, we could only freely do it for two of them, while the age of the third individual would be constrained: there are therefore 2 degrees of freedom (df2). Generally, in statistics the degrees of freedom are equal to the total number of elements of the sample group minus one: df = N-1. Actually, in psychometrics the degrees of freedom can also be smaller (e.g. with ANOVA - **Analysis of Variance**).

In other words, the degrees of freedom can also be considered as the inverse index of the constraints that they express: the higher the number of degrees of freedom, the more freely one can individuate the elements of a set; the lower is the number of degrees of freedom, the more constraints must be taken into account.

Let’s try transpose the concept of degrees of freedom for the purposes of distance learning: it can be stated that the degrees of freedom in distance or blended learning course designing and development, represent the elements of a distance learning model that can freely be managed, or conversely, the number of constraints that need to be taken into account. In this case, the number of degrees of freedom will no longer strictly be the result of statistical calculations, but that of the level of competencies to be achieved through the course.

As introduced in the outline and further deepened in the following paragraphs, this model structures the Competencies Profile in three levels:

1. **technical competencies**, as the set of procedures that translate into precise behaviour algorithms referable to specific branches of learning or professions (for example, a procedure in the field of healthcare or safety regulations);

2. **organizational competencies**, that refer to the ability to manage the organizational and interpersonal dimensions of a job performance (for example organizing meetings, planning work timetables, and so on);

3. **personal competencies**, that refer to personal pre-requisites one must have to correctly use the other two sets of competencies. Often, these competencies are also defined as cross-sectional skills, as for example, communication or problem solving, as they apply to various areas of specialization and professional designations.
Clearly, at **level 1** the technical competencies section that translates into precise procedural algorithms, drastically reduces the number of degrees of freedom: which is to say, for example, that a specific healthcare procedure must be executed following a precise method, in order to guarantee effectiveness and efficiency. Indeed, the constraints in such case are numerous and narrow the range of alternative options. This implies that when we are developing such a distance learning model we will have numerous constraints, as will the other three profiles presented in the initial outline: *Environment Profile*, *Tutor Profile*, *Assessment Profile*.

At **Level 2**, concerning organizational competencies, we deal with a larger number of degrees of freedom: for example, setting up a meeting requires following some basic rules and conditions (we may, for example, have to respect timetable constraints or environmental conditions, etc.), which results in having to plan some constraints. However, it also allows for a greater amount of user customization and tweaking, that is, it has some degrees of freedom concerning the communication methods adopted, the supports one can use, etc. **Level 3**, the *third and last*, concerning personal competencies, offers the greater number of degrees of freedom. This does not mean that specific skills are not necessarily to be acquired; indeed, because of a greater number of degrees of freedom, a substantial repertoire of competencies is demanded. It means however, that we can personalize those competencies to a very high level of customization.

It is clear, then, that going from the first level to the third in the *Competencies Profile* the number of degrees of freedom increases; freedom that can be “spent” in the other three profiles: *Tutor*, *Environment* and *Assessment*. So, merely by way of example, if we place ourselves at the first level of technical competencies, within the *Environment Profile* our options will be substantially bound to a closed and homogenous environment, with equally strictly defined *Tutor* and *Assessment Profiles*. When, on the other hand, we are working at the Personal Competencies level, within the Environment Profile, we will have greater freedom of planning in open and heterogeneous environments.
a. The four profiles
Following is a diagram showing the four profiles of the model.

Fig. 1 - Pyramid diagram of the profiles of the model

The four profiles are represented by triangles (the four faces of a pyramid) and are interconnected. Each triangle is split into three sections (the steps of the pyramid) which indicate the level (df - Degree of Freedom) to which they belong: from the first (at the top) to the third (at the bottom of the pyramid), and occupy an increasingly greater area representing greater degrees of freedom.

2.3. Exit Competencies Profile:
competencies in a European context

At a first reading of the diagram of the model, it can be said that the procedure for practical implementation (key entry) consists of clearly defining and framing the “exit competencies”. In this way, the main focus of the course is the set of competencies, which will be different according to the final professional profile. In the objectives and description of the educational path (educational and/or vocational training), the term competence has been associated to abilities such as planning, promoting, certifying, etc., which belong to the language of economy, production and business rather than that of learning and education. In the eighties, however, such abilities became commonly accepted also in the realm of education and teaching, especially when drawing up a didactic plan.
In the Recommendations of the European Parliament and Council\(^1\), specifically in the section concerning the “European Qualifications Framework (EQF)”, the term “competencies” is used to describe the outcomes of a precise profile, both at a basic education and professional level. The analysis involves distinguishing between:

- **knowledge** - the result of a learning and assimilation process and the understanding of facts, concepts, dates, theories or procedures that are gained through study and experience connected to various contexts, within a discipline or subject area, or a work context;
- **skills** - the ability to use and apply the acquired knowledge in everyday-life, to carry out specific tasks or to resolve problems;
- **competencies** - demonstrated ability to apply knowledge and skills in actual contexts of study, professional development and work; competency includes cognitive and motivational components as well as social and ethical values\(^2\).

![Fig. 2 - Table of interactions](image)

According to these aspects, in its recommendations the Commission itself, underlines that learning is to be interpreted as the “… **combination of knowledge, skills and attitudes appropriate to the context. Key competencies are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment.**”

So basically, it is about abilities that, on the one hand, are tightly connected to carrying out a job (or task), on the other, depend on the personal attitude of the subject within an operating professional context (e.g. motivation, communication skills, problem solving skills, etc.).

Accordingly, the profile of the competencies presented in this Model is clarified.

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3. THE PROFILES

As already represented, the diagram showing the “Distance Learning by Degree of Freedom Model” presents the following four profiles:

1. ASSESSMENT
2. CLASS/LEARNER (environment)
3. TUTOR
4. EXIT COMPETENCIES

These profiles will now be explained and analysed with reference to their functional interactions, since together they build up a process and a continuum route towards the objectives of any kind of learning plan.

3.1 Competencies Profile

This section of the model is devoted to the strategies that enable us to move the single objectives that determine the final profession, within the competencies profile, placing them at a pertinent level (technical, organizational and personal competencies) and consequently assigning to them, diverse levels of relevance.

3.1.1. Technical competencies

During the first phase of the process of learning a profession, the learner faces a large amount of terms and key concepts that have to do with the various disciplines and good practice, which characterize the future profession. According to the exit professional profile, there is a whole range of theoretical-practical knowledge, which forms the basic “technical competencies” required to practice each profession.

Fig. 3 - Competencies profile (technical)
The range of knowledge is continually updated by each professional during the practice of their profession in order to guarantee efficiency. During this stage of distance learning, the students spend a lot of their time to study. This stage coincides with the continual pursuance of knowledge (concepts, theories, methods, etc.), following and taking the advice and didactic indications suggested by the teacher, according to a taxonomical logic which gradually reveals the contents allowing the students to better learn the them.

3.1.2. Organizational competencies

The second level within the learning path is an important stage as it requires a greater commitment on the part of the learner; here, thanks to practice and exercise, “knowledge” becomes, “skills”.

As already emphasized, having a skill means being able to use and practically implement the acquired knowledge, which is different for every profession, and entails specific actions that belong to the “features of each profession”.

For example, in healthcare, “knowledge” is contextualized in the actions and organisational and interpersonal skills implemented by the professionals. This is the stage in which the learner, aided by tutoring and constant referral to models (modelling), is asked to gradually implement new strategies and skills to meet the practical organisational needs of the various contexts (practical application).

Time spent learning decreases in favour of more time dedicated to organizing the practical application of “knowledge”.

![Fig. 4 - Competencies Profile (organizational)](image)

This is a type and level of learning in which learners have to implement their “knowledge” in the various practical-work contexts. Opportunities of cognitive elaboration and continual practice in in-context situations and no longer merely simulations; learners are allowed to acquire the necessary competences to perform a new range of tasks that differ for their intrinsic complexity and nature. At this level, the final outcome in terms of “organizational competencies” is
constructed on a matrix of “know how”; an essential dimension of professional improvement, mostly coordinated and guided by “knowledge”, which entails specific technical competencies undergoing further consolidation.

3.1.3. Personal Competencies

The uniqueness of each individual can be noticed in all everyday activities. Creating a type of teaching that enhances and qualifies potentials, in terms of resources and abilities to be recognized and promoted for each individual, contextually with the training for a task and/or profession, is a strength which is not exactly trivial.

![Competencies profile (personal)](image)

These entail the advantages perceived by the learners, who gradually are represented by the formal and empowering aspects of the educational proposal. A path that fosters significant learning experiences that are able to enhance the potentials of each learner. At this level of the competencies profile, specific aspects that are typically personal and strictly connected to the professional specifications (management of one’s own anxiety and stress, communication skills, problem solving, etc.), come into play.

This is the phase where the Learning Units, aim at providing well-defined criteria of mastery, and enhance alternative methods (workshop drills that are progressively more complex in terms of projects and tasks), that require different types of personal involvement on the part of the learners (resistance to fatigue, self-discipline and emotional control, assertiveness), supported by metacognitive processes that become more empowered in relation to the expected outcomes. This entails individual and/or personality traits that are “in potential” growth, but rather “developing potentials”, which also correspond to the learners’ commitment
to make a final effort in order to achieve “full mastery of the competencies” required by the profession: qualities that contribute and correspond to “knowing how to be”; the crowning achievement of the hard work and great effort performed by each learner.

3.1.4. Exemplifications

Exercising a profession has its grounds on knowledge and therefore, on the knowing how to proceed and apply the “knowledge” that is specific to the various discipline structures. In healthcare professions, for example, there are several profiles that concern personal care and assistance, corresponding to a selection of scientific data and knowledge that belong to medical studies: cardiology, neurology, physiatrists, etc.

“Knowledge” therefore, is the foundation upon which the procedure specifications and good practice that characterise and qualify the exercise of a profession can be build. The level of knowledge is associated with precise “technical competencies” which, as shown in the following diagram, define different levels of relevance and take up different educational moments and areas of the “pyramid”.

![Fig. 6 - Representation of “knowing”, “knowing how”, and “knowing how to be”(K, KH and KHB)](image)

The diagram representing the “arrangement” of the curricular objectives within the pyramid highlights how “knowledge” occupies nearly the entire space allocated to the first level. This obviously does not mean that this is a forced and compulsory procedure. Indeed, at any moment, the learner can be prompted and led to dynamic reasoning on the practical implementation of a technical element (of knowledge) as well as mind-mapping to visualize possible effects and results.
The organizational competencies profile instead, is structured in learning modules that pertain to different activities and contexts, which are generally more practical and dynamic. Simulations, that enable participants to “learn how” (Level 2), entail repeated exercises, which, due to their nature and dynamics, totally involve the learners are the most common methods. These include shared simulations, where extensive references can be made to operating standards, and pro-active interacting and fellow course-participants’ assistance is not excluded. In this case, “knowing how”, mergers with “knowledge” to the extent that the concepts and information are the grounds for operating practices and procedures.

The last level, “Personal competencies”, inevitably entails specific aspects that are unique, personal and connected to each learner, and this is strictly linked to the dimension of “knowing how to be”.

For example, an aspect of the various professions in healthcare that cannot be unfulfilled is the quality of the relationship between the caregiver and the care-recipient. The stream of emotions and feelings experienced by patients can be eased by the careful and assuring presence of the professional, who, though not directly involved in the “clinical status” of the patient, is nevertheless able to impart courage to him or her. Still, we can refer to situations, that are less critical but in any case more frequent, where the decisions and actions of the caregiver determine a change of behaviour on the part of the care recipient; for example, “knowing how” to act with authoritativeness (being assertive) on the part of the caregiver is a key element that determines and influences the behaviour of the patient.

Regarding this level, as it is fully explained through the diagram, the space occupied by time dedicated to learning, training and testing one’s personal competencies does not rule out functional and continuous reference to “knowledge”, or the acquired organizational competencies; on the contrary, they are included though in separate and dedicated spaces.

3.2 Environment profile

After having defined the exit competencies, the characteristics of the potential learners/users as well as the possible configuration of the working environment will be analysed. As each face of the pyramid (model) is subdivided into three sections, the user simply can compare the two adjoining faces (competencies/environment) to identify the corresponding profile.

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Fig. 7 - Comparison between the sections on the faces of the pyramid.
This project considers the entry competencies (homogeneous and non) of the participants in the course and the definition of a working environment (participation and interactions between the participants), as being significant characteristics (when compared to the operational procedure) and focuses on the model itself.

As shown in the diagram, according to the educational activities there are characteristics specific of homogeneous and closed environments or open and heterogeneous environments. It will be necessary to adapt the tools, which are represented by the organised sets of activities proposed to promote and ensure the achievement of the competencies. The various objectives have an increasing taxonomic structure, which modulate and modify the environment (class/learners), according to the specific learning contents.

Let's examine the structure and progression of the levels linked to the types of “environment”.

### 3.2.1 Level 1: closed homogeneous environment

In a hypothetical course type, intended for the field of healthcare, designed to offer one year-long tuition divided into two modules (a theoretical one and a more professional training module with exercises in preparation to training and work experiences), for example, all the participants in the course need to share a basic required education (prerequisites) in order to access the tuition and be able to cope with the new concepts and “knowledge” proposed by the theoretical module.

![Fig. 8 - Environment profile (closed homogeneous)](image)

Each learner will need to individually tackle the contents and “knowledge” proposed by the DL course, centred on the quality control of the contents (independent variable) and on the ways these are conveyed, in order to enhance
individual cognitive processes (intervening variable³). This level therefore, sets up the conditions of a “closed homogenous” environment, as there is no particular need for an interaction between the participants. Often similar professional-training courses do not necessarily require further levels of shared learning, mediated and implemented through forums, group work and research etc.

3.2.2 Level 2: semi-open homogeneous environment

As for the objectives related to the second level of degrees of freedom of the competencies profile, a basic homogeneity of the environment profile is maintained, as in the case of the example of the same class, but with the due open options that differentiate the structure. Going back to the previous example, in the second module of the course, the student needs to learn how to implement knowledge into action (“knowing how”) within organizational contexts. As in real life there is a supervisor (that is, for example, the person in charge of the nursing service), it can be supposable that exercises and activities designed to train the learners (in turn) to support and supervise the class, can be planned and implemented. This can be implemented by designing specific “discussion areas” that need to be mediated. So, there will be Learning Units tasked to implement an interaction “for the sake of learning” as a priority and a “place” through which sharing models and practical examples (modelling) of the various professional tasks. Sharing experiences and knowledge among the participants of the course will become even more important, when mediated and facilitated by tools such as social texting, moderated forums etc.

Fig. 9 - Environment profile (semi-open homogeneous)

Regarding the model of reference (Distance Learning by Degrees of Freedom), it

³ attention, motivation, memory and previous specific pre-requirements
is therefore necessary to respect the characteristics of a homogeneous but semi-open "environment", taking into account new and different operational options. One further observation leads to consider how characteristics described in the example course, belong to the professions that require close cooperation aiming at realizing a “product”.

### 3.2.3 Level 3: open heterogeneous environment

Proceeding in the analysis of the example used as a model, let’s look into the specific parts, which present heterogeneous and more or less open environments. The objectives that fall within this level concern Personal competencies. These competencies are connected to the interaction ability in practicing a profession (reflective empathy, symmetrical analysis, etc.) together with the contextual use of assertiveness.

The **environment** is set and has a dimension which is totally open to different contributions and contexts, in which the learners can examine the various duties and tasks, implement them and verify their correctness, so as to construct and consolidate their own professional personality. Therefore, the interaction of the “open to dialogue group” helps the learners to make “adjustments” on their operational practice, so as to improve their performance at a practical level.

In planning the “class group” at this level, prerequisite assessment is not necessary; indeed, it is the variety of personalities that determines the configuration of the final objective: “know how to be”. Heterogeneity and “openness” of the environment become the paradigms necessary to fulfil the educational experience.

Distance Learning, now requires systematically resorting to web 2.0 tools, such as blogs, the social media, etc., which, together with social bookmarking sites, represent an ideal set of tools from a Lifelong Learning point of view. In this way, an “open environment”, where sharing and discussion enrich, reinforce and support the abilities that have been acquired, is possible and allows to acquire further knowledge thanks to comparison and cooperation among the subjects of the learning experience (symmetrical relationships), where the objective and the purpose move forward towards a dimension of “knowing how to be” beyond merely “knowing how”. All this, in compliance with the theories of social constructivist learning environments, thanks to the affordances offered by online applications (Armstrong & Franklin, 2008).

By collaborating, new paths can be discovered and this could lead to effective

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4 social bookmarking is an online service which enables users to add, annotate, edit and share bookmarks of web documents (wikipedia.org).

5 the higher the affordance, the more automatic and intuitive will be the use of a device or tool.

solutions and “good practice”; indeed, by becoming more active and “co-producers” of knowledge, learners learn strategies to “learn how to learn” (Technology Enhanced Learning\(^7\)), and finally are led to think about the values and strengths of each one’s professional dimension, contextually to the models and experiences offered.

![Diagram of education environments]

**Fig. 10 - Environment profile (open heterogeneous)**

An open heterogeneous environment necessarily sets up various modulations in the management of each single educational step, both in terms of technical implements and the general didactic management of the course.

### 3.3 Tutor profile

Preparing an e-tutor to fully support a Distance Learning course, especially in its most “basic meaning” (not blended), is very demanding, both in terms of an ever evolving technology and of costs (costs in time and money). The main tasks of an e-tutor are to give an answer to the requirements of the users, to provide support and ultimately to contribute to the overall success of the learning experience. Thus, an e-tutor is supposed to have multi-competencies: pedagogical, social, organizational and technical (Berge, 1996\(^8\)); an articulate list of abilities to guarantee such task, in consideration of the variety of situations and professional contexts in which a tutor intervenes.

It is advisable to relieve the tutor of the burden of some tasks, which could be entrusted to someone who has similar tasks within the institution that supplies the service (Rotta M., 2002\(^9\)).

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7 role of the metacognitive and motivational components in Technology Enhanced Learning.
Literature in the last decade has delineated the figure of the e-tutor in relation to the social-organizational context in which he/she is required to operate, in some cases privileging activities above contents, while in others, favouring scaffolding actions or activities to promote and manage complex interactions (for example: open discussions in and among work groups).

The training of an e-tutor or better of an e-moderator, can be feasible by emphasizing on the tutorship tasks which are essential to adequately support a Distance Learning course. To achieve such aim, several practical/operative suggestions have been collected in Chapter 4, pointing out the aspects that most fit the main online (instructor centred, learner centred or learning team centred\(^\text{10}\)) learning models. Less restrictive consideration will then be made on the role of the instructor, facilitator and moderator\(^\text{11}\), within the various “sections”.

An interesting model has been proposed by Salmon\(^\text{12}\) who links the e-moderator’s support and monitoring activity with CMC\(^\text{13}\) (technical support).

![Fig. 11 - Learning model (Salmon G., 2000)](image)

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13 Communication Mediated Computer.
The model shows how the use of technology mediation gradually increases on the part of the tutor, as do the online interactions among the participants and not only: from the simple messaging, to supplying spaces where to carry out discussions and to meet new interlocutors.

![Tutor Profile Diagram]

Fig. 12 - Tutor Profile

Also, in this model, there are distinct roles in the interaction areas. Such roles are affected by the degrees of freedom in the three sections: the Directive tutor, the Facilitator tutor and the Orientation tutor.

3.3.1 The Directive Tutor

The Directive tutor as a learning provider, falls within the first level of degrees of freedom. Such learning providers must mainly engage students orienting them within the online learning experience (supply clarifications on the structure of the course, as well as the contents of the learning units, etc.), deliver the learning products (make them available) and eventually assist the teacher (intercept and filter the flow of demands from the learners in order to relief the teacher of extra non pertinent work).

When learners explore the environment (portal), this will be the first figure they contact to get information, and this entails precise responsibilities in creating and establishing a confident and friendly relationship. The on-demand tutor's tasks entail reception and orientation as well as aiding the learners in their choices and finally motivating them.

Other tasks of the tutoring are connected to the “user-technological environment” and “user-learning products” interactions. This includes facilitating access to all the services offered by the portal (e-mails, chats, calendars, forums, FAQs, bibliography, reports, etc.), as well as properly exploiting the resources used for the Learning Units, which have a high degree of didactic engineering.

Indeed, the following pattern of fundamental elements to support the learning
experience can be identified within the first level of Degrees of Freedom:

- Facilitating a correct access to the “system” and technological tools;
- orienting towards appropriate learning paths based on the individual and professional needs;
- supplying information on contents, study methods, access timetables;
- socially interacting (greetings, feedbacks, motivation messages, etc.);
- supporting and aiding learners with the more complex tools.

3.3.2 Facilitator Tutor

The second level of degrees of freedom, includes technology designed to manage the communication and interactions within the learning group: chats, mediated forums, FAQs, e-mails, etc.

Here, the tutor has a more affective-relational role, which entails active listening and involvement with every member of the group as well as facilitating the socialization and sharing of competencies.

It entails supporting a good level of cooperation in view of the professional organization and exchange processes, through strategies of task contextualizing and “psychological vicinity” (dialogue with the learners), besides promoting and easing the collaborative learning activities planned for the group-class.

In order to support such learning process, at this second level of degrees of freedom, the following actions and technical support have to be included:

- dividing the users in learning groups (such as dedicated forums or social-texting);
- technical support, for learners who need it, to access the virtual environments devoted to collaborative activities;
- didactic mediation carried out by presenting the contents and the tasks to perform, giving indications on the collaborative methodologies to follow, and finally mediate and pep the online activities;
- monitoring motivation and social dynamics of the study groups providing corrective interventions when needed.

3.3.3. The Orientation Tutor

The third level of degrees of freedom includes the set of educational activities which, through the interaction among the group members and with the tutor, help the participants develop their own critical, metacognitive and relational abilities, their self-awareness and a sense of belonging to a professional group.

To reach such a level of openness towards online highly communicative contexts, the learners are prompted to plan social “environments” (such as blogs, forums,
social-groups, etc.) in order to enhance and support the improvement of the personal and professional competencies of the group. Such educational tasks dramatically increase the range of competencies that are necessary and profitable for the learners, to reach the professional and course objectives. Indeed, the following pattern of fundamental elements to support the learning experience can be identified within this third level of Degrees of Freedom:

- supporting social contexts of open communication where people with heterogeneous competencies can acknowledge each other professionally, entering discussions and develop innovation;
- managing the in-group and out-group dynamics, facilitating the creation of new offspring active communities;
- stimulating the development of innovative co-constructed knowledge and shared creative work methods, especially those that have positive professional spin offs;
- implementing strategies for user fidelity (risk of course abandonment).

By examining this chapter, it can be easily noticed how planning and implementing an ad-hoc training for the e-tutor can be one of the most critical and hindering obstacles to overcome. The main causes of such hindrance can be individuated in the level of competencies performed and declared by the tutor in terms of relational dynamics, group dynamics and group management. Management cannot only be limited to respecting netiquette. To this purpose, it could be useful to supplement the training path of such important roles, with extra problem solving exercises, simulations of critical socio-affective situations as well as those of educational, process, and collaborative nature, etc. In a nutshell, situations that set the tutor in a position to experience and experiment challenges and advantages within the psychological dynamics of work groups.

It is a task that could require preliminary work to fine-tune the details of “group leading” activity (control of the leadership, quality of the “guide” incentives and information, assessment of oral answers, etc.), with the aim of guaranteeing the quality and efficiency of the “group management” itself. Such operation could include a collection of tested example situations, in a sort of handbook for future aspiring “tutors”.

### 3.4 Assessment profile

The fourth and last profile pertains to assessment methods applicable to this Distance Learning model. The objective is to individuate the most effective modalities to bring out the acquired knowledge and competencies. By reasoning on this topic in the field of docimology, several important issues emerge:

1. to guarantee reliability of the data collected - how eliminate the influence of transitional variables? Such variables are connected to those that do not
significantly relate to the range of acquired competencies and that alter the results (for example, a bad performance due to tiredness, a non-modulated emotional state, etc.)?

2. the effectiveness of the course – how to separate the competencies already held by the learner, to assess the actual effectiveness of the course? Finally, establishing, especially in cases where poor results involve most of the class group, whether the cause of such failure is due to the method applied, to mis-targeted assessment or to a wrong relational style is a crucial matter. From a pedagogical point of view, assessment of the acquired knowledge, must also be a committed moment of self-assessment of the teaching method;

3. last but not least, how to evaluate the various levels of learning (“knowing”, “knowing how” and “knowing how to be”)? How to let alone the various aspects of the contents and “meta” contents, or to put it as Bateson, the ability to “learning to learn”?

The answer to such issues becomes possible when the Assessment Profile is divided into different levels, according to the degrees of freedom. According to the level of the competencies that are settled, the assessment methods necessarily need to be adapted in order to reliably pick out the learning variable considered: in other words, the assessment strategies adopted will have to include the degrees of freedom corresponding to those of the Competencies Profile we are planning.

Fig. 13 - Assessment profile
In a simple schematic way, therefore, it is possible to outline the following assessment structure:

<table>
<thead>
<tr>
<th>Technical competencies</th>
<th>Structured assessment, that includes predefined items, following decontextualized knowledge and skills taxonomies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational competencies</td>
<td>Flexible assessment, with variable items, following contextualized performance profiles.</td>
</tr>
<tr>
<td>Personal competencies</td>
<td>Metacognitive assessment, in absence of predefined items, following generalized tasks and new situations.</td>
</tr>
</tbody>
</table>

Let’s continue by examining each of these three levels.

3.4.1 Structured assessment

If the Distance Learning course focuses on technical competencies, which is the first level, assessment necessarily needs to present the same level of structuring. In other words, the technical competencies are presented in a precise sequence of concepts and behavioural actions, based on specific procedures or professional algorithms (for example, to carry out a particular healthcare procedure), likewise an articulate assessment structure made of specific cognitive and behavioural items, organisable in check-lists or rating-scales is to conform. Such assessment tools are structured, as they include three characteristics:

- they are articulated in predefined items according to the educational objectives that lie behind the selection of competencies to be conveyed to the learners;
- they assess competencies that are decontextualized in relation to the contingent situation (for example, a specific healthcare procedure must be carried out in a standard, expected manner regardless of disturbance variable of the context);
- finally, they can be led back to ability taxonomies, constructed following a hierarchical order.

This reference to taxonomies is important, as it allows to create a hierarchical order of knowledge, mainly within consecutive Distance Learning modules, in which every step represents the pre-requisite for the next: indeed, in such cases, to arrange a reference taxonomy (for example, one like Bloom’s taxonomy\textsuperscript{14})

\textsuperscript{14} Bloom, B.S. (1983). Tassonomia degli obiettivi educativi. La classificazione delle mete dell’educazione: Area cognitiva, Teramo, Giunti e Lisciani
allows to assess not only each single knowledge acquired by the learners, but also how they are applied in a long term evolutionary path. In this way, it will be possible to identify a set of predefined items to assess the knowledge and competencies acquired by the learner at the conceptual nodes appropriate to the involved taxonomic level.

3.4.2 Flexible assessment

The second level is the one that corresponds to the Organizational competencies profile: group management, meeting chairing, team programming, etc. These are competencies difficult to articulate into rigidly predefined algorithms, as performance necessarily entails a set of intra-individual (cognitive, emotional, behavioural, relational, etc.), inter-individual and contextual variables. The result of this reasoning is the need of a more flexible assessment to examine performance ability in context. This objective can be reached through the use of tools showing the learners’ performances: videos, critical situation reports, solutions to hypothetical scenarios set in open questionnaires, etc. Flexibility of a tool does not however exclude extreme rigor in terms of assessment criteria. In other words, while in structured assessment which answers are to be considered correct or incorrect must be defined; in this case, the criteria through which the fulfilment of a performance can be assessed are established. The performance will be carried out in a personal manner by each learner, but assessment will follow precise criteria:

- **effectiveness**: does the performance lead to a result? (for example, the chairing of a meeting was documented with a final report);
- **efficiency**: is the performance efficient? (the meeting was carried out an allotted time);
- **flexibility**: can the performance be adapted to unexpected context contingencies? (successfully handled with opposing viewpoints in the group);
- **personalizing**: is the meeting personalized according to one’s own style? (the meeting was chaired with a communication style is fully mastered).
3.4.3 Metacognitive assessment

The last level corresponds to personal competencies, which allow the maximum number of degrees of freedom. It is plan how the assessment process must deal with an extremely complex object, which refers to the way the learner acquires and applies wide ranges of personal abilities (communicative, problem solving, stress management, etc.) within a personality structure and a specific identity. To this extent, therefore, assessment will occur at two levels:

- the first, strictly linked to performance, can be carried out by using the tools and criteria outlined in the previous paragraph;
- the second, metacognitive, concerns the level of awareness and personal control the learner shows regarding the developing of personal competencies.

In other words, regarding the latter level, it is important to use all the open and personal tools (personal blogs, social media, etc.) that enable to verify some criteria of metacognitive mastery displayed by the learner:

1. **self-awareness concerning one's own style**: does the learner display awareness of their own communicative style, in stress management, etc.?
2. **self-awareness of one's strengths and weaknesses**: does the learner display awareness regarding their abilities as well as the weaknesses, for example, interpersonal communication, stress management, etc.?
3. **degree of voluntary control**: is the learner aware of the degree of voluntary control he/she exercises on the personal competence under scrutiny (for example, communication) as well as of the limits of such control (for example, influence over other individuals)?
4. **degree of self-improvement**: does the learner recognize further prospects for the improvement of their developing personal competence?

In such a way, it is possible to carry out a “meta” assessment, which allows to assess the degree of consciousness mastery the learner has developed beyond the already formed personal competencies.
4. THE LEVELS

4.1 Level 1 Degrees of Freedom

A situation with minimum degrees of freedom entails the setting of numerous constraints to define the four profiles in the planning of the Distance Learning model. This, in terms of the choice of media and technology system for the online learning project, translates into an increased supervision of the didactic tools and strategies adopted, as well as an appropriate verification of the entry “digital” skills possessed by the participants. As Clark\(^\text{15}\) (2003), stresses, the benefits do not only depend on the technological media, but principally on the didactic strategies used to develop the teaching materials, to identify the reference taxonomy or boost the interest of the learners to their task, etc. Also when it comes to Distance Learning, it is the didactics that mostly influences the quality of the learning process.

![Fig. 15 - Distance Learning by Degrees of Freedom Model (Level 1 profiles)](image)

The technological set up and the tools resulting from the degrees of freedom in exam and the relative profiles, as already shown in the initial diagram, will now be examined in detail: Competencies profile, Environment profile, Tutor profile and Assessment Profile.

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4.1.1. Closed and predefined tools (online, downloading, podcasting)

At Level 1 of Degrees of Freedom, the concept “closed and predefined tools” refers to technological tools and environments adopted to respond to a precise need: control intermediation between the education supplier and the users, through a structured and centrally controlled set up. This does not correspond to a radicalization on a solely conveying model, and therefore excluding the potentialities offered by the web 2.0 tools (hindering innovation processes). This means to identify contexts where there is no need of opening and autonomous communities devoted to group work and peer-to-peer knowledge exchange to reach the ultimate educational objectives of the model. It is indeed claimed that, in certain circumstances, the traditional paradigm, centred on giving instruction, on controlling and selecting the tools and contents to adopt produces better outcomes in Distance Learning. In the configuration of this model such circumstances refer to “technical” exit competencies.

For example, if in a course for “web designers” one of the objective of the course is to “know which models are used to digitally represent a colour”,

- the e-tutor (with a directive function) will inform and supply the learners with the necessary learning objects, give information, verify and give feedback, and so forth;
- the teacher will have to prepare the tools for the assessment and self-assessment as well as other support resources;
• it will be necessary to programme one or more meetings (also on demand) between the teacher and the learner/s;
• it will not be strictly necessary to create specific “environments”\textsuperscript{16} devoted to group work or sharing of information, as the concepts to be learnt are already well defined and do not entail interpretations or nuances.

This refers to a Distance Learning situation (the most frequent) that resembles a traditional type class, whose focus is on the content to be taught and the means of conveyance; where the quality of the presentation of the teaching material is pivotal as is choosing the best media\textsuperscript{17}, verifying the entry pre-requisites (homogeneous environment for the reference competencies of the discipline/area) and designing the appropriate assessment and self-assessment tools. As it is understandable, technical stress must be put on the quality of the Learning Objects and on the “ergonomics” of the interactive relationship between the “supplier of the service and the user”.

**Online tools**

A first analysis of these tools must necessarily concern “the institutional platform” being the main interface between students and supplier of the course. This is the Learning Management System (LMS) that provides the management processes, filing of the learning material and supply of “knowledge”.

In an async mode, the teaching activities are carried out through mere fruition of the contents, in sync mode, through chats, webinars, etc.; where the “virtual communities” and shared activities (shared learning) support the learning process. In this case the sites include their own chat rooms, forums, questionnaires, tests, surveys, etc.

Beyond the strictly pedagogical aspects, one of objectives concerns, as already pointed out, the ergonomics of the services immediately accessible within the system. Facilitated navigation and intuitive access to the tools must be guaranteed, in order to make using the portal stress-less and easy.

Following is a list of some free open source LMSs. No mention is made to software names/brands and businesses (as in this whole report) so it mustn’t influence interest in a product rather that another, but rather promote using free open source software altogether.

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\textsuperscript{16} reference is made to specifically planned environments with the sole objective of teaching and not to offer an online space where students can socialize

\textsuperscript{17} in order to facilitate preferential cognitive multimodalities to access the contents
Traditionally, these were "closed" platforms, though it is to be noted that in recent years, external links from the institutional platforms towards the most popular social networks (for example, Facebook) have increasingly been used to supply information on the teaching units, give homework and assignments. This ongoing trend of opening profiles on the social-media has particularly involved higher education institutions, as the outcome of studies have indicated. Such profiles, contribute to strengthening a sense of belonging and participation in the academic community. These are mainly used for communication/relationship, mostly as top-down broadcasting (little is devoted to actual learning). This is a reductive way to use these media compared to the potentials offered by social networking which, as presented in Chapter 4, can actually support a student centred type of learning. Another factor to be taken into account is that, through social media institutions can widen the range of influence establishing connections with the labour market and maintain a relationship with former-users/alumni. Following is a survey on the social media present in the 95 Italian universities (Lovari & Giglietto 201218) which highlights how approximately half (51.6%) of the institutions considered are represented in at least one social network.

Fig. 17 - The use of social media by the 95 Italian universities (Lovari e Giglietto, 2012)

Within the framework of online tools taken into consideration, there are also the thematic FAQs, online filing (cloud computing), podcasting and sites that support video-streaming (for example, YouTube) and all the sites that offer OER (Open Educational Resources).

FAQ sections (Frequently Asked Questions) are employed to supply a rapid means to get information and answers to recurrent questions, as well as relieve site authors to repeating the same answers to the most frequent questions asked. Since it is in the disciplinary area that such frequent requirement can arise, an adequate solution to support a DL course, could be to create a FAQ section devoted to the various units of learning. Though there are initiatives in this direction, they often lack adequate information and a clear invitation to exploit such tool. Besides, there is little attention on how the information and resources are organised (according to shared taxonomic principles) which makes finding the information difficult.

The previous list also includes cloud computing services. The reason to resort to such online tools is to supply alternative services to those provided by the institutional LMS as well as guarantee a greater freedom of organization and recording of the didactic tools and assignments (for example, home assignments). The first advantage offered by decentralizing resources (localizing them on other providers) and planning new virtual spaces, is to show the user/learner how to take full advantage of these new technologies. In this regard, tutorials that teach users how to create a “product” by simply logging onto the Internet without having to resort to costly software or overload their computer memories with heavy files (like video files, etc.) are available online.

As for podcasting, this method of distributing multimedia files will be further dealt with in later paragraphs.

Sites that support video-streaming are portals, like Youtube (https://www.youtube.com), Vimeo (https://vimeo.com) or Dailymotion (http://www.dailymotion.com), which supply services that require high bandwidth and are otherwise difficult to implement at reasonable costs. It is easier and less expensive to activate a private channel on YouTube, for example, to exploit filing space and “bandwidth”, using simple links from one’s site to one’s own videos (filed on the server).

Consider also opening a “channel” as a “showcase” that is potentially visible by hundreds of millions of users. Another advantage that has been offered by YouTube since June 2007, is the online video editing tool, YouTube Video Editor. Such consideration is of great interest when it comes to OER (Open Educational Resources), as suggested in the 2007 OECD report (Giving Knowledge for Free: The Emergence of Open Educational Resources), which analyses all the educational resources, delivered for free, that allow flexibility and manipulation of the contents. As a matter of fact, it is important to define whether among the “open didactic resources” designed for education, there is already something that can be readily used.

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19 one among others in Italy “Federica” (http://www.federica.unina.it), the OER portal of the University of Naples “Federico II”.
20 official statistics show that more than 1 billion unique users visit YouTube each month (http://www.youtube.com/yt/press/it/statistics.html).
LO (available via download)

Digital Learning Objects (LO) have become increasingly open and flexible to the educational requirements of teachers. The resources can range from entire courses, to modules, video, audio files, e-books, handbooks, hypertexts in general and software that can be used for education. Also, if the emerging paradigms are taken into account, the concept of LO is exceeded by the idea that anything can become an object of learning (everything is learning).

According to DL, it is important to consider the resources and technological supports that represent the elements of the educational setting to support the didactic techniques and methods.

In practical terms, teachers need to choose the methods, plan and follow the translation into digital format of the contents to file into the repository and reassemble everything and make it available to the learner (through links from the platform or dedicated external services). The more an LO is “granular” (reduced into minimal units of content), the greater the possibility to reuse and combine it in various contexts (context-free).

It is easily understandable that adhering to a standard classification and recovery of information in time is an important advantage. This is why most LMS solutions support standard course management formats such as SCORM (Shareable Content Object Reference Model) and Tin Can.

Clearly, the designer of LO can be the IT office of the educational institution, a specialized company or the teachers themselves (if technically competent) exploiting commercial software or even freeware. Following is a list of some free editors available on the net:

<table>
<thead>
<tr>
<th>software to editing (free)</th>
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<tbody>
<tr>
<td>VLC media player</td>
<td>audio converter</td>
<td><a href="http://www.videolan.org/vlc/download-windows.html/">http://www.videolan.org/vlc/download-windows.html/</a></td>
</tr>
<tr>
<td>Audacity</td>
<td>file audio</td>
<td><a href="http://audacity.sourceforge.net/">http://audacity.sourceforge.net/</a></td>
</tr>
<tr>
<td>GarageBand (Mac)</td>
<td>file audio</td>
<td><a href="http://www.apple.com/mac/garageband/">http://www.apple.com/mac/garageband/</a></td>
</tr>
<tr>
<td>AMCap</td>
<td>file video</td>
<td><a href="http://www.noeld.com/programs.asp?cat=video#AMCap">http://www.noeld.com/programs.asp?cat=video#AMCap</a></td>
</tr>
<tr>
<td>Gimp</td>
<td>immagini raster</td>
<td><a href="http://www.gimp.org/">http://www.gimp.org/</a></td>
</tr>
<tr>
<td>OpenOffice - Writer</td>
<td>pdf - rtf - …</td>
<td><a href="http://www.openoffice.org/it/">http://www.openoffice.org/it/</a></td>
</tr>
<tr>
<td>VideoPad Video Editor free</td>
<td>screencast</td>
<td><a href="http://www.nchsoftware.com/">http://www.nchsoftware.com/</a></td>
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<tr>
<td>TotalEdit</td>
<td>web page</td>
<td><a href="http://www.codertools.com/">http://www.codertools.com/</a></td>
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<tr>
<td>KompoZer</td>
<td>web page</td>
<td><a href="http://www.kompozzer.net/download.php/">http://www.kompozzer.net/download.php/</a></td>
</tr>
</tbody>
</table>

21 PLN (Personal Learning Network).
22 http://tincanapi.com/
LO (available via podcasting)

Using *podcasting* to make audio, video and text files available, is still little exploited in the realm of education. One thing should be clear: podcasting does not mean making resources available for download. Indeed, it is a *podcast* only when the contents are organized in a series of more or less structured "episodes" under a common topic (Pian, 2009) that, with a timetable decided by the user, can be downloaded on a *device*.

One of the strengths of podcasting (Personal Option Digital casting) is the data transmission system that allows immediate enjoyment on various mobile devices: from iPods, to *smartphones*, MP3 readers, PDAs and tablets as well as PCs. To have this operation enabled you need a *podcast aggregator* or *podcast feedreader* (a free software), for example iTunes, Google, Yahoo!, Juice, Newsgator etc.

The advantages are for sure, the automatic updating (learning units, homework assignments, etc.), offline use of the material, async communication and exceptional mobility and portability. A data transmission system that can be used as a precious support complement. In order to have the material fully enjoyed, it is advisable to segment the tracks in sections/episodes that last between 3 and 5 minutes. Here is some reference information for some useful tools.

<table>
<thead>
<tr>
<th>Collections podcast</th>
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<tbody>
<tr>
<td>iTunes</td>
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<td><a href="http://www.apple.com/itunes/">http://www.apple.com/itunes/</a></td>
</tr>
<tr>
<td>Podcast.it (italiano)</td>
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<tr>
<td><a href="http://www.podcast.it/">http://www.podcast.it/</a></td>
</tr>
<tr>
<td>AudioCast (italiano)</td>
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<td><a href="http://www.audiocast.it/podlist/">http://www.audiocast.it/podlist/</a></td>
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<tr>
<td>PodAcademy</td>
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<th>Podcast aggregators</th>
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<tr>
<td>Juice</td>
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<td><a href="http://juicereceiver.sourceforge.net/">http://juicereceiver.sourceforge.net/</a></td>
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<td><a href="http://alternativeto.net/software/google-reader/">http://alternativeto.net/software/google-reader/</a></td>
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<th>Sites to create podcasts</th>
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<td>Podomatic</td>
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<td><a href="http://podomatic.com/">http://podomatic.com/</a></td>
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<tr>
<td>Radio Podcast</td>
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<td><a href="http://www.radiopodcast.it/">http://www.radiopodcast.it/</a></td>
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**Webinars and sync activities**

The need to meet, in a *vis-à-vis* manner, for teachers and learners is particularly felt in Distance Learning courses. All services and *software* that enable to organize periodical meetings or appointments are to be considered.

*Online* seminars (*webinars*) allow to organize informative and educational activities.

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24 acronym coined in 2004 by journalist Doc Searls in in his article “DIY Radio with PODcasting”.
25 Personal Digital Assistant.
sessions “upon invitation” in sync connection with the participants. Besides webcasting services, web conference systems make it possible to guarantee interaction between students and “auditor”, supported by tools that enable to manage presentations and discussions.

Also to be considered are the various chat services, which are simpler to implement and use compared to webinars. Suitable especially for 1-to-1 instant messaging, they can support more complex group chats. Moreover, an increasing number of service providers are introducing live voice communication. Here are some sites that supply free (or partially free) services.

<table>
<thead>
<tr>
<th>webinar</th>
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<tr>
<td>Skype</td>
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<td>Google+ Hangout</td>
<td><a href="http://www.google.com/intl/it/+/learnmore/hangouts/">http://www.google.com/intl/it/+/learnmore/hangouts/</a></td>
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<tr>
<td>OnWebinar</td>
<td><a href="http://www.onwebinar.com/">http://www.onwebinar.com/</a></td>
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<tr>
<td>AnyMeeting</td>
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<th>instant messaging</th>
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<td>Yahoo! Messenger</td>
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<tr>
<td>Adium (Mac)</td>
<td><a href="https://www.adium.im/">https://www.adium.im/</a></td>
</tr>
<tr>
<td>Chatme.im</td>
<td><a href="http://chatme.im/">http://chatme.im/</a></td>
</tr>
</tbody>
</table>

*Other social media and LMS platforms

As already stressed, directly using social media that offer these and other useful services, can be a win-win choice as well as less dispersive (one tool rather than many), both from an economical/organizational point of view and in terms of didactics, as it will be outlined in the next chapters.

4.1.2 Assessment

In order to introduce an example describing the various assessment modes that can be implemented using the tools available at every level of Degrees of Freedom, a hypothetical module is examined, “Create a company identity” belonging to a course to form new “marketing professionals”.

Remaining within the technical competencies (topic of this chapter), one of the objectives could concern “graphical planning knowledge”. This module includes knowledge (for example, iconography, typometry, lettering, perception psychology, etc.) that can be verified through structured methods and tools such as questionnaires online, assign the creation of a “product” or a report (strengths and weaknesses of a “supplied sample”), etc.

Currently LMSs are generally already equipped with appropriate software dedicated to creating assessment tools; however, it is also possible to resort to other external and free services, such as:

- ClassMarker - (test online) - http://www.classmarker.com/
- ProProfs Quiz Maker (test online) - http://www.proprofs.com/quiz-school/
If you want to increase the reliability of the assessment tools (by diminishing for example, the probability of guessed correct answers), you can plan and implement new systems taking advantage of the available computer science technologies. An example could be to create a software to replace the “closed multiple-answer questionnaire”, with a system that creates a questionnaire, arranging the questions and answers supplied in a random order. Of course, every new implementation involves initial costs, but if a system is actually versatile and effective, the higher costs are easily amortized.

4.1.3 Entry “digital” competencies

As an introduction, it is noteworthy to remember that in the past few years there was an increasingly progressive attention towards Digital Competence or Digital Literacy on the part of many international organisms, in particular in terms of Lifelong Learning.

While initially such competencies mainly meant acquiring knowledge and computer skills, today they translate into a wide range of activities that cannot prescind from critical and cognitive cross-sectional aspects (Calvani, Fini e Ranieri 2009).

This development has led to the definition of Digital Competence within European framework as:

“Digital Competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet” (European Union, 2006).

After this necessary foreword, it is necessary to examine the digital competencies that in terms of DL course planning, can determine successful or unsuccessful educational objectives. If the key tools to transmitting and benefitting from the contents of the learning experience are specifically “digital” (ICT and multimedia), it will be necessary to set the level of digital competence as a pre-requisite to enrol in the course. Likewise, it will be necessary to prepare tutorials and...

26  this has formally entered the European framework of Key Competencies for Lifelong Learning (2006/962/EC)
informative material aiming to improve deficient abilities. The minimum digital requisite necessary for the objectives of the first level of degrees of freedom, proposed in this particular model, is a basic knowledge of an ITC literacy Media literacy. In literature, however, there are a number of definitions and parallel “interpretations” of the concept … Digital Literacy, Digital Competence, e-Literacy, e-Skills, e-Competence, use of ICT, basic ICT skills, basic computer skills, ICT user skills … these are just to quote those used without distinction within the initiatives and documents of the European Commission. They represent wealth in semantic terms that however, determine the overlapping of the terms in the reference areas, so, which term to use is basically a free choice of the various authors.

ICT literacy refers to the ability to use a computer and technologies at various levels. According to Martin (2006), starting from the nineties up to now, the terms have acquired more holistic and philosophical meanings, better articulating the competencies needed for a proper exploitation of technology for educational purposes. From this point of view DL course users need to at least possess some basic knowledge of computer technology and be able to use minimal applications to access the net and the materials, let alone to realize their assignments (word processor, browser, resource management, etc.). At this level, we should also take into account Media literacy, which are the knowledge, skills and competencies required to use and interpret the media and in particular audio/visual material. Today, obviously Medium literacy is ever more addressed to new forms of medial communication; a concept that intersects with that of Digital literacy.

### 4.2 Level 2 Degrees of Freedom

Level 2 of degrees of freedom corresponds to a profile framework that opens considerably towards models of collaborative learning applied to e-learning. The traditional physical environments devoted to meeting and discussion are replaced by “virtual classrooms” remotely managed by tutors, including both async and sync communication. As this level has dramatically influenced the e-tutor, so the creation of a new learning environment (Environment profile) determines and requires suitable technological support.

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29 Information and Communication Technology.

Once the idea of integrating all the tools into one single system is set aside, it is possible to define an environment and a tutor that focus on coordinating the learners and the wide range of services offered on the web. This is the moment in which **open online** tools rightfully enter the scene of didactic practice.

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**Fig. 18 - Distance Learning by Degrees of Freedom Model (Level 2 profiles)**

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**Fig. 19 - Distance Learning by Degrees of Freedom Model (“digital” tools and competencies - Level 2)**
4.2.1. Open online tools

The framework of technologies considered at this level of degrees of freedom includes all the Computer Mediated Communication tools (CMC) such as forums, social texting, blogs, etc. that allow to create controlled communities on the net that are able to managing peer-to-peer communication and support a mediator. The mediator in this case should be for example, a tutor or teacher that is set in the position to ease and direct the activities as well as control and mediate the various contributions.

It can be stated that, currently, most VLE sites support or incorporate tools that allow bi-directional and symmetrical communication such as social media. As already individuated in the Competencies profile, in the practical implementation of “knowledge”, for each profession specification, the organizational abilities as well as the formal structures become fundamental. This entails all those occasions of propositional interaction, discussions regarding operative models and sharing simulations, which allow the students to identify the best strategies and consolidate their own organizational abilities.

For example, in a training course for professional educators that will work with a variety of care recipients (disabled, addicts, elderly, etc.), it will be necessary to take into consideration a variety of situations. Such educational professionals, together with other professionals, need to take actions that modify unsuitable behaviours (resistant, phobic, aggressive, etc.) exhibited by the care recipients. These are actions and interventions performed following particular techniques (for example, behaviour modification), which all the professionals have to strictly follow, as already discussed and decided within the work group.

Let's attempt to simulate some didactic activities taken from the “Create a company identity” example presented in the previous chapter. The first step will be to identify the objectives regarding organizational competencies. For example:

- “management of a multidisciplinary team”;
- “coordination and analysis of research on social market trends”;
- “creation and organization of a front office”;
- … et al.

For the “management of a multidisciplinary team” the task could regard the coordination of a group of professionals (designers, IT professionals, communication psychologists, budget managers, etc.) who have the objective to transform the company branding (efficiency, competitiveness, etc.), through an image, a logo, a website and so forth.

Surely in this early stage to use video-seminars is advisable as they allow discussion and exchange of opinions among the various professionals. Subsequently, by supplying videos on “group management” techniques and

31 in the meaning of Virtual Learning Environment.
32 for example, represent and sell the image that has been studied.
organizing forums on such techniques (it could be interesting to use Youtube), learners will be able to exchange opinions and identify the strengths and weaknesses displayed in the videos.

Regarding the specific objectives of this learning experience, the e-tutor could use several didactic systems to monitor procedures and coordinate tutorial resources, so as to best involve the participants in cooperative and shared activities. Managing work groups addressed to collaborative learning could therefore constitute, at this level, the qualitative and critical dimension of the DL course.

Using a parallel type strategy, the teacher can invite each learner to work independently on a specific part of the “product” expected. In sequential mode instead, the teacher could require learners to perform actions regarding the “product” in precise turns. Alternatively, for work groups that are more cohesive and have followed a longer course, the teacher can resort to strategies of reciprocity, where each student is required to work on the product in close cooperation and interaction with the other members of the group. It is in this case, fundamental to be able to create a co-operative-participation identification, which contributes to tackle and resolve difficulties and increasing complexity in such context through aimed actions.

Not only, but creating a community of practice can be finalized to maintain relationships among the members of the class group. Therefore, this would enable the progressive spreading and widening of the relationships and exchanges for the purpose of professional improvement.

4.2.2. Assessment

In this, as in the previous and following paragraphs devoted to use online tools for assessment in DL courses, reference is made to the example module “Create a company identity”. In the previous item of analysis, concerning the objective “management of a multidisciplinary team”, one way to assess the performance is to examine the contents of the discussions on forums or social-texting (assessing, for example, the number and context pertinence of the interactions). Remaining within the boundaries of experimental activities performed by the group, another assessment activity could be to supply each learner with a video and the following assignment: “Create (or customize) and fill in the coordination abilities analysis grid, you can identify in the video”. This task implies identifying and analysing the various performances (suitable number of situations, mean time required, respect for turn taking, quality of communication, propositional functions and leadership, etc.). Assessment could include analysing the depth, flexibility and pertinence of the grid submitted.
4.2.3 Entry “digital” competencies

In consideration of what has been said up to now, assessing entry digital competencies must also include Information Literacy, without however, excluding the bulk of competencies indicated in the previous chapter.

Today, Information literacy is defined as the “set of skills needed to find, retrieve, analyse, and use information” (American Library Association, 1989). From a competence that was possessed by an elite group of intellectuals, Information literacy has become a universally recognized need (Ferrari, 2012) to be able to “live, work and learn in this society of information and knowledge” (NCCA, 2004). The points identified by UNESCO in 2008 to define this competence as: recognize one’s own information needs, localize and evaluate the quality of the information; store and retrieve information; effectively and ethically use such information to spread knowledge.

4.3 Level 3 Degrees of Freedom

The maximum level of degrees of freedom entails the possibility to use open systems for the DL courses, that allow a heterogeneous community of subjects (learners, former learners, professionals, teachers), oriented by one or more tutors, to share opinions and to co-operate to reach their personal potentials: for “complete mastery of the competencies”.

![Fig. 20 - Distance Learning by Degrees of Freedom Model (Level 3 profiles)](image)

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According to free exchange of ideas and research, the potentialities of web 2.0 technologies can play an active role. It is now an undeniable choice to complement the tools already possessed with new resources, like social media and applications that enable to create, share and build a net. The objective will be to support space filled with social relationships, technologically supported and enriched for the development of such experiences. These “environments” present great potential of development and experimentation, both from a technological and didactic pedagogical point of view.

As previously discussed team work methods like research and collection can be used or can be designed for simulations, role plays, surveys and representation of professional situations, with the aim to develop and assess the meta-competencies. Not to be forgotten is the fact that the class community may very well survive after the conclusion of the course itself, so the structure of the course will have to support such requirement and opportunity in time.

![Fig. 21 - Distance Learning by Degrees of Freedom Model ("digital" tools and competencies - Level 3)](image)

### 4.3.1 Non-moderated open web tools

All the web 2.0 applications that facilitate communication and shared learning are to be considered in and between the various learning communities. The aim is to “create an extremely interactive and dynamic network, where the users contribute to the added value.”

**Social network**

According to some authors, using social networks is cheap and demands little training, because it represents an extension of the way in which many users

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already exploit the web (Armstrong & Franklin, 2008). Here is a description on how to proceed.

Once the “class” group is defined, there is need to identify which social media better represent the experiences and the interests of the learners. Based on the reports on popularity, a choice can be made among a wide range of social networks:

- Facebook (https://www.facebook.com),
- Twitter (https://twitter.com),
- LinkedIn (https://www.linkedin.com)

Once the objectives of the online system have been identified, it is possible to imagine activities on a “work community” model, and find methods to attract users to the community.

How can high levels of learning and professional exchange among the participants in the learning experience, be guaranteed? First of all, it is necessary to work for enhancing contextualization and application of the supplied contents, designing professionally significant tasks, and stimulating participation in professional communities in order to make learners interact constantly through the net.

Here are some services to aid learning:

- within the chosen social network, create a friendly and reliable context, where the users feel comfortable, both due to the greater liberty and mixed range of differences, and to a wider possibility to compare the assignments with the peers and the larger group;
- promote contexts of co-operative and shared learning every time situations need shaking up in terms of individual learning or exchange of information;
- orient towards the creation of a common language and support the members of the group in their setting-up and opening towards other communities; for example, social-groups of previous training courses or similar groups of professionals;
- orient towards innovative ways of learning that could also be of interest for a wider audience;
- increase and encourage processes of further self-study and training, to protect oneself against the outdating of their acquired competencies, due for example to ever evolving technological advances.

**Other tools**

As already stated in the chapter regarding the Assessment, one way to assess the level of metacognitive mastery acquired by the learners, is to examine their communicative style, how they control stress, their level of self-awareness and their ability to influence others and so on. It is therefore important to test the learners using open and customizable tools.

For example, asking participants to set up their own personal blog could be a good idea, because, besides requiring a set of technical competences, it also requires applying their devising-creative abilities and the cognitive components necessary to create a quality product (new information, strong appeal, expertise, etc.). The structuring and consistency can be analysed and assessed, and enables the learners to self-assess their work.

Today, setting up a personal blog, is no longer a complex activity reserved only to IT experts or specialists. Simply, a student needs to type in "create a blog" on a search engine and they will immediately get a list of thousands of websites that offer ideas, suggestions, tutorials and deal with blogs. Here are just a couple of the hundreds possible: WordPress.com (http://it.wordpress.com/), Blogger (http://www.blogger.com) and LiberoBlog (http://blog.libero.it/).

**4.3.2. Assessment**

To find a system that efficiently and effectively assesses the performance of a single learner (also in terms of meta-cognitive competencies) and of the learning community, is without doubt a complex task, which is little practiced especially in Distance Learning contexts. Such situation is the occasion to experiment new measurable and applicable strategies with contained economic investments.

Going back to the example of the module “Create a company identity”, for the personal competencies, the following goals have been identified:

1. “learn interpersonal communication abilities (verbal and non-verbal)”;
2. “ability to handle the emotional aspects of communication”;
3. “commitment ability (sense of belonging, identification, commitment, etc.)”;
4. … et al.

In order to focus on the second objective, the **“ability to handle the emotional aspects of communication”** could be translated into knowing the value of the iconic messages in the management of the conflicts or in the ability to motivate, etc. Thus, to identify a method of assessment, also in this case, it will be necessary to analyse the learning activities that have been implemented. For example, when the analysis of a sitography is assigned, an excellent assessment system is to require learners to enhance it with their personal contributions (easily assessable).

As for the activities possible on the net (using **social-media**) of formal and informal
groups that share ideas on personal competencies, assessment can be made on an individual’s initiative in terms of participation in the discussion (number of contacts, communicative style, empathic impact, evocation of ethics, affective re-evocation, subliminal stimulus) or the effectiveness of the media used (blog, group, etc.).

4.3.3. Entry “digital” competencies

Assessing whether the ability and level of Internet Literacy of the users is acceptable for the course (effective use of the web\textsuperscript{38}) is necessary. However, there are different opinions; for some authors,\textsuperscript{39} referring to a specific tool, places Internet Literacy within the realm of ICT literacy, for others\textsuperscript{40}, the dimension becomes wider because besides the ability to use devices (referring to all devices that give access to the Internet, ranging from the PCs to tablets, smartphones, consoles, etc.) there is also the ability to communicate via the Internet.


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