



## SKILLS, KEY SKILLS, ATTITUDES AND ASSESSEMENTS

During these last decades, the access to knowledge has considerably improved in such a way as the need to memorize knowledge has become less useful as before. However, the citizen needs to own more tools to use his/her knowledge and face the continuous evolutions of technology and individual practices whether they are of a behavioural, social or professional nature. The result of this evolution is **an increasing tendency to develop skills rather than teach factual knowledge**.

The skill is defined as a capacity to behave in a given situation: **the skill is based on knowledge but is not only constituted of it**. The skill mobilizes knowledge, know-how and experiences but also values and behaviours. In the same time, we evolved from the notion of skill in the strict sense to the notion of **"key skills"** identified as **"all the necessary skills to act in an "efficient, appropriate and responsible way in the human, economical and political field"**.

For a long time, a general consensus has acknowledged that the perfect command of reading, writing and arithmetic is a necessary condition but it is not enough to succeed. The skills in literature and mathematics exceed the simple command of the mother tongue and mathematics as they are considered in curriculum: it is now referred to the ability to understand, use and think on a text such as it is referred to the ability to use in a functional way mathematical knowledge.

At the same time **transversal skills** are defined: these skills, which are not linked to any subjects, can be mobilized in a broad range of fields and situations regardless of subjects. The fleeting side of skill is replaced by the notion of **"transferability and flexibility"** of know-how and **"generic skills"** such as communication, creativity, team work or ability to learn.

Similarly **social skills**, such as the ability to develop and professional and private relations, are defined: these skills have now become **"a way to employ"** people in the companies. Last, the importance given to **information and communication technologies** and to foreign languages is now acknowledged as real **"economical resources"** in a multicultural and multilingual Europe.

In modern societies, training all your life appears as the best suitable solution to meet the need of continuing training. But to reach expected results, this approach implies that for everybody the development of the ability to understand and **control one's own thinking and learning process**: this new skill specifies **"behaviour"**. At school the behaviours are often associated to personal skills: curiosity, motivation, enthusiasm, self respect, initiative, perseverance...; in everyday life behaviour is at the heart of learning of social and professional life and a successful integration.

These changes led to an increasing demand of certification: the level reached by the youngster becomes an indicator of his/her personal success and beyond that success, School success which aim today has become to provide knowledge, know-how and necessary **key skills**.

Par excellence, school is the place where these skills are acquired but today school can not do it alone: **"informal"** training through family, friends, media or associations and political groups is as important as **"formal"** training when it comes to develop cognitive, social, personal skills. These last personal learning depend on everybody's abilities and individual motivations: to develop for everybody these abilities and individual motivation implies a strong interaction between school and outside environments if we do not want to reinforce social handicaps linked to the environment inside which people initially live in.

In the same way, traditional assessments are particularly criticized when the modalities and tests are focused on the memorization of information rather than the application of knowledge through a critical and creative thinking: in that case, factual knowledge are often memorized with the only aim of passing the exam and not of using this knowledge later.

This sort of assessment has long influenced the contents and methods of learning and teaching, which was kept alive by some "**complicity**" between the teacher and the pupil. It is common to observe a great number of pupils who develop these "**consumerist**" attitudes towards exams for which "**cramming**" remains the rule in many exams. One should help to develop new behaviours: the exam must become more and more a **situation** from which the person in charge with the assessment **can measure if the person is likely to develop a skill or not**. These practices must be spread to all the skills and in particular to the assessment of **potential skills** for which the acquisition is not directly measured but the ability (or not) to develop this sort of skill.

The assessment of professional skills follows the same approach: **the ability to carry out an activity does not come down to check the professional gesture but to measure the ability to "anticipate" in a specific professional context, according to the fixed degree of requirements, that can vary according to the level of the diploma.**

The assessment of the skills pose the problem of certification of abilities and individual talents developed in social and professional life. This assessment goes beyond the mere use and accepted acknowledgement of qualifications on paper: today it is the way opened by the validation of the acquired experience.

Skills, their assessment and their validation are now at the heart of the evolution of knowledge and know-how for each individual: they are the heart of the education act and have become the central element of the training all life long and during all economical and human progress in modern countries.

## **THE PROFILE OF THE ADVANCED TECHNICIAN IN PLASTICS INDUSTRIES**

The EuroPlastic Leonardo project is based:

- on the preliminary discussions that took place in Greece and in Italy during meetings organised as part of the Sustainable Professionalization European programme ;
- on suggestions of the preliminary working group set up by the French plastics processing federation (Fédération de la Plasturgie), EuPC (European Plastics Converters) and the French Ministry of Education helped by Belgium, Greece and Italy.
- on the suggestions of the working group Europlastic that is composed of 5 countries - Belgium, France, Greece, Italy and Poland - the French plastic federation, European Plastic Converter and the French ministry of Education

This working group in which took an active part of representatives of companies, worked out the reference frame of the occupations of the advanced technician in plastics industries.

The situations described correspond to the full range of skills that an advanced technician in plastics industries must "eventually" develop within the European plastics companies ("eventually" means a period of 6 to 18 months, which may vary according to the individuals and the types of companies, within which the new graduate will confirm his knowledge through professional situations).

- The advanced technician in plastics industries (production stream) practises his/her activity mainly in the plastics processing industrial firms: in small size firms, he/she co-ordinates and manages the production shop; in medium and large size firms, he/she is in charge and runs a production cell.
- He/she is actively involved in the different stages of production, from organisation to start-up and monitoring.

- He/she has control over the entire production line and its environment: he/she is responsible for "good practices" as regards staff and equipment, in line with the performance indicators resulting from the technical and economic constraints of production.
- He/she ensures optimum management of the production and quality of manufactured products, in compliance with the Product Specification and production standards.
- He/she works towards the continuous improvement of the manufacturing process: he/she is a major player in solving the problems related to production, and his/her contribution is crucial in the search for solutions.
- He/she contributes to maintaining a high level of performance from the production line.
- He/she is involved in the company's business, and is a potential contact for the firm's customers, capable of taking in charge and meeting their demand.
- He/she can make capital suggestions concerning product development and production organisation : choice of materials, conformance quality of products, tool alterations, production process improvements, and compliance with quality, cost and delivery requirements.
- He/she participates in the organisation of production and management of projects. He/she contributes to the prevention of occupational hazards, the protection of environment, and the safety of staff and equipment.
- His/her industrial knowledge depends on scientific and technological knowledge closely associated with practical knowledge.
- His/her skills in communication and human qualities enable him/her to assume the role of a leader and manager capable of driving the operators of his/her team: harness competence, ability to anticipate, management of staff, information sharing, problem-solving approach, adaptation to socio-economic developments.

The position of the advanced technician in the European plastics companies depends on a sound knowledge in plastics, a practical and pragmatic approach of the different stage that help bring production from assembly and tool setting to staff management together with an intellectual and practical mobility. **He/she is an operational technician and manager.**

## SUMMARY

A methodology to build European diplomas with a common frame of reference was set within the frame of a programme Sustainable Professionalization from the development of two professional diplomas in the service sector. The general direction Education and Culture of the European Commission approved the approach implemented in the programme Sustainable Professionalization but thought that the method used for the development of the diplomas was clumsy and demanding in time and resources: a new methodology applied to the diploma of the advanced technician in plastic industries was developed.

This method is based on the association of three concepts PROFESSIONAL ACTIVITIES FRAME OF REFERENCE, SKILLS FRAME OF REFERENCE and ASSESSMENT FRAME OF REFERENCE .

These concepts are close to those implemented in the development of professional diplomas in many European countries but the methodology suggested is different as far as the place and the role given to professional skills in the diploma are concerned.

The professional skills are not established according to academic knowledge but according to knowledge, know-how and behaviours that are necessary to carry out identified professional activities. They play the part of a thread the construction of the diploma concerning the assessment, nature and the range of knowledge and the way this knowledge is taught: established from the activities and tasks described in the professional frame of reference, the detailed skills are then grouped in a limited number of skills to assess that serve as a base to the implementation of certification.

This methodology is condensed in the chart below:

**PROFESSIONAL  
ACTIVITIES FRAME OF  
REFERENCE**

PROFESSIONAL ACTIVITIES: group of tasks carried out by someone who has got an identified activity in a company

**SKILLS FRAME OF  
REFERENCE**

PROFESSIONAL SKILLS: professional activities, concrete measurable or observable defined according to the requirements that are expected by the companies and the level of training.

**ASSESSMENT FRAME  
OF REFERENCE**

- Grouping of skills leading to the heart of professional skills to assess
- → HEART OF THE JOB – UNITS OF CERTIFICATION
- List of associated knowledge → AXIS OF THE DIPLOMA
- Link between knowledge, professional skills that are assessed and certification → EDUCATIONAL DEVELOPMENT

**CERTIFICATION\***

Group of rules that set the modalities of functioning of the training and the award of the diplomas\*

(\*the subsidiary part of the diploma is indicated in grey )

A technical and methodological information to use the web conference to inform the social partners and to build the European diploma frame of reference and educational documents is presented at the same time ([www.europlastic.org](http://www.europlastic.org)).