



## TOWARDS AN INCLUSIVE SKILLS TYPOLOGY

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### **Abstract:**

The article seeks to contribute to the clarification and deeper understanding of certain key skills concepts. In this context, it presents and analyzes both the usefulness and the limitations and difficulties of constructing a modern and comprehensive skills classification and proposes a categorization of skills that are considered critical for the performance of job roles and the effective execution of work tasks. The proposed skill typology broken down into 7 categories, 9 sub-categories and 68 individual knowledge and skills was based on an overview and analysis of 18 important existing skill typologies. The proposed typology covers fundamental, general, professional, social skills, as well as certain work-related attitudes and values. It also includes a reference to digital skills.

**Keywords:** skill policies, skills typology, general / generic skills, social skills, digital skills

### **1. Introduction**

The main aims of the paper is (a) to highlight the need, the usefulness and also the restrictions in constructing a documented and integrated typology of the various types of skills, (b) to contribute to a better understanding of some basic concepts regarding skills, and (c) to submit a specific proposal regarding skills classification for dialogue and further development.

The following text briefly presents both the importance and the difficulties in developing a modern classification of skills which satisfies the need for a common -or at least convergent- understanding and use of the basic notions around skills. Moreover, the dialogue on the basis of a “working taxonomy of skills” is necessary because the initial construction and the adoption -in the operational level- of a typology is not a neutral, technocratic issue that is just awaiting the appropriate “scientific documentation” to

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achieve a reasonable, general consensus. It is a political-scientific challenge around which different interests are interwoven: employees and employers, distinct bodies of economic and social practices (e.g. state, social partners, international organizations), distinct educational subsystems (e.g. public educational system, private education providers), as well as institutions, organizations and bodies that have divergent missions and goals. After all, a classification of skills necessarily incorporates theoretical assumptions and has certain political and operational consequences. As a result, the typology of skills suggested in this paper, on the one hand, has taken into consideration -as it should have- a large part of the existing relevant dialogue, on the other hand, it is put forward as a part of this open dialogue in order to be subjected to the critical examination which is the necessary condition for any further development.

The interest for skills policies has increased exponentially over the last years. All significant international organizations dealing with employment and education (e.g. OECD, The World Bank, UNESCO, ILO) have established corresponding departments and have developed relevant strategies. The European Union and the national governments in Europe have made the policies for narrowing the “skills gap” an overall priority, and additionally they have created institutions and they have developed mechanisms to anticipate the needs of emerging professions and future skills, based on the estimation that the character of employment, the content of professions and the forms of work will change rapidly and fundamentally within the next years. Consequently, the education and training systems are under great pressure, which often leads to institutional reforms, considering that education is not able to transform itself in adapting to the conditions and needs of labour market, as well as the new social, economic and entrepreneurial environment defined by the constant digital transformation and the “fourth industrial revolution”.

## **2. Importance, necessity and usefulness of a skills typology**

Skills, which were considered as a “crossroad” of employment and education policies, have been key point of extensive social dialogue and governmental interventions, within the above-mentioned socio-historic framework. Moreover, the concept of skills, nowadays, has included and covered almost all the different terms and definitions that we used to come across at older codifications (or typologies), such as the one which distinguished knowledge, skills and attitudes or the more widespread, through the European Qualifications Framework (Council of the European Parliament, 2008; Council of the European Union, 2017), distinction between knowledge, skills and competencies.

It is therefore true that a “comprehensive” approach has been adopted, which summarises under the term “*skills*” many different “qualities”, such as theoretical knowledge, practical dexterity, full professional competency, (inter)personal characteristics, social behaviours, views and attitudes, personality traits and so on. Therefore, according to the prevailing view nowadays, the term *skills* is used as a concept-framework, which includes different yet interrelated qualities of the individuals.

Nevertheless, the most common uses of this -relatively new- signification of skills are linked mostly with work and working environments, possibly because genealogically the concept of skills, traditionally defined as the ability someone has to carry out successfully a practical work task, is closer to the sphere of employment and economy and farther from an “academic” conception of things, which often uses the concepts of theoretical and practical knowledge instead of skills.

From the moment skills are transformed into an “umbrella term” which covers many “cognitive qualities” of different kinds, ambiguity and polysemy of the statements on skills necessarily increase, accuracy of the relevant statements decreases (especially about which skills exactly we talk every time) and the need for clarifications and elucidation increases. In other words, while inclusive and abstract conceptualization of skills facilitates political rhetoric and “journalistic” handling of the relevant subjects, at the level of the particular investigation of the skills needs, the use of more detailed typologies is necessary. Additionally, many skills typologies have been presented and suggested but no one has prevailed nor has it been established. This is necessary, however, for anyone seeking to understand the various problems concerning skills (e.g. skill mismatch) (Cedefop, 2018) and to critically assess the directions of policies as well as the measures and initiatives aiming to the effective development of skills. On this basis, our aim is to contribute to the construction of an as far as possible complete -and updated with the recent data of the relevant international research- skills typology, hoping that this endeavour not only contributes to a better understanding of the field but also favours improvements of the methodology and inference of the relevant studies.

As it has been demonstrated, a starting point that motivated the attempt to construct a skills typology, was the awareness that in literature no accepted typology / classification of the various skills has been established; on the contrary, every significant organization (coming either from the field of education and learning theories, or from the field of employment and labour market) proposes, convergent as they may be, yet with many differentiations, skills typologies.

The discussion about a substantiated skills typology and mostly the adoption and application of such a classification could have the following benefits:

- Establish a relatively common contextual / conceptual framework for handling skills,
- clarify certain aspects and dimensions of skills strategies and policies,
- facilitate and qualitatively improve the surveys of skills needs diagnosis, specializing and clarifying their results, reducing abstract generalities, ambiguities and conceptual overlaps,
- assist the providers of vocational / career guidance in their initial personalised skills assessment,
- guide the designers of educational content and material providing them with a common frame of reference,
- contribute to a better drawing up of the analysis of knowledge - skills - competencies in the studies of professional profiles (job descriptions),

- handle the critical issue of the asymmetries between supply and demand for skills (“skills gap”) being aware of the need to combine the integrated entity and indivisible wholeness of the profession with the need for a detailed taxonomy of the skills of different nature and character; a classification which after all is a necessary condition for the further targeted development of skills (reskilling / upskilling).

### 3. Limitations, alternative views and basic questions for the construction of skills typologies

It is beyond any doubt that the landscape of human labour is changing significantly and rapidly. This condition is an initial difficulty for a completely clear typology of the various kinds of skills. Nowadays, the contents of the existing skills typologies and more generally the suggested definitions and descriptions of occupations cannot provide permanent and long-lasting classifications. For example, a few years ago, having some basic digital skills was intended, not taken for granted by the labour market in the majority of jobs. As a result, possessing these skills was often considered a *specialized competency* (e.g. good knowledge and effective use of worksheets applications), whereas now its extensive use has turned them into a *basic and general competency* which is required from almost all employees in several different jobs.

A particular difficulty in constructing credible skills classifications is also the fact that many skills alter their meaning depending on the application framework. For example, the skill of efficient communication in the case of a Salesperson is a basic vocational skill, while in the case of a Machine Tool Operator considered to be a less cardinal one -though it is not negligible- transversal or social skill. Consequently, the placement of a skill in a typology is not always definitive, but it may be determined by specific application circumstances. This justifies and explains Winch’s (2011: 88) claim that “*it is not so easy to say what a skill is as it is to say that a certain activity requires skills*”.

Another limitation in the construction of skills typologies is related to the different meaning that the various concepts and words we use to name skills in each individual linguistic and cultural community may have (Winch, 2011). The contents -as well as notions and meanings- of terms and concepts, may be expressed in a differentiated way in the different languages. In addition, the exact meaning of the concepts varies since the concepts themselves are historically and culturally defined.

Moreover, the inherent and inevitable polysemy of some concepts does not allow an easy and confident classification exclusively into one particular category of skills. According to this reasoning, *initiative* or *responsibility*, for example, can be characterised as individual characteristics, as personal values but also as general or social skills.

Finally, the different categories of skills are not always clearly differentiated and mutually exclusive; on the contrary, in some cases they are overlapping. For example, the distinction between *inter-personal* and *social* skills is not always clear. Therefore, given that the construction of distinct (though homogeneous with each other) “skills families” corresponds to certain distinction criteria of the skills, an individual skill may -based on

a different evaluation criterion- be integrated into a different “family” (category). For example, *effective cooperation with colleagues* (or *team work*) could be characterised a *general* skill (because it is not a specific vocational skill), a *transversal* skill (because it is not a firm-specific skill), a “*soft*” skill (because it is not a “*hard*” technical skill), a *socio-emotional* skill (because it is not considered to be a pure cognitive skill), or finally, a *systemic* skill (because of its importance to the overall operation of enterprises and organizations).

Therefore, constructing categories of skills and including individual skills in them involves -consciously or not- decisions which incorporate theoretical assumptions, logical inferences, and also ideological beliefs regarding the nature of skills.

Skills can be perceived and described from two standpoints, in an equally acceptable way: from the standpoint of the employment structure, i.e. the exercised vocation / profession, taking the form of *particular tasks to be performed* (job profiles and functional analysis of the occupational roles and duties), and from the standpoint of the education-training system (or the skills development and acquisition processes), taking the form of learning objectives, educational contents and expected learning outcomes (Cedefop, 2008).

The need to understand the different types of skills and to construct an accessible and substantiated codification of these translates into a dual task as well as the corresponding questions:

- 1) How shall technical vocational skills be understood and reflected, given that they are highly specialised and quite obviously differentiated among different professions? Is it possible for the multiple specific vocational skills to be reduced to broader concepts and categories? (Eurofound, 2016).
- 2) Which categories would inclusively reflect the most important different types of general / generic (not specific) skills, such as transversal, social, socio-emotional, systemic and so on?

#### **4. The importance of general skills**

The need for a coherent typology of skills that will facilitate the dialogue and the work of researchers but will also contribute to the improvement of the quality of general public dialogue on skills is crucially linked to the clarification of the different categories (types) of *general* skills.

General (not specific professional) skills -which have basically constituted the new and disputed object par excellence of the current discussion on skills- have taken various names: transversal, transferable skills, “soft” skills, future skills, employability skills etc. All these, no matter what they have been called, refer to a set of similar skills, behaviours and attitudes considered important for life beyond school.

In order to address these skills, despite the fact that through the literature references the use of some of the aforementioned terms is inevitable, we have chosen the concept of *general skills*. It is, however, a conventional decision and the use of the concept “general skills” shall be used as equivalent to the ones aforementioned such as basic, transferable, transversal, soft skills and so on. In English literature we come across two

terms: *general* skills, a term referring to skills of *wide, universal application* [the antonym in this case is *partial, individual skills*] and *generic* skills, which refers to *general applications*, in the sense of the *non-specialised* [the antonym here is *specialised skills*]. According to this interpretation, the effective linguistic communication is a *general* skill, whereas knowledge of the English language is a “partial” skill. Similarly, the ability to sell (in general) is a non-specialised, *generic* skill, in contrast to retail sale or sale of insurance products.

## 5. Typologies of knowledge and skills that were taken into consideration

In the framework of literature overview, two kinds of skills typologies were examined:

- 1) General typologies of knowledge and skills, i.e. taxonomies referring to the necessary skills for the modern world in general.
- 2) Specific taxonomies mainly concentrated on the skills necessary for work.

In the first category, the following typologies were examined:

- The World Bank’s approach on the multidimensional nature of skills (World Bank, 2018: 102-104).
- The Partnership for 21st Century Skills (2008) concerning the main learning objects for the 21<sup>st</sup> century.
- The World Economic Forum’s (2016a) approach concerning the “Typology of knowledge, competencies and personal characteristics suggested for the education of the 21<sup>st</sup> century”.
- The OECD’s (Organisation for Economic Co-operation and Development) project “Future of education and skills 2030”, in particular the part “Learning framework 2030 – Learning Compass 2030” (OECD, 2019).
- Key competences for lifelong learning (Council of the European Union, 2018).
- The Bloom’s taxonomy, popular for decades, which, although mainly concerning a typology of teaching objectives, is linked, at least indirectly, to the goals of the proposed classification that follows (Cedefop, 2008: 23-24)

In the second category the following typologies were examined:

- Framework for the non-specialised occupational skills, presented in the OECD’s (2015) study “*Skills for Social Progress: The Power of Social and Emotional Skills*” (see also Guerra et al., 2014).
- Enhancing youth employability: What? Why? and How? Guide to core work skills, (Brewer / International Labour Organization, 2013: 6).
- Transferability of Skills across Economic Sectors: Role and Importance for Employment at European level (European Commission, 2011).
- Building skills for the 21st century (European Commission, 2012).
- Skills Agenda for Europe (updated version) (European Commission, 2016).
- The future of work. Skills and resilience for a world of change (European Political Strategy Centre - European Commission, 2016).
- Skills survey (Cedefop - European Centre for the Development of Vocational Training, 2015).

- Core work-related skills (World Economic Forum, 2016b).
- The future of skills, Pearson, in cooperation with the NESTA foundation (National Endowment for Science, Technology and the Arts) and Oxford Martin School of the University of Oxford (Bakhshi et al, 2017).
- Employability Skills Framework, Perkins Collaborative Resource Network, USA, (Employability Skills Framework, n.d.).
- Common Employability Skills, The National Network of Business and Industry Associations, USA (Common Employability Skills, 2015).
- European Skills, Competences, Qualifications and Occupations – ESCO (European Commission, 2019).

All the aforementioned typologies demonstrate classifications of different types of skills based on general skills groups (categories) of similar nature and characteristics. Therefore, they seek to construct a conceptual framework with logical structure in which every individual skill could find its place in a group of higher level. It could be said that it is a kind of “deductive” process which moves from the general (“broad” and abstract level) towards the partial (“limited” and concrete level), i.e. firstly it creates ranks of skills and then places each individual skill into one of them (e.g. category: *General skills* → sub-category (within the category *General skills*): *Systemic skills* → individual skill (within the category of *Systemic skills*): *Cooperation - Teamwork*).

## 6. Proposal for an inclusive typology of skills considered necessary for work

In view of the study of skills typologies mentioned above, both the general ones and (mostly) those targeted to work, we shall attempt to compile an inclusive proposal for the classification of the various kinds of skills.

The proposal that will be presented and analyzed below, will attempt to take into account:

- (a) the main elements from the most well-documented approaches regarding skills classification, seeking not only to create a collage of different ideas, without internal cohesion, but to condense and include the most structured and timely proposals,
- (b) the traditions of holistic learning approach (such as Illeris, 2007; Jarvis, 2006) which try to incorporate all the processes and dimensions of learning, in particular attempting to include apart from the cognitive, rational and conceptual aspect, both the emotional (incentives, feelings, inclinations) and the social (interaction, learning context) aspect.

According to the aforementioned, the proposed skills typology is as follows:

## 7. Category (type) of skills

### 1. FUNDAMENTAL GENERAL KNOWLEDGE (Broad-based knowledge )

Writing, Reading, Reading comprehension in mother tongue  
Basic Mathematics  
Basic principles of natural sciences (Physics, Chemistry, Biology, etc.)  
Basic knowledge of Technology, Information technologies & Communications  
History  
Geography  
Basic knowledge of Social Sciences and Humanities  
Foreign Language  
Main knowledge related to active citizenship

### 2. GENERAL SKILLS (not occupation-specific)

Cognitive of higher level  
Ability for continuous learning  
Problem solving  
Analysis – Synthesis  
Deductive thinking (reasoning, justification, interpretation)  
Critical thinking  
Multidisciplinary / Cross-thematic approach  
Creativity

#### Socio-emotional

Ability to associate with other people (sociability)  
Communication  
Self-management  
Empathy

#### Systemic

Cooperation, Teamwork  
Autonomous - independent work  
Adaptability  
Responsibility  
Conflict management  
Planning and organisation  
Negotiation  
Decision making  
Coordination of projects  
Leadership

### 3. VOCATIONAL / PROFESSIONAL SKILLS (at sectoral, field or specific issue level)

#### General professional skills

Understanding and compliance of institutional framework and regulations  
Accuracy and speed of calculation  
Concentration and attention  
Memorization of information  
Understanding and applying instructions  
Space orientation  
Time calculation and management  
Customer-orientation (Influence – Sales – Service provision)  
Target achievement orientation  
Main principles and practices of entrepreneurship

#### Physical handling of items (transformation of materials)

Physical strength



Dexterity and precision of physical handling

Use of tools and machines

Data and information management and transformation

Accessing, extracting and processing information

Evaluation, analysis and synthesis of information and data

Use of technological applications

Other professional skills

Facilities and infrastructure supervision and maintenance

Operation and checking of equipment and material

Commitment to the quality of products and services

Financial and economic resources management

Teaching, supporting and guiding other people

#### 4. SPECIFIC PROFESSIONAL SKILLS (occupation-specific)

[They vary by profession]

#### 5. BROADER SOCIAL SKILLS

Intercultural awareness

Environmental concerns and protection

Providing for health and safety at work

Ensuring public health and consumer protection

Respect and protection of personal data

#### 6. CHARACTERISTICS, ATTITUDES & VALUES

Personal characteristics / Attitudes – Behaviours

Reliability

Initiative

Receptiveness – Openness

Self-confidence

Values

Integrity

Understanding and respect of diversity

Work ethics

#### 7. DIGITAL SKILLS (according to Europass)

Data processing

Communication

Content Creation

Security

Problem solving

Comments and clarifications on the proposed skills typology:

- Category 1 includes the “*Fundamental General Knowledge*”. This knowledge is acquired (or at least should be acquired) mostly in the formal education system during childhood, adolescence and the first phase of adulthood. They are not directly related to any specific vocational / professional context; however they serve as the background of any further learning or personal development and smooth transition into social life, including employment. As a result, they are the basis on which all the other groups of skills are constructed. In addition, in many cases, they define the extent and the pace of growth of the more specialised skills. Acquiring these skills,

even though it establishes everyone's knowledge base, does not always assure complete and durable knowledge for all subjects, and consequently there is often a need for repetition or even more often for renewal and expansion of these broad knowledge bases, insofar as changes in scientific fields have occurred or a new set of skills has been added to the body of existing knowledge (e.g. new digital skills)

- Category 2, "*General (not occupation-specific) skills*", refers to those skills which have been and still are the object of a more extended and intense public dialogue nowadays. They are characterised by major discrepancies between the various skill classifications, which is why they constitute the most "disputable" part of every skills typology. Nevertheless, they are exactly the skills which seem to emerge as one of the most important factors of the contemporary labour markets, especially in the sectors of commerce, tourism and other personal services. These skills, despite the observed increasing polarisation of many national labour markets into relatively least-populated professions of high skills and populous professions of low skills, are necessary for all professions and job positions. This group is broken down into subcategories, i.e. into different types of general skills according to the nature and meaning of every skill. This division into "subsections" (Cognitive skills of high level, socio-emotional, systemic) is indicative in the sense that the various existing skills typologies contradict each other, and specific skills are classified into different subcategories depending on the overall structure of every taxonomy. This group of skills includes a number of complex competencies, which combine theoretical knowledge acquired in the formal education context and practical skills acquired and developed from professional and social experience, throughout the full life course.
- Specific professional skills are obviously different for any profession and they are difficult to describe with common terms. In the case, though, that the needs analysis of vocational / professional skills does not concern an individual profession or job position but a wider section of similar vocations (e.g. Construction vocational specialties) or an economy sector (such as industry or agriculture) or a transversal interbranch skills set (e.g. energy saving) then professional skills should be reduced to categories i.e. as categories of tasks, activities or functions, according to the content and the methods of execution. This is exactly what is attempted with category 3 "*Professional Skills*" (at the level of sector, branch, and specific issue).
- However, in the case of investigating the skills needs at the level of *individual vocation / profession*, it will also be required to record the specific per profession technical skills in a separate section with the title "*Specific Professional Skills*" (category 4). In the category of professional skills (at sectoral, field, specific issue level) the possession of certain physical characteristics (such as physical strength) are integrated, which are possibly required by some tasks, although these could not be considered as *skills* due to their "inherent" nature (while skills are considered to be *acquired qualities*, like every learning object). Many individual skills of this category concern complex abilities regarding to the practical implementation of projects, for which either knowledge and emotional background already exist and are fertilised in work, or they are acquired ab initio during work / professional experience.

- With regard to “*Broader social skills*” (Category 5), the following should be noted: The field of personal and social life is not distinguished from that of work. It never was, but especially nowadays that the rapid expansion of media communication and information has established technologies and applications of constant interaction (Internet, “smart” devices, social media etc.) experiences and knowledge (or more often ignorance or partial knowledge and mis-knowledge) accumulated during everyday life, formulates concepts, ways of thinking and behaviours, in other words, it constructs and reconstructs our personal identity, which consequently affects every aspect and facet of our presence (relationships with other people, attitudes towards social phenomena, beliefs and practices regarding the natural environment and so on) -and, of course, work. From this standpoint, the knowledge, skills and attitudes for which previously we possibly thought that did not directly influence our professional / work life and behaviour, and are able to exist irrespective of work roles, now often have great importance and affect the processes and results of work in many ways. In this context, it is obvious today that exactly as the fundamental components of human social life e.g. providing for personal health is directly related to the (ability to) work, thus, the views of a person regarding the protection of the environment or the concerns about the protection of personal data influence his/her professional behaviour in dozens of different career profiles. Insofar as the importance of general skills -the name “life skills” used for those is constantly gaining ground- the same applies for the need existing in the modern world for “broader social skills”, such as intercultural awareness, addressing xenophobia, combating discrimination, facilitating social integration, improving the competence of searching and evaluating information or the competence of recognising fake news, contributing to the reduction of social, racial and gender inequalities and so on.
- With regard to “*Characteristics, attitudes and values*” (category 6) it is proposed that they be divided into two subcategories (a) Characteristics related to behaviours in the context of work and (b) values considered necessary and desirable in modern professional / working environments. In the framework of this distinction, a relatively small number of basic characteristics and values has been selected and is highlighted.
- With regard to “*Digital skills*” (category 7) it has been preferred to list them in a separate section, mainly because this practice facilitated the direct and aggregate reference to this increasingly important type of skills. Furthermore, there are now two models for the recording and analysing of digital skills: the Europass model (Digital Competence) (European Union, 2015) and the more detailed and more recent model of the European Commission DigComp 2.1 (The Digital Competence Framework for Citizens) (Carretero et al., 2017). The first was preferred and is recommended as the simpler and more appropriate, since it is the case of a typology concerning all skills and not the digital ones in particular. However, according to the Europass model, the distinct fields of digital skills are: Information processing, communication, content creation, safety and problem solving, and the hierarchical levels of skills are: basic, independent and proficient user.

- With regard to *entrepreneurial* skills, which in some typologies are mentioned as a separate category, it should be pointed out that according to the Entrepreneurship Competence Framework which has been published with the support of the European Commission (see Bacigalupo et al., 2016), a great deal of the competencies and knowledge necessary for effective entrepreneurship are already included in various parts of the proposed skills typology (such as creativity, self-confidence, financial literacy, influence and motivation of other people, initiative, resources organising and management, coordination of projects, teamwork etc.). For this reason, a separate section for entrepreneurial skills was considered unnecessary, and instead only a reference was made to the knowledge of the basic “principles and practices of entrepreneurship” as a general professional skill.
- Except for the “Specific Professional Skills” (category 4) all the other categories of the proposed typology include skills, characteristics or competencies which can be considered *transversal* and *transferable* (meaning that there is the possibility of their application in various working environments). Nevertheless, the specific weight and importance of every skill may differ from profession to profession or among different professional roles and positions in the work hierarchy.

## 7. Conclusion

The presentation aimed to formulate a proposal for the taxonomy of skills in order to contribute to the specialisation and clarification of the different kinds of qualities, characteristics and competencies of human resources. The usefulness of classifying all skills into distinct sections (categories and sub-categories) with skills similar to each other (homogenous skills) derives not so much from the need to understand the specific vocational / professional skills, which – in any case – differ per profession, but from the confusion created due to the vagueness surrounding the so-called *general* or *transversal*, “soft”, *socio-emotional* skills or *employability* skills.

In modern labour markets, which after all include an increased number of professions as well as employees in professions of the services sector, these skills are considered to play a crucial role in ensuring the quality and efficiency of professional work. It is also considered that the workforce’s general skills as well as new skills that emerge due to technological evolution and digital transformation contribute to an increase in work productivity.

Moreover, it is common ground that the necessary changes in the mixture of skills needed for the currently changing labour contents have not adequately been adopted and assimilated by the education systems. Additionally, many of these general and new skills cannot be easily developed and activated through the conventional forms of formal education. On the contrary, it is believed that they are facilitated by other learning forms and environments, such as work-based learning or a combination of school and in-plant training program (apprenticeship).

The preceding report pointed out both the usefulness and the difficulties in the construction -and much more in the consensual and effective adoption- of a detailed skills

typology, differentiation criteria among skills and critical questions for constructing any skills classification were identified. Then, after eighteen cases of important existing skills taxonomies were examined, a new typology was compiled and proposed, taking into consideration the main current characteristics, data and trends.

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