Towards a structured and consistent terminology on transversal skills and competences

2nd report to ESCO Member States Working Group and EQF Advisory Group on a terminology for transversal skills and competences (TSCs)

September 2020

John Hart, Martin Noack, Claudia Plaimauer (External experts) and Jens Bjørnåvold (Cedefop)

DRAFT

Content

Executive summary 5

1. The mandate and deliverables of the Expert Group 9

2. Defining the nature and scope of transversal skills and competences (TSCs) 11

2.1 The point of departure – ESCO version 1.0 11

2.2 The role of "knowledge" 12

2.3 The relationship between "skills" and "competence" or "competences" 12

2.4 Transversal skills and competences (TSCs) - underpinned by learning 13

2.5 Transversal skills and competences (TSCs) as related to 'transferable', 'soft', non-cognitive' and 'socio-emotional' skills and competences 14

Box 1. 'Soft Skills' – a terminological challenge 15

2.6 Transversal skills and competences (TSCs) and their relation to "basic", "key" and "core" skills and competences 16

2.6.1 Basic skills and competences 16

2.6.2 Key and core skills and competences () 16

Box 2. The eight EU Key competences 17

2.7 Preliminary conclusions regarding the nature and the scoping of TSCs 18

Box 3. Definition of transversal skills and competences (TSCs) 19

3. Identifying and structuring transversal skills and competences (TSCs) 20

3.1 Main sources for identifying Categories of TSCs 20

3.2 General principles for structuring transversal skills and competences (TSCs) 20

3.3 Defining Categories of transversal skills and competences (TSCs) 22

3.3.1 Language skills and competences 22

3.3.2 Thinking Skills and Competences 22

3.3.3 Self-management Skills and Competences 22

3.3.4 Social and Communication Skills and Competences 22

3.3.5 Life Skills and Competences: 23

3.3.6 Physical and manual skills and competences 23

3.4 Defining clusters of transversal skills and competences (TSCs) 24

3.4.1 Language skills and competences 25

3.4.2 Thinking skills and competences 25

3.4.3 Self-Management skills and competences 25

DRAFT

3.4.4 Social and communication skills and competences 26
3.4.5 Life skills and competences....26
3.4.6 Visualisation of the TSC structure 26
4. From categories and clusters to single concepts....28
4.1 Thinking skills and competences....28
4.1.1 Acquiring and organizing information 29
4.1.2 Analysing and processing information....29
4.1.4 Planning and organising 29
4.1.5 Addressing problems and issues 30
4.1.6 Creating and innovating 30
4.2 Self-management Skills and Competences....30
4.2.1 Responding to routine requirements of tasks 31
4.2.2 Acting according to values 31
4.2.3 Acting independently and showing initiative 31
4.2.4 Managing negative factors in life and work 32
4.2.5 Dealing with change....32
4.2.6 Engaging in self-development....32
4.3 Social and communication skills and competences....32
4.3.1 Conveying and exchanging information and ideas 33
4.3.2 Showing respect and consideration for others....33
4.3.3 Supporting others 33
 Ensure client orientation ESCO....34
 Give advice to others ESCO 34
4.3.4 Collaborating with others in teams and networks 34
4.3.5 Managing and leading others....34
4.3.6 Conciliating and negotiating....34
5. Life Skills and Competences ()....36
5.1.1 Environmental skills and competences 36
5.1.2 Health skills and competences....37
5.1.3 Digital skills and competences 37
5.1.4 Financial and entrepreneurial skills and competences 37
5.1.5 Civic skills and competences 37
5.1.6 Artistic skills and competences 38

DRAFT

6. Outlook 39
6.1 The role of TSCs in the ESCO skills pillar 39
Figure 2: Manifestation of a transversal skill (“make decisions”) in concrete occupational contexts 39
6.2 Independent use of the TSC structure....41
7. Next steps to complete the development of transversal skills....41

References 43
ANNEX I – TSC categories, clusters and concepts 46
ANNEX II – Concepts and their sources....46
ANNEX III – Identified sources....46

DRAFT

Executive summary

The expert group on transversal skills and competences (TSCs) was mandated, by the ESCO Member States Working Group and the EQF Advisory Group, to refine and structure the existing ESCO terminology on transversal skills and competences. Based on an analysis of a wide range of existing approaches in this area, the current report provides a terminological map clarifying the scope of and relationship between terms in this area. TSCs are defined as follows:

> *"Transversal skills and competences (TSCs) are learned and proven abilities which are commonly seen as necessary or valuable for effective action in virtually any kind of work, learning or life activity. They are "transversal" because they are not exclusively related to any particular context (job, occupation, academic discipline, civic or community engagement, occupational sector, group of occupational sectors, etc.)."*

The working group observes that the terminological landscape in this area is diverse and fragmented. There is a tendency for each institution and each researcher to restart and duplicate terminological work. This complicates dialogue and cooperation. While seeking to refine and structure terminology, the group has systematically built on previous approaches and tried to position the terminology in a wider context of (psychological and social-science) research ([1]).

Five main categories ([2]) of TSCs

The working group suggests operating with five broad categories of TSCs:

- Language skills and competences
- Thinking (cognitive) skills and competences
- Self-management skills and competences
- Social and communication skills and competences
- Life skills and competences

These five categories are closely interconnected and moves from the internal reasoning and individual self-awareness to the social and external. Each of the five main categories covers a wide range of single transversal skill and competence concepts. To allow users to orient themselves in this complex terminological landscape, and identify relevant single TSC concepts, each TSC category, based on an analysis of existing approaches and research, is divided into a number of TSC clusters.

TSC categories and their clusters

([1]) The sources used and analyzed by the expert group are included in annexes II and III of this report.

([2]) Initially the working group included Physical and manual Skills and competences as a distinct category of transversal skills and competences. While ESCO needs to include terms in this area, many of these skills and competences may be considered too contextually and functionally specific to be categorized as transversal. Given the relevance of these terms, the working group includes a list of physical and manual skills in this report (annex I) but not as part of the basic structure of transversal skills and competences.

DRAFT

The identification of clusters is based on an extensive analysis of existing terminology in this area, supported by relevant research literature in relevant disciplines. The final report of the group provides an overview of and links to these sources.

Language Skills and Competences

Language is at the core of any human activity and provides the starting point for any terminology in this area. Skills and competences will relate to the four dimensions of language competence:

- Reading;
- Writing;
- Speaking;
- Understanding.

The expert group's proposals build on the Common European Framework of Reference for Languages (CEFR). Social and interactional applications of language, such as advising, persuading and negotiating, are listed under Social and Communication Skills and competences. Each language listed in ESCO would act as a separate cluster where the above four dimensions of skills and competence become apparent.

Thinking Skills and Competences

Thinking skills and competences allow the individual to deal with abstract cognitive concepts. They can be divided into the following clusters:

- Acquiring and managing information;
- Analyzing or processing information;
- Planning and organizing;
- Addressing problems and issues;
- Creating and innovating.

Self-management Skills and Competences

Self-management skills and competences allow the individual to reflect on and make best use of own abilities and potential. They can be divided into the following clusters:

- Responding to routine requirements and tasks
- Acting according to values
- Acting independently and showing initiative
- Managing negative factors in life and work
- Reacting constructively to change
- Engaging in self-development

Social and Communication Skills and Competences

Social and communication skills and competences allow the individual to interact with other people. They can be divided into the following clusters:

- Using language, symbols and text to communicate effectively

DRAFT

- Showing respect and consideration for others
- Supporting others
- Collaborating with others in teams and networks
- Managing and leading others
- Conciliating and negotiating

Life Skills and Competences

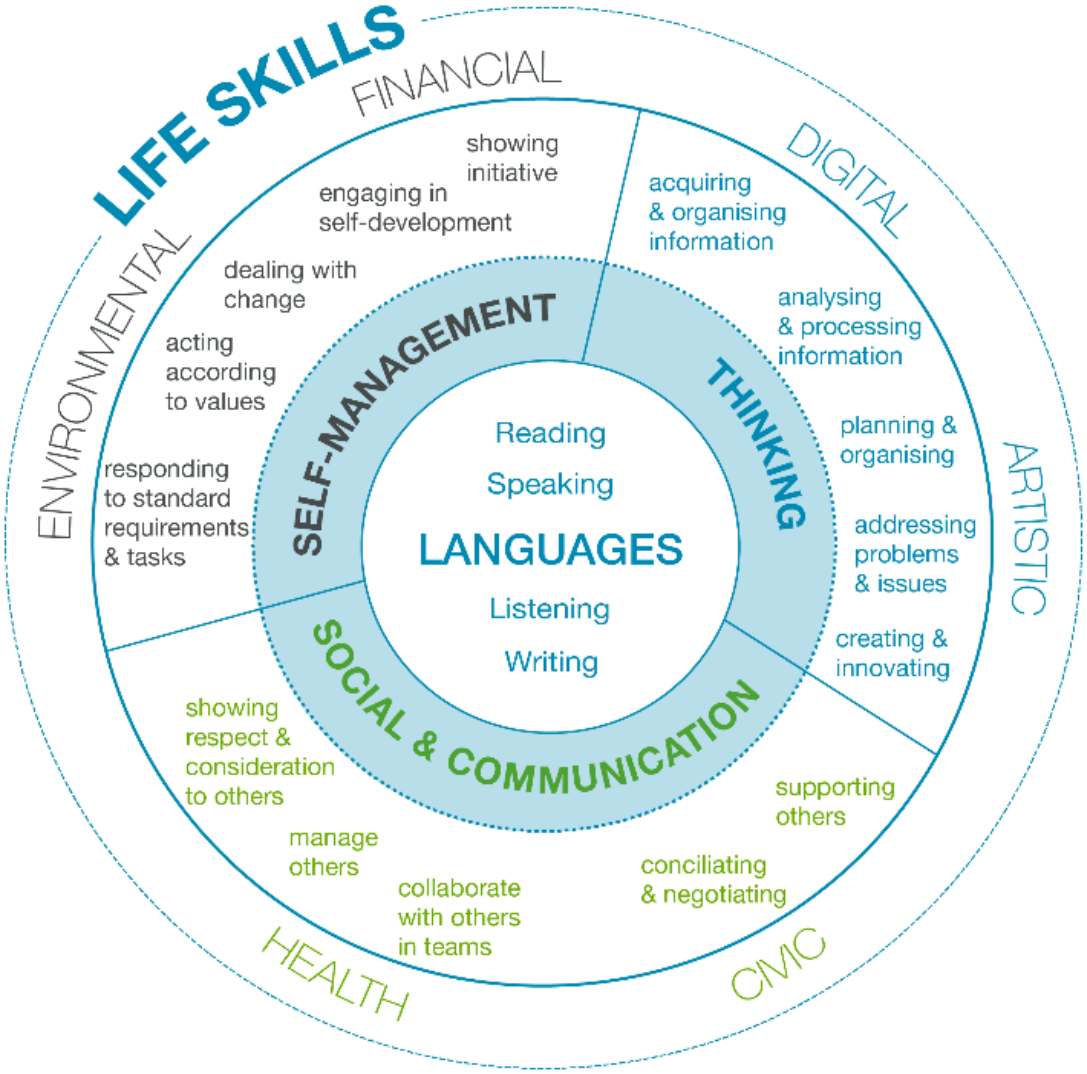
Life Skills and Competences allow the individual to deal with the conditions and responsibilities of life in modern society. Based on an analysis of already existing approaches in this area, the expert group uses the term “literacy” to point towards clusters of skills and competences within areas of social and political importance. The group acknowledges that Life Skills and Competences are contextually bound and will change more rapidly than other TSCs. In this sense Life Skills and Competences differ from the four initial categories listed above. The clusters of Life Skills and Competences identified by the expert group are:

- Environmental skills and competences
- Health skills and competences - Maintaining physical and emotional well-being
- Digital skills and competences - Working with computers
- Financial and entrepreneurial skills and competences -
- Civic skills and competences - Seeking opportunities for self-empowerment and participatory involvement
- Artistic skills and competences - Appreciating and expressing artistic potential

A visualization of transversal skills and competences (TSCs)

The TSC structure proposed by the working group can be visualized and demonstrates the interdependence of different types of skills and competences, starting from the language skills and competences of the individual and moving outwards to the external world.

DRAFT


LIFE SKILLS
FINANCIAL
DIGITAL
ARTISTIC
CMC
HEALTH
ENVIRONMENTAL
SELF-MANAGEMENT
THINKING
SOCIAL & COMMUNICATION
showing initiative
engaging in self-development
dealing with change
acting according to values
responding to standard requirements & tasks
acquiring & organising information
analysing & processing information
planning & organising
addressing problems & issues
creating & innovating
showing respect & consideration to others
manage others
collaborate with others in teams
conciliating & negotiating
supporting others
Reading
Speaking
LANGUAGES
Listening
Writing

1. The mandate and deliverables of the Expert Group

In their joint meeting February 2019, the EQF Advisory Group and the ESCO Member States Group asked the Commission to revise the existing terminology for transversal skills and competences (TSCs) in ESCO. Members of both advisory groups, representing all Member States, as well as key stakeholder groups in education and employment, underlined the need for a better structured and consistent terminology in this area. While TSCs are becoming increasingly important in the labour market and for education and training, no broadly shared terminology exists in this area. A multitude of partly competing headlines illustrate this lack of agreement; terms like 'transferable skills', 'soft skills', non-cognitive skills', 'socio-emotional skills and competences', 'key competences', 'cross-sectoral skills', 'skills for the future' and '21st Century Skills' all refer to a broad spectrum of skills and competences relevant across occupations and sectors and deemed to be of key importance to citizens and societies alike.

The expert group was given the following tasks:

- To systematically develop and extend the existing terminology considering empirical evidence from different use-cases and applications.
- To pay attention to the intuitive logic of the terminology, its comprehensiveness and precision.
- To draw on the experience of stakeholders who are developing and using applications where transversal skills and competences are important (validation, qualification design, HR-management).

The work of the expert group departs from the terminology on TSCs developed for ESCO version 1.0 (first published in 2016). While providing a starting point, there is agreement that this part of ESCO requires further updating and strengthening. The expert group delivered a first report to the Commission in February 2020. While establishing the basis for an updated terminology, this initial report pointed to several areas where further work was required. The current report presents the results of the work carried out in spring and summer 2020. The key deliverables are:

- A definition of the term "transversal skills and competences".
- A clarification of how "transversal skills and competences" is related to terms like 'soft skills' and 'non-cognitive skills and competences' (etc.).
- A scoping of TSCs indicating which categories of terms belong under this heading.
- A structuring of TSC through the identification of main terminological categories and clusters.
- A structuring of TSCs with reference to psychological and social science research demonstrating how the TSCs can be understood as moving from the individual and an inner perspective to society and the external world.

DRAFT

- An identification of more than 1000 single concepts populating the categories and clusters
- A systematic use of the learning outcomes approach when expressing single TSC concepts.
- A systematic identification of research and literature dealing with transversal skills and competences.

As illustrated in chapters 4 and 5 (and Annex I), the expert group has made a first proposal of TSC concepts to be included in categories and clusters. While this proposal will require refinement, it seeks to reduce the overall number of preferred terms to be included – thus to support overall user-friendliness. For the TSC terminology to be used in future updates of ESCO, and support terminological work in other policy areas, additional work is needed in the following areas:

- Carry out further quality assurance of the TSC concepts identified to reduce duplications and thus to ensure consistency.
- Organise the concepts into thesaurus structure (preferred terms, alternative labels, broader/narrower terms)
- Apply terminology control to TSC vocabulary to ensure consistent naming, in line with ESCO guidelines
- Describe content and scope of each concept in line with ESCO criteria.

The report contains some indications on how the expert group sees the integration of the TSC terminology with the overall structure of the ESCO skills pillar. This will need to be further discussed in the time to come leading up to the publication of the next version of ESCO.

DRAFT

2. Defining the nature and scope of transversal skills and competences (TSCs)

The initial discussions of the expert group focussed on the definitions of key terms influencing the identification and structuring of relevant skills and competences. It was noted that terms like "transversal", "knowledge", "skills" and "competence(s)" are understood in different and partly contradictory ways (see for example Cedefop 2008, 2014**,** Bartram 2006, National Research Council 2012, OECD 2019, World Economic Forum 2018a, and UNESCO-UNEVOC 2014). These differences and contradictions have influenced the design of the EQF and ESCO. The revision and strengthening of the existing TSC terminology provide an opportunity to address some of these issues.

2.1 The point of departure – ESCO version 1.0

The current version of ESCO contains a dedicated terminology on transversal skills and competences. Developed by the "ESCO cross-sectoral working group" between 2012 and 2015, this terminology forms part of the overall skills pillar of ESCO. Divided into five main categories ("social interaction"; "thinking"; "attitudes and values"; "application of knowledge"; and "languages") ([3]), these terms are relevant to a broad range of occupations and economic sectors and forming the top level of "skills reusability" as defined by ESCO. "Cross-sectoral skills" are defined as the next level of usability, focussing on skills which are "relevant to occupations across several economic sectors". ESCO states that TSCs "often (are) referred to as *core skills*, *basic skills* or *soft skills*" and that these skills and competences play a critical labour market role, forming "…the cornerstone for the personal development of a person", and acting as "…the building blocks for the development of the 'hard' skills and competences required to succeed on the labour market…". While providing a starting point for the expert group, the original ESCO approach triggered several questions:

- Should 'knowledge', as indicated in the current ESCO definition, be included?
- To what extent, and how, should the terms skills and competences be separated?
- What is the relationship to learning and development?
- What is the role of attitudes and values?
- Should TSCs, given the mandate of ESCO, be restricted to a limited labour market context or should they be applied in a wider setting?
- Should physical and manual skills and competences be included?

The following sections outline some of the expert groups discussions on these topics and the conclusions drawn.

([3]) The TSC-categories in the current version of ESCO are ordered in the way they are presented on the ESCO web-page. This ordering unfortunately contradicts the recommendation of the 'cross sectoral working group' to move from internal characteristics and dispositions of individuals to the skills and competences required for interacting with others in the external world. The expert group agrees in this principle and seeks to further refine it.

2.2 The role of "knowledge"

Knowledge is defined by ESCO as "the body of facts, principles, theories and practices that is related to a field of work or study". Knowledge can be theoretical and/or factual and can underpin any application of skills and competences. While the skills-pillar of ESCO originally operated with a mix of knowledge, skills and competence concepts, the ongoing (2019-20) restructuring of the skills-pillar treats knowledge concepts as a separate category.

- The expert group agrees that knowledge concepts should not be included in the TSC taxonomy ([4]). This reflects the fact that TSCs, by definition, are independent of any specific field of work, study or activity.

Knowledge concepts will indirectly, however, play a role in identifying relevant concepts or terms to be included in the taxonomy. The expert group observes the existence and emergence of broad areas of knowledge which may trigger the identification of valuable TSCs. This could include (for example) knowledge related to health and well-being, finance and economics, environmental issues, science, issues of diversity, social justice, citizenship and democracy. These knowledge areas potentially point towards existing and emerging TSCs of high relevance and importance (see chapter 3 and discussion on 'Life Skills and competences').

2.3 The relationship between "skills" and "competence" or "competences"

The EQF operates with clearly distinct definitions of "skills" and "competence" and applies these definitions in its level-descriptors. ESCO, while referring to the definitions of EQF, in practice treats skills and competences as synonyms. The expert group discussed the possibility of simplifying the terminology by only referring to transversal skills, reflecting the de facto approach applied for the skills pillar of ESCO. This, given the need to accommodate for differences across Europe, was not seen as a viable option. An examination of EU national systems, using the full range of EQF Referencing Reports as source ([5]), reveals different national traditions and approaches. While "skill" and "skills", denoting the learned and/or proven ability to apply know-how to complete routine practical tasks, is widely shared across languages, there is less consistency in the understanding and use and terms 'competence' and 'competences'.

Frequently, when applied in a national context, the term "competence" draws attention to non-routine capabilities, notably the ability to take responsibility and to act autonomously. Many

([4]) However, should any generic knowledge be identified as essential in relation to the concept of a skill or competence , it would be mentioned in the description or scope note of the TSC concept.
([5]) https://ec.europa.eu/ploteus/en/referencing-reports-and-contacts

national qualifications frameworks place specific TSCs under a “competence” heading of their level descriptors, and in many cases use these descriptors as a reference point for quality assurance and policy development ([6]). We can also observe a significant difference in the use and understanding across countries of the generic terms “competence” and “competency” and the specific terms “competences” and “competencies”. This distinction is of relevance to our understanding of transversal skills and competences. In some countries, “competence” is a fundamental concept, pointing towards “maturity and comprehensive ability to act, including participation, reflectiveness and a holistic problem-solving capacity” (Bundesministerium für Bildung und Forschung 2013:58). The emphasis will in this case be on the ability to deal autonomously and with expertise (also) in non-routine situations. According to this understanding, “competence” is clearly distinct from “skill” and should not be confused (stakeholders often refer to the need for holistic education and training as a condition for facilitating these kind of competence). In other systems “a competence” (or, occasionally, “a competency”) is a specific and clearly delimited learning outcome, mainly expressed in the plural, as in “the general and subject-specific competences that are obtained through the programme” (Logai et al, 2014:49). According to this understanding, “competence(s)” can either be synonymous with, or very closely related to, ”skill(s)”([7]). The difference between European countries and systems about the understanding of the skill(s) and competence(s) concepts influence the work of the expert group. The expert group agrees on the following:

- Given the multilingual character of ESCO, and the translation role played by the EQF, it is essential that the taxonomy ([8]) addresses both ‘skill(s)’ and ‘competence(s)’.
- While it is impossible to precisely define the exact demarcation line between ‘skill(s)’ and ‘competence(s)’, the taxonomy must observe the difference and tension between the different skills and competences required for dealing (for example) with routine and non-routine tasks, or the difference in applying skills and competences in simple and complex settings.

2.4 Transversal skills and competences (TSCs) - underpinned by learning

TSCs are defined in this report as abilities and capabilities which have been learned and can be further developed. From a terminological point of view, this implies using a learning outcomes approach (Cedefop 2017) when describing these skills and competences. This highlights that

([6]) See Cedefop 2018 https://www.cedefop.europa.eu/en/publications-and-resources/publications/5566

([7]) For the EQF "***competence*** means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development." [European Commission, 2008:11]. While referring to this (generic) definition and understanding, ESCO (“The European (terminology on Skills, ***Competences***, Qualifications and Occupations”) gravitates towards a narrower and more specific understanding where “competences” are seen as synonyms for “skills”.

([8]) This will be done at all sub-levels of the taxonomy.

TSCs can constantly change and evolve, playing key roles in personal as well as professional developments. The focus on learning and development helps to ensure that the TSCs do not imply moral judgments or subjective value judgements. The importance of this is well illustrated in the example given by the ESCO Guidelines: "For example, reference to honesty (e.g. 'be trustworthy') implies a character judgement that raises ethical and possibly legal problems" (ESCO 2017 SEC DRAFT, 2017:19). The same principle will apply to physical and manual skills and competences (see sub-chapter 3…), focusing on learning draws attention to abilities which can be improved; excluding aspects out of individual control and potentially subject to discrimination.

2.5 Transversal skills and competences (TSCs) as related to 'transferable', 'soft', non-cognitive' and 'socio-emotional' skills and competences

The term "transversal" points directly to the transferability of these skills and competences, i.e. the extent to which a skill or competence acquired in one context can be used in a different context. In a world facing rapid technological and social change, this transferability is seen as increasingly important. The expert group notes that this transferability can be linked to what is termed "deeper learning", pointing to skills and competences underpinning and enabling the more specific skills required in a work setting ([9]). The work carried out by the US National Research Council (2012) provides an important overview of research in this area, elaborating on the extent to which this transferability is achievable or not. The expert group has taken due note of the conclusions of the NRC in this area. The insights of the NRC regarding the relationship between the cognitive, intra-personal and inter-personal competences is helpful to position a taxonomy on transversal skills and competences in relation to the diversity of (more or less) competing taxonomies on "soft", "socio-emotional" or 'non-cognitive' skills and competences. The following main conclusions can be drawn:

- The use of terms like 'non-cognitive' and to some extent 'socio-emotional' skills and competences explicitly and implicitly underestimates the critical role of important cognitive skills and competences. Transversality and (indeed) transferability of skills and competences very much depends on the ability of an individual to conceptualize, analyse,

([9]) It should be noted that some transversal skills and competences are more bound to cultural contexts than others and can hardly be acquired at all detached from a domain. Take for instance, 'negotiation skills' as part of the category 'social skills'. While such skills may well be acquired in a specific domain (say retail) and become transversal (by working in different domains, say health, social work whatever) it is hard to imagine that they can a) be developed with no relation to a domain and b) successfully transferred to completely different cultural settings (compare negotiation in Western cultures with Eastern or African cultures). In contrast, there are also 'truly' transversal skills which have become almost universal and are less bound to domains and cultures (e.g. counting or calculating). While not directly influencing the current taxonomy, these general points regarding transversality and transferability must be observed.

synthesize and/or evaluate information; all critical features of cognition and mental processing.

- The use of the term 'soft-skills and competences' tends to underestimate the transversality and transferability of certain physical and manual skills and competences. The metaphor 'soft' draws attention to aspects of human interaction like communication and collaboration (subject to subject), implicitly distinguishing this from human intervention on physical objects and the external world (subject to object). The ambiguity of the term is addressed in box 1 (below).

Box 1. 'Soft Skills' – a terminological challenge

An OECD paper relating to the Programme for the International Assessment of Adult Competencies (PIAAC) notes that "it has to be acknowledged that there is no consensus on the definition or measurement of soft skills" (Martin, 2018:29). In this paper, the author uses communication, teamwork, empathy, self-motivation and leadership to exemplify soft skills. However, one definition which is repeated frequently (Lippman et al. 2015) refers to soft skills as "a broad set of skills, competencies, behaviors, attitudes, and personal qualities that enable people to effectively navigate their environment, work well with others, perform well, and achieve their goals." Even high-profile definitions of "soft skills" (from Cedefop, UNESCO-International Bureau of Education, and UNESCO-UNEVOC) vary considerably, as exemplified by the following definitions:

- "Skills that are cross-cutting across jobs … and sectors … and relate to personal competences (confidence, discipline, self-management) and social competences (teamwork, communication, emotional intelligence)" [Cedefop, 2019:online).
- "Examples of soft skills include: empathy, leadership, sense of responsibility, integrity, self-esteem, self-management, motivation, flexibility, sociability, time management and making decisions." (UNESCO-IBE:online)
- "A set of intangible personal qualities, traits, attributes, habits and attitudes that can be used in many different types of jobs" (UNESCO/UNEVOC, TVETipedia Glossary:online]
- The TVETipedia Glossary (source?) definition broadens soft skills to include personal qualities, traits, attributes, habits and attitudes, all of which it describes as "intangible".

This considerable variation in understanding of the term illustrates the need for a comprehensive terminological approach in this area. The term "soft skills" also raise the question of what is understood as a 'hard skill'; is it something exclusively related to 'hard' instrumental interventions in the physical world; are they defined according to their 'hard' or objective measurability; or are they understood as less transferable and occupationally specific than soft skills?

DRAFT

2.6 Transversal skills and competences (TSCs) and their relation to "basic", "key" and "core" skills and competences

One way of exploring the nature and scope of TSCs was to follow the references to "basic", "core" and "key" skills and competences.

2.6.1 Basic skills and competences

In the context of the EU Framework of Key Competences, "basic skills" are listed as "literacy, numeracy and basic digital skills" (EU Council: Recommendation 189/4). This limited group of skills and competences can provide a minimum basis – a foundation – for further personal and professional development and learning. Cedefop has defined basic skills as "…needed to live in contemporary society…", adding, as examples, listening, speaking, reading, writing and mathematics (Cedefop, 2008:37). Cedefop also adds a category of "new basic skills" including ICT skills, foreign languages, social, organizational and communication skills, as well as technological culture and entrepreneurship (Cedefop 2008:132). This latter broadening seems to go against the view that basic skills are to be foundations – a minimum basis – for further development and learning.

- The expert group agreed to follow the understanding of basic skills applied for the Key Competences framework, emphasizing their role as foundations for personal and professional development and learning.

This raised the question of whether basic skills should be presented as a separate category underpinning TSCs ('Foundations''), or whether basic skills should be integrated into the main categories of the taxonomy?

- The expert group agreed to integrate basic skills into each of the main TSC categories identified.

While basic skills and competences certainly form a part of the dialogue in this area, a separate category would significantly overlap and to some extent confuse the five categories listed above. For this reason, an integration of these concepts into the five categories was considered most appropriate

2.6.2 Key and core skills and competences ([10])

[10] The main sources for investigating this topic were 40 EQF Referencing Reports (most of which are available at https://ec.europa.eu/ploteus/en/referencing-reports-and-contacts) and volume II of the *Global Inventory of Regional and National Qualifications Frameworks* [UNESCO, ETF, CEDEFOP, 2019]. In these accounts, there were references to "core skills", but also in some systems the terms "key skills", "core competences" and "core competencies" are used in ways that seem to refer to the same ideas.

In several countries, “key skills” or “key competences” are given a strategic role in education and training or qualifications frameworks. These policies usually refer to the EU Framework of Key Competences for Lifelong Learning.

Box 2. The eight EU Key competences

- Literacy competence
- Multilingual competence
- Mathematical competence and competence in science, technology and engineering
- Digital competence
- Personal, social and learning to learn competence
- Citizenship competence
- Entrepreneurship competence
- Cultural awareness and expression competence

Several countries have integrated elements of these key competences into the descriptors of their national qualifications frameworks, although in different ways and to varying degrees. The extent to which these key competences influence education and training programs and curricula also varies (Cedefop 2020, Forthcoming). Some countries have developed their own framework – for example Italy’s Key Competencies for Citizenship, composed of: learning to learn; planning; communicating and understanding messages; collaborating and participating; acting autonomously and responsibly; problem solving; creating connections and relations; and acquiring and interpreting information (Republica Italiana, 2012:102). In contrast to the relatively widespread use of the term “key competence”, few national qualifications frameworks refer to “core skills/competences”. The term “core” is more frequently used by education and training institutions, notably in relation to “core” curricula and “core” subjects. In these cases, references are normally made to communication, numeracy or mathematics, use of digital technologies, teamwork, and learning or personal development ([11]). The phrase “core skills” is more likely to be found in contexts where it means “skills which are considered essential in a particular sector or occupation (for example customer-orientated skills, core management skills, or core skills for careers) or even skills deemed core for employment in a specific organization (OECD, 2014). These core skills are often defined in a series of levels, making it difficult to relate them to ESCO.

[11] At the time of the investigation, only the Scotland report refers to a national framework of core skills and only the India National Qualifications Framework (NQF) was identified as using “core skills” as a vertical category in its level descriptors. In both cases, the core skills are structured hierarchically, which makes it difficult to relate them to ESCO.

2.7 Preliminary conclusions regarding the nature and the scoping of TSCs

A transversal skills and competences taxonomy, as asked for by the ESCO and EQF Boards, must be sufficiently comprehensive to show how a particular interpretation and application of transversal concepts ("terms" in the taxonomy) can be positioned. The purpose of the work of the expert group has been to develop a taxonomy which makes it possible to grasp the scope and coverage (as well as non-coverage) of an application. A comprehensive taxonomy is important for the following reasons:

- It will provide a reference point for further developing and refining terminological approaches in this area.
- It will provide a reference point for dialogue between researchers, policy makers and stakeholders focussing on how to develop and make use of TSCs.

The importance of a terminological reference point is illustrated by the application of transversal skills in teaching, learning and assessment. Integrating transversal skills and competences into education and training programs and curricula requires awareness of the overall landscape of TSCs. We can in some cases observe the inclusion of some TSCs in programs or curricula, but this appears arbitrary, overlooking other skills and competences which could be equally important. This becomes even more critical when assessing these skills and competences; a lack of conceptual overview may cause unintended bias and undermine the validity of the approach adopted. The expert group, based on the discussions referred to in chapters 2.1-2.6, and following the elaboration of a wide range of sources and approaches, agreed to base the TSC taxonomy on the following key principles:

- The TSC terminology should refer to both "skills and competences", signalling (a) the extensive use of both concepts in national and international contexts and (b) the significant differences about the orientation of these concepts.
- The headline 'Transversal skills and competences" signals the comprehensive nature of the taxonomy; reflecting that alternative terms like "soft", "non-cognitive", "socio-emotional", "key and "core" skills and/or competences frequently address a more limited set of skills and competences.
- TSCs should be limited to descriptions of behaviours which can be learned, improved and observed or assessed.
- "Knowledge" concepts should not be included separately in the taxonomy ([12]).
- Attitudes and values should only be included to the extent that they can be learned and developed.

([12]) "Knowledge" is understood as an integral component of skills and competences.

- TSCs should be regarded as both “basic” and “advanced” and thus relevant to routine as well as non-routine contexts[13].
- An adapted version of the three main categories identified by the NRC (2012) should form the basis for the “Thinking’, ‘Personal’ and ‘social’ skills and competence categories of the terminology.
- A category including physical and manual skills and competences with a transversal relevance should not be explored further at this time but could be included at a later stage.
- A category including broader ‘life skills and competences’ should be included
- The terminology should be designed to be relevant in a wide setting, for all areas of life, including both labour market and education and training contexts.
- The terms “skills” and “competences” should refer to learned capacities to apply knowledge, know-how, methods or instruments to complete tasks, carry out processes, and/or address changes or problems in a wide variety of contexts.
- TSCs may, but need not, build on personal characteristics or predispositions.
- Skills are narrower than competences, in the sense that they refer more to basic, pre-defined, or routine procedures, while competences are broader than skills, referring to proven abilities *in* new and complex situations and/or in the face of unforeseen challenges or issues.

Based on the preceding analysis, the following revised and integrated definition is proposed:

Box 3. Definition of transversal skills and competences (TSCs)

“Transversal skills and competences (TSCs) are learned and proven abilities which are commonly seen as necessary or valuable for effective action in virtually any kind of work, learning or life activity. They are “transversal” because they are not exclusively related to any particular context (job, occupation, academic discipline, civic or community engagement, occupational sector, group of occupational sectors, etc.).

([13]) The expert group has discussed the longer term need to be able express different levels of complexity of terms. This is an issue outside the mandate of the group but should be given due attention in future updates of ESCO. The expert group also noted the efforts done by the 2012-15 cross sectoral working group on this and recommend to build on this.

3. Identifying and structuring transversal skills and competences (TSCs)

3.1 Main sources for identifying Categories of TSCs

The diversity of terminological approaches currently existing in this area underlines the need for a basic structure clarifying the position of one category of TSCs in relation to another. This is critical for clarifying borderlines between terms as well as for identifying their scope and significance.

Initial discussions about a system of categories of TSCs centered on a report (National Research Council, 2012) on "Transferable knowledge and skills in the 21st Century'" of the US National Research Council (NRC). The report systematically refers to relevant research in a wide range of disciplines. Focusing on three "broad domains of competence" ("Cognitive", "Intrapersonal" and "Interpersonal"), the report covers both cognitive and non-cognitive skills and competences. Referring to these three domains, a series of "competencies clusters" are identified. The expert group saw several advantages in building on the NRC approach. The logic of moving from internal dispositions to interactions with others makes intuitive sense and is also in line with the original approach chosen by the ESCO 'Cross-sectoral working group'. This logic can also be used to go beyond what is covered by the NRC, by including skills related to coping with the economy, environment and politics, which we propose (below) under the heading 'Life skills and competences'.

While the value of this perspective was confirmed during the work of the expert group, allowing us to build on a wide variety of existing terminological approaches, the group agreed that the resulting structure needed to use readily understandable language. In addition, the group saw the need for developing clear definitions of the main categories, indicating the borders between them. Beyond the work on NRC, a wide range of existing approaches to skills and competences were consulted and analyzed (see documentation in Annex II and Annex III). Each of the systems examined offered material for identifying and scoping the main categories and for identifying sub groups (clusters) of single concepts within these.

3.2 General principles for structuring transversal skills and competences (TSCs)

To ensure a balance between overview over and granularity of terms, the expert group agreed on the need to develop the taxonomy at three levels:

1. Main groups of transversal skills and competences - Categories.
2. Sub-groups of transversal skills and competences - Clusters.
3. Individual transversal skills and competences – Concepts ("Terms" in the taxonomy).

DRAFT

This structure makes it possible for users to 'drill down' from general to more specific terms (illustrated in full detail in Annex I). The structure also allows users to observe how different concepts are related and interact with each other. The structure will furthermore support continuous development and refinement, supporting a necessary and continuous dialogue on relationships between the taxonomical terms and their relevance to professional and personal developments. The expert group agreed that each Category (Level 1) of TSCs should be:

- Clearly identified and related to established and reputable skill/competence typologies and structures.
- Supported by research into current practice in specifying skills and competences for recruitment and selection.
- Written in layman's language
- Operating as parent of a discrete hierarchy of skills and/or competences defined both by inclusions and exclusions.

The expert group agreed that language forms the core of any human action and interaction and that any TSC terminology needs to depart from skills and competences in this area. Departing from this core, the expert group then refers to the three broad categories ("domains") identified by the NRC, cognitive, intra-personal and inter-personal skills and competence. While providing an important point of departure, the expert group decided to name these four categories as follows:

- Language skills and competences
- Thinking skills and competences
- Self-management skills and competences
- Social and communication skills and competences

Based on the analysis of sources, two further categories were considered:

- Physical and manual skills and competences – these are (to a limited extent) already included in the existing ESCO transversal skills, reflecting their potential relevance for work related activities, but also for learning and life in general.
- Life skills and competences - pointing to the important skills and competences required for employability and overall participation in society.

While the expert group acknowledges that physical skills and competences are important in many situations and contexts, the transversality and indeed transferability of some of these was questioned. While this might be revisited at a later stage, the expert group agreed to leave out physical and manual skills from the basic TSC structure. Noting that physical and manual skills currently form part of ESCO, an extended and improved list to be used separately from TSCs is included in Annex I.

DRAFT

The expert group agreed to include Life skills and competences as part of the basic TSC structure, since they form an important part of several existing approaches. The expert group acknowledges that the current Life skills and competence proposal only forms a starting point, underlining the need for further development and elaboration.

3.3 Defining Categories of transversal skills and competences (TSCs)

As indicated above, the expert group suggests five main TSC Categories (Level 1). These five categories cover and capture a wide range of TSCs, cognitive as well as non-cognitive, allowing potential users to better understand how an application of skills and competences is placed in a wider context. The relationship between the five categories goes, as stated above, from the internal to the external. It should be noted that in 'real life' these categories will overlap. The structure, however, will serve as a map making it possible to identify relevant concepts or terms and contextualize these appropriately.

3.3.1 Language skills and competences

The language skills and competences referred to under this heading relate to technical mastery of a language with respect to the rules and conventions of language usage, such as order, meaning, grammar and expression

3.3.2 Thinking Skills and Competences

Thinking (cognitive) skills and competences allows the individual to deal with abstract cognitive concepts. The expert group suggest the following definition:

> *The skills and competences referred to as Thinking (cognitive) skills and competences relate to the ability to apply the mental processes of gathering, conceptualizing, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication. This is demonstrated by using information of different kinds to plan activities, achieve goals, solve problems, deal with issues and perform complex tasks in routine and novel ways.*

3.3.3 Self-management Skills and Competences

Self-management skills allow the individual to reflect on and make best use of his/her own abilities and potential:

> *The skills and competences referred to under this heading require the individual to understand and control their own strengths and limitations and use this self-awareness to manage activities in a variety of contexts. This is demonstrated by an ability to act reflectively, responsibly and in ways which are structured according to values, by accepting feedback, and by seeking opportunities for personal and professional development.*

3.3.4 Social and Communication Skills and Competences

DRAFT

Social and communication skills and competences allow the individual to interact with other people:

> *The skills and competences referred to under this heading relate to the ability to interact positively and productively. with others. This is demonstrated by communicating ideas effectively and empathetically, coordinating one's own objectives and actions with those of others, seeking resolutions to differences, building trust and settling conflicts, ensuring the well-being and progress of others, managing activities and offering leadership.*

3.3.5 Life Skills and Competences:

Life skills and competences allow the individual to deal with the conditions and responsibilities of life in modern society:

> *The skills and competences referred to under this heading relate to the ability to process and use knowledge and information which has transversal significance and facilitates active citizenship. They cover aspects such as health, culture, finance and economics, science and technology, the environment and civic engagement. Life skills and competences allow individuals to manage knowledge and information and use it as a basis for forming opinions, making decisions and taking actions in relation to both personal/professional progression and social responsibility.*

Each of the five TSC Categories outlined above provides a basis for identifying clusters (Level 2) of TSCs as well as for identifying and including individual TSC concepts (Level 3). As noted above, the expert group discussed the inclusion of a category of 'Physical and Manual skills and competences'. While the importance of these skills and competences in work and life is acknowledged, it was decided to leave this category out of the basic structure. The expert group, however, agreed on the following definition of this category and used that as a basis for updating the terminology to be used in ESCO (see Annex I).

3.3.6 Physical and manual skills and competences

Being in possession of physical and manual skills and competences allows the individual to master tasks and activities which require some form of manual or other physical input:

Ability to perform tasks and activities by hand or with other physical intervention, using equipment, tools or technology requiring guidance, force or movement. Physical and manual skills and competences primarily require physical dexterity and strength, although an understanding of principles, processes and sequences is also essential, especially for more complex practical skills and competences ([14]).

([14]) This category can be developed in the same way as the other categories – using outcome statements referring to proven abilities or learned capacities. Natural aptitudes which are not accessible to learning, or at least

The expert group furthermore discussed the inclusion of a 'Basic skills and competences' category. While basic skills and competences certainly form a part of the dialogue in this area (see also discussion in chapter 2), a separate category would significantly overlap and to some extent confuse the categories listed above. For this reason, an integration of these concepts into the five categories was considered more appropriate and carried out.

3.4 Defining clusters of transversal skills and competences (TSCs)

To allow users to drill down into the terminology, the five main TSC Categories need to be disaggregated into a set of discrete clusters, allowing for an unambiguous allocation of sub-ordinated skills and competence concepts, and being, as far as possible, intuitively understandable. The proposed clusters (see below) draw on the mapping and analysis of existing approaches to structuring skills and competences. Annexes I and II provide references to sources and illustrate how the expert group has been working. Relevant material related to qualifications frameworks and the use learning outcomes in education and training (for example related to standards and curricula) have been used for identifying clusters. The expert group suggests that the results of this analysis is compared with the results of Cedefop's big data analysis of European vacancies. This will make it possible to secure a wider matching with the concepts and terms used by European companies and organizations. On a longer-term basis, the taxonomy should be continuously revised and refined, ensuring coverage, coherence and consistency. As with categories, criteria were proposed for adopting and using clusters of TSCs. Each cluster in each category of TSCs should:

- Be clearly scoped.
- Be discrete and as far as possible avoid overlapping
- Accord with agreed definition of TSCs
- Be derived from the relevant TSC Category according to an agreed and transparent form of analysis and/or synthesis.
- Relate to the results of research into current practice related to intended uses and users
- Be named using a verbal noun form ('ending in –ing")
- Be written in layman's language
- Be the parent of a discrete hierarchy of more specific skills and competences concepts.

Each cluster is identified by a unique label and a description. Each cluster has been further disaggregated into single skills and competences (Annex I). The indication of single TSC concepts is only indicative and will require further work before being included in ESCO, notably

considerable improvement, and risk discriminating physically challenged parts of the workforce, will not be included (cf ESCO 2017 SEC DRAFT, 2017:19).

by quality assuring the naming of concepts, by finalizing definitions of each cluster, by developing preferred and alternative labels following a consistent naming strategy, thus guaranteeing unique concept or term names. Term descriptions and scope notes will also need to be developed and checked, notably to clarify content and application and to minimize overlap.

3.4.1 Language skills and competences

Language skills and competences can be divided into the following four clusters:

- Reading; implies understanding (including through the use of Braille) of texts at an appropriate level for specific requirements of work, learning or life activity
- Writing: implies conveying factual or personal information, feelings or opinions in written form (including use of word processing, or other digital or mechanical modes) at an appropriate level for the specific requirements of work, learning or life activities
- Speaking: implies conveying factual or personal information, feelings or opinions in speech (including use of voice synthesis), sign language, or other manual mode(s), at an appropriate level for the specific requirements of work, learning or life activities
- Understanding: implies understanding clear standard speech, or interpreting sign language or other manual mode(s) of communication, at an appropriate level for the specific requirements of work, learning or life activities

Detailed descriptors for these language skills and competences can be found in the Common European Framework of Reference for Languages (CEFR). More complex and social, or interactional, uses of language such as advising, persuading and negotiating, are listed under Social and Communication Skills and Competences ([15]). Each language listed in ESCO would act as a cluster.

3.4.2 Thinking skills and competences

Based on the analysis of existing approaches, Thinking skills and competences can be divided into the following clusters

- Acquiring and managing information
- Analysing or processing information
- Planning and organising
- Addressing problems and issues
- Creating and innovating

3.4.3 Self-Management skills and competences

Based on the analysis of existing approaches, Self-Management skills and competences can be divided into the following clusters:

- Responding to routine requirements and tasks

([15]) The model assumes that users would refer to this category along with other skills and competences and that they could select more than one language and every skill or competence could refer equally to first and subsequent languages.

- Acting according to values
- Acting independently and showing initiative
- Managing negative factors in life and work
- Reacting constructively to change
- Engaging in self-development

3.4.4 Social and communication skills and competences

Based on the analysis of existing approaches, Social and communication skills and competences, building on the basic Language skills and competences referred to above, can be divided into the following clusters:

- Using language, symbols and text to communicate effectively
- Showing respect and consideration for others
- Supporting others
- Collaborating with others in teams and networks
- Managing and leading others
- Conciliating and negotiating

3.4.5 Life skills and competences

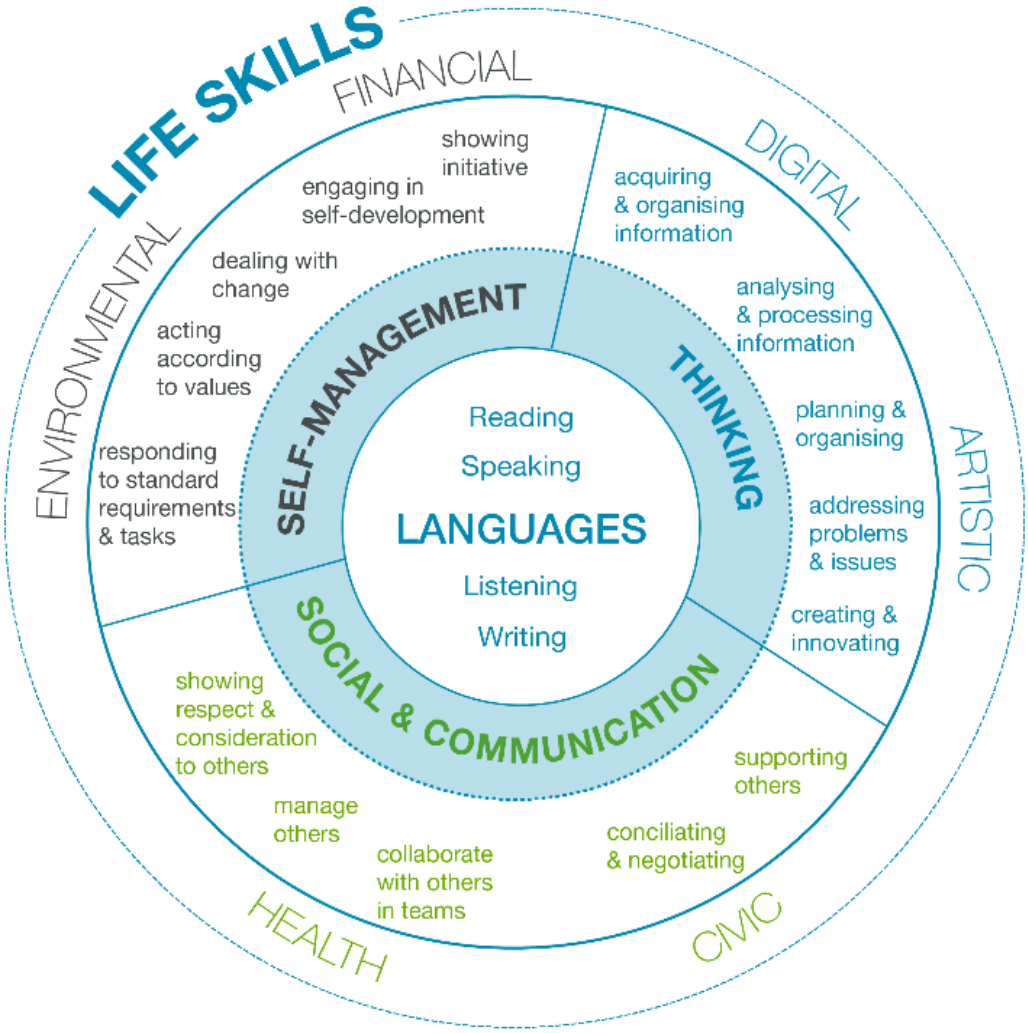
Based on the analysis of existing approaches, Life skills and competences can be divided according to the following clusters ([16]):

- Environmental skills and competences
- Health skills and competences - Maintaining physical and emotional well-being
- Digital skills and competences - Working with computers
- Financial and entrepreneurial skills and competences -
- Civic skills and competences - Seeking opportunities for self-empowerment and participatory involvement
- Artistic skills and competences - Appreciating and expressing artistic potential

3.4.6 Visualisation of the TSC structure

Figure 1 below illustrates the basic TSC structure as proposed by the expert group. The figure illustrates the basic principles applied by the group (moving from the individual outwards to the external world and context) and the disaggregation of terminology from the general (Categories) to the specific (clusters and individual concepts).

([16]) The expert group is divided about the naming of the Life Skills and Competence clusters. While the learning outcomes-oriented statements capture the main orientation of each cluster, an alternative to the term 'Literacy' should be sought out.


LIFE SKILLS
FINANCIAL
DIGITAL
ARTISTIC
CIVIC
HEALTH
ENVIRONMENTAL
showing initiative
engaging in self-development
dealing with change
acting according to values
responding to standard requirements & tasks
acquiring & organising information
analysing & processing information
planning & organising
addressing problems & issues
creating & innovating
showing respect & consideration to others
manage others
collaborate with others in teams
conciliating & negotiating
supporting others
SELF-MANAGEMENT
THINKING
SOCIAL & COMMUNICATION
Reading
Speaking
LANGUAGES
Listening
Writing

4. From categories and clusters to single concepts

The complete overview over single terms and concepts identified by the expert group is included in Annex I of this report. For illustration purposes, this chapter presents the main single concepts identified for the clusters included under Thinking, Self-management as well as Social and communication categories. A separate chapter addresses the single concepts identified for Life skills and competences category. Concepts already included in the current ESCO version 1.0 has to some extent been included; this s indicated for each single case. For the terminology to be used in the coming update of ESCO, and support terminological work in other policy areas, the expert group underlines the need for further refinement in the following areas:

- Further quality assurance of the terms and concepts identified to reduce duplications and thus to ensure consistency.
- Organise terms into thesaurus structure (preferred terms, alternative labels, broader/narrower terms)
- Apply terminology control to TSC vocabulary to ensure consistent naming, in line with ESCO guidelines
- Describe content and scope of each concept in line with ESCO criteria.

As illustrated by Annex I, the expert group has identified more than 1200 single relevant terms and concepts distributed across the main categories. Extensive overlaps and duplications makes it necessary to reduce the number of terms to be included, resulting in a limited set of key single concepts, preferred terms, eventually to be included by ESCO ([17]). This limitation in the number of preferred terms is important to ensure a wider use of the terminology. If combined and enriched ([18]) with alternative labels and synonyms, this structure will hopefully make it possible for future users to better navigate in this complex terminological field.

4.1 Thinking skills and competences

For this category the expert group suggests, as indicated, the following five clusters:

- Acquiring and organising information
- Analysing and processing information

([17]) This reduction and simplification is illustrated by the case of Thinking skills and competences where the draft proposal suggests a simplification from 234 single terms into 22 concepts; in Self-Management skills and competences where a total of 339 single concepts are captured by 6 clusters and 28 concepts; and in social and communication skills and Competences we suggest 27 concepts summarizing a total of 318 single concepts. This reduction in complexity is, in our view, important to ensure the future use of the terminology. This limitation in the number of concepts is used for Life skills and competences as well where 6 clusters are captured through 32 concepts. The total number of TSC concepts suggested by the expert group is thus 110.

([18]) This is a task which lies beyond the capacity f the expert group. See also chapter 7.

- Planning and organising
- Addressing problems and issues
- Creating and innovating

The following sections presents the key concepts identified for each cluster (listed alphabetically). These 22 key concepts summarize 234 single concepts used by other TSC approaches, potentially to be used as alternative labels and pointing in the same broad direction.

4.1.1 Acquiring and organizing information

The following key single concepts have been identified:

- Memorise information [ESCO]
- Organise information [ESCO (19)]
- Record information
- Search for information ([20])

4.1.2 Analysing and processing information

The following key single concepts have been identified ([21]):

- Analyse information ([22])
- Evaluate information [ESCO]
- Demonstrate logical reasoning [ESCO]

4.1.4 Planning and organising

The following key single concepts have been identified ([23]):

- Demonstrate a focussed approach
- Develop strategy ([24])
- Manage resources
- Manage time [ESCO]

([19]) In the current version of ESCO also represented as concept „structure information".
([20]) Generalised from ESCO concept „search for information online".
([21]) In the current version of ESCO this cluster is illustrated by 'process qualitative information'.
([22]) In the current version of ESCO also represented by „think analytically".
([23]) In the current version of ESCO the term 'develop strategy to solve problems' is used, actually covering two different clusters.
([24]) Split current ESCO concept „develop strategy to solve problems".

DRAFT

- Manage quality
- Plan activities

4.1.5 Addressing problems and issues

The following key single concepts have been identified:

- Carry out work-related calculations [ESCO]
- Identify problems
- Solve problems ([25])
- Make decisions [ESCO]

4.1.6 Creating and innovating

The following key single concepts have been identified ([26]):

- Act intuitively
- Demonstrate holistic thinking
- Think creatively [ESCO (27)]
- Think critically
- Think flexibly

4.2 Self-management Skills and Competences

For this category the expert group suggests, as indicated, the following six clusters:

1. Responding to routine requirements of tasks
2. Acting according to values
3. Acting independently and showing initiative
4. Managing negative factors in life and work
5. Dealing with change
6. Engaging in self-development

([25]) Split current ESCO concept „develop strategy to solve problems“; currently represented in ESCO also as „troubleshoot“, „create solutions to problems“

([26]) In the current ESCO this cluster is covered by ‘creatively use digital technologies’, a mixed construction linked to self-management as well as digital life skills.

([27]) Currently represented in ESCO as closely related concepts like „seek innovation in current practices“, „develop creative ideas“,

The following sections present the key concepts identified for each cluster (listed alphabetically). These 28 key concepts refer to a total of 339 single concepts used by other TSC approaches, partly overlapping and pointing in the same broad direction.

4.2.1 Responding to routine requirements of tasks

This cluster is about important aspects of successful performance, such as reliability, diligence or precision, and taking steps to meet these requirements. The following single concepts have been identified:

- Attend to detail ESCO
- Attend to hygiene ESCO
- Follow environmentally-sustainable work practices ESCO
- Follow safety precautions in work practices ESCO
- Make an effort ESCO
- Meet commitments ESCO
- Work efficiently ESCO

4.2.2 Acting according to values

This cluster is about analyzing tasks and responsibilities in relation to personal, social and/or organizational values and ensuring that activities are carried out in a consistent, accountable and ethical way, habitually reflecting on practice. The following key single concepts have been identified:

- Adhere to legislation or policies
- Respect confidentiality obligations
- Follow ethical code of conduct ESCO
- Meet commitments ESCO

4.2.3 Acting independently and showing initiative

This cluster is about showing initiative, doing the right thing without being told or asked to, taking a leadership role where that helps to deal with a problem, making decisions and taking action. The following key single concepts have been identified:

The following key single concepts have been identified:

- Assume responsibility
- Demonstrate enthusiasm ESCO
- Demonstrate curiosity ESCO

DRAFT

- Identify opportunities ESCO
- Take risks
- Work Independently ESCO

4.2.4 Managing negative factors in life and work

This cluster is about taking steps to ensure a resilient response to stress, criticism and failure. The following key single concepts have been identified:

- Cope with pressure ESCO
- Demonstrate physical resilience
- Manage frustration ESCO
- Manage risk
- Persist ESCO

4.2.5 Dealing with change

This cluster is about acting in an open-minded and pragmatic way to deal constructively with ambiguities and/or changes in the context or constraints which affect tasks and responsibilities. The following key single concepts have been identified:

- Perform services in a flexible manner ESCO
- Adapt to change ESCO
- Deal with uncertainty ESCO

4.2.6 Engaging in self-development

This cluster is about showing initiative, motivation and commitment, and seeking opportunities to pursue personal and/or professional development. The following key single concepts have been identified:

- Demonstrate self-management
- Reflect on practice ESCO
- Demonstrate willingness to learn ESCO

4.3 Social and communication skills and competences

For this category the expert group suggests, as indicated, the following six clusters:

1. Conveying and exchanging information and ideas
2. Showing respect and consideration for others

DRAFT

3. Supporting others
4. Collaborating with others in teams and networks
5. Managing and leading others
6. Conciliating and negotiating

The following sections present the key concepts identified for each cluster (listed alphabetically). These 27 key concepts refer to a total of 318 single concepts used by other TSC approaches, partly overlapping and pointing in the same broad direction.

4.3.1 Conveying and exchanging information and ideas

This cluster is about speaking formally and informally to a variety of different audiences and for different purposes, listening to others and responding to their contributions or concerns.. The following key single concepts have been identified:

- Address an audience ESCO
- Explain facts or ideas
- Listen actively ESCO
- Report facts or ideas ([28])
- Use body language ESCO
- Use questioning techniques ESCO

4.3.2 Showing respect and consideration for others

This cluster is about taking account of others' rights, opinions, wishes, experience, and competence, encouraging others to express ideas and treating them with courtesy and politeness. The following key single concepts have been identified:

- Accept constructive criticism ESCO
- Demonstrate consideration ESCO
- Demonstrate good manners ESCO
- Demonstrate intercultural competence ESCO

4.3.3 Supporting others

This cluster is about ensuring that others who lack skills/competences or confidence are given constructive, compassionate, or empathetic advice, if they ask for guidance or show a need for it.

The following key single concepts have been identified:

([28]) Currently represented in ESCO as ‚report facts' only.

- Ensure client orientation ESCO
- Give advice to others **ESCO**
- Support others

4.3.4 Collaborating with others in teams and networks

This cluster is about engage in joint activities with partners or teams openly and on agreed terms, and showing respect for the skills, experiences and contributions of others when planning, carrying out and evaluating these activities. The following key single concepts have been identified:

- Develop professional network ESCO
- Liaise with others
- Share information ([29])
- Work in teams ESCO

4.3.5 Managing and leading others

This cluster is about exercising influence or power in motivating, proposing, planning, actioning and evaluating the outcomes of social or work-related activities, and taking responsibility for decisions taken. The following key single concepts have been identified:

- Coordinate activities
- Instruct others ESCO
- Lead others ESCO
- Manage diversity ([30])
- Manage people ([31])
- Motivate others ESCO
- Persuade others ESCO
- Supervise others ([32])

4.3.6 Conciliating and negotiating

This cluster is about influencing and motivating others to minimise or resolve conflicts. The following key single concepts have been identified:

- Manage conflicts ([33])
- Negotiate compromise ESCO

([29]) Currently represented in ESCO as „circulate information".
([30]) Currently represented in ESCO as „support cultural diversity" and „promote inclusion".
([31]) Currently represented in ESCO as „manage human resources", „manage personnel" and „manage staff".
([32]) Currently represented in ESCO as „supervise staff", „monitor daily work", „monitor activities" etc.
([33]) Currently represented in ESCO as „conflict management", „social mediation", „apply conflict management", „handle conflicts" etc.

DRAFT

DRAFT

5. Life Skills and Competences ([34])

For this category the expert group addresses, as indicated, the following six areas:

- Environmental skills and competences
- Health skills and competences - Maintaining physical and emotional well-being
- Digital skills and competences - Working with computers
- Financial and entrepreneurial skills and competences -
- Civic skills and competences - Seeking opportunities for self-empowerment and participatory involvement
- Artistic skills and competences - Appreciating and expressing artistic potential

It is worth noticing that some of these clusters partly overlap with the EU key-competences framework and its categories 'Digital competence', 'Citizenship competence', 'Entrepreneurship competence' and Cultural awareness and expression competence. Given the efforts invested in the key competences framework, the expert group sees it as important to build on the basis already established. The fact that Environmental literacy and Health literacy are not covered by the key competences framework illustrates that the category 'Life skills and competences' as suggested in this report is continuously evolving and responds to contextual and external factors. While the categories Thinking, Self-regulation and Social/communication skills and competences will remain (fairly) stable, the terminology related to the Life skills and competences clusters will change and develop. In line with the approach chosen above, and t facilitate use, a limited number of concepts were eventually included (32). The following sections presents the key concepts identified for each cluster.

5.1.1 Environmental skills and competences

This cluster is about living and acting in an environmentally friendly way.

- Identifying and analyzing environmental issues in life and work.
- Evaluating ways if addressing environmental issues
- Using evidence and experience to explain issues and warrantable ways of resolving them.
- Taking personal responsibility for action to resolve or help resolve environmental issues.

[34] The areas covered by these clusters are sometimes referred to as "literacies" (Environmental Literacy, Health literacy, etc.). The idea of a "literacy" usually implies that it constitutes an agreed definition or schedule of competency or knowledge in a specific area of social or cultural importance. The clusters proposed by the expert group, do not carry this implication.

DRAFT

- Engage in collaborative social or organisational action to address environmental issues.

5.1.2 Health skills and competences

Health literacy is not systematically covered in existing terminological approaches. Its relevance has, however, been demonstrated by the 2020 pandemic. This cluster takes in personal, social and occupational issues of physical and mental well-being. The following key concepts provide a basis for further developing this terminological cluster:

- Making informed choices about the health implications of food and drink
- Managing health risks
- Making good use of opportunities for physical activity
- Acting in ways which protect mental health
- Taking action to maintain personal and public hygiene
- Meeting health and safety requirements

5.1.3 Digital skills and competences

This section can be developed based on the complex and rich list of terms currently used by ESCO. The man challenge is to reduce complexity and to clarify the distinction between transversal and sector/occupationally specific digital terms and concepts. Annex I gives some indication of this.

5.1.4 Financial and entrepreneurial skills and competences

The concepts suggested here reflect terms used by various other approaches and is also enriched by terms used in the Key Competence Framework. The proposal is seen by the expert group as a basis for further developments:

- Identifying opportunities
- Observing ethics
- Managing risk
- Maintaining control of finances
- Pursuing innovation
- Managing projects and processes
- Planning and monitoring supply and use of resources

5.1.5 Civic skills and competences

The concepts suggested here largely reflects the key concepts referred to in the Key competence framework. The proposal is seen by the expert group as a basis for further developments:

- Participating in democratic decision-making at all levels.
- Acting according to the principles of justice
- Acting with respect for social diversity and cohesion
- Engaging in community or neighbourhood activities

DRAFT

- Engaging with others in the public domain
- Acting with respect for differences in value systems

5.1.6 Artistic skills and competences

The concepts listed here reflect terms identified in various existing approaches but is enriched by concepts from the Key competence framework. The proposal is seen by the expert group as a basis for further developments:

- Taking account of cultural heritage
- Acting according to an appreciation artistic expression
- Demonstrating aesthetic sense
- Creating media products
- Demonstrating creativity
- Demonstrating design talent
- Demonstrating literary talent
- Demonstrating musicality

DRAFT

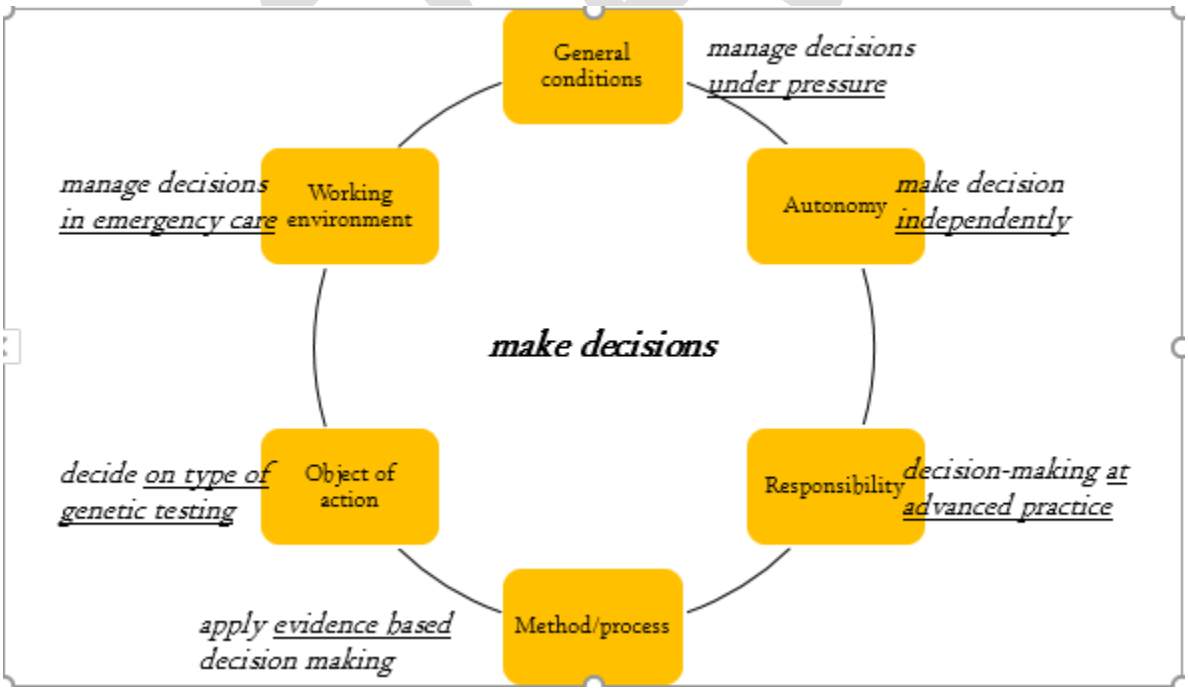
6. Outlook

The terminology of transversal skills and competences outlined in this paper has been designed to form part of version 1.1 of ESCO to be published in 2021. A key challenge is to ensure that the approach to transversal skills and competences suggested here can interact with and support the development and use of the overall ESCO terminology of occupationally and sector specific skills and competences (+/-13000 concepts). The issues involved in this are discussed below (6.1). The terminology of transversal skills and competences outlined here can, however, also be used independently of ESCO. The intuitive logic of the structure combined with a concise set of subordinated skills concepts (to be developed) will help potential users to better position their applications and approaches in a wider terminological landscape. This will be briefly exemplified and discussed below (6.2).

6.1 The role of TSCs in the ESCO skills pillar

The TSC structure and terminology presented in this report is conceptualized at a rather generic level (e.g. “make decisions”) in order to be widely applicable across sectors, but can be contextualized (see Figure 2) to become tailored for specific sectoral or occupational usage.

Figure 2: Manifestation of a transversal skill (“make decisions”) in concrete occupational contexts



Individual transversal skills concepts contained in the new TSC structure

- either already existed in ESCO before, mostly as transversal (e.g. “demonstrate willingness to learn”), but sometimes also classified as cross-sectoral (e.g. “develop professional network”), or even as sector-specific (e.g.”reflect on practice”) skill/competence,
- or had to be supplemented to close terminological gaps (as in the case of e.g. “search for information” or “analyze information”).

The original skills pillar of ESCO (in ESCO version 1.0) was developed in 27 different economic sectors, listing more than 13000 terms. which were all classified with respect to their expected reusability as occupation-, sector-specific, or as cross-sectoral. A separate list of transversal skills and competences was developed and operated in parallel to this extensive list of terms. Once both vocabularies had been finalized, all cross-sectoral and sector-specific KSCs identified as contextualizing (in some cases even duplicating) transversal KSCs were subordinated to these. This means that, to a certain extent, transversal KSCs in ESCO v1.0. were never fully integrated into the system because

- transversal skills were only later linked with their more contextualised manifestations (cross-sectoral, sector-specific KSCs)
- but were not systematically expressed in occupational profiles.

A key challenge for version 1.1 of ESCO is to address this original weakness of ESCO version 1.0. The integration of TSCs into ESCO version 1.1 must depart from the new basic structure having been agreed (2020) for the Skills pillar. According to this, the existing +/-10000 terms will be distributed according to eight main areas, reflecting the character of the tasks, functions and activities involved. Different from a traditional occupational/sectoral structuring (ISCO, NACE), the approach draws attention to the fundamental difference between occupations mainly depending on communication and collaboration (for example personal services) and occupations mainly defined according to interaction with the external world (for example manufacturing). Using the new TSC structure as a reference point and resource for the overall development of the skills pillar is important for several reasons. It will

- Support a more uniform approach to expressing skills and competences, notably how TSCs can inform the description of skills related to tasks, functions, occupations and economic sectors
- Allow for a simplification of terminology by avoiding duplication and unnecessary confusion of terms

The TSC terminology, seen as an overarching reference point and resource for ESCO, will play two main roles:

- Used as a starting point for contextualisations, the TSC structure will support the development of a more transparent and consistent expression of cross-sectoral, sectoral and occupation-specific skills.
- Used as a construction template across sectors the TSC structure can help to systematically express and highlight transversal skills across occupations and sectors.

DRAFT

These application possibilities are essential for ESCO to capture the increasing importance of transversal skills and competences in society, pointing to the blurring of borderlines between occupations and sectors. For a terminology of occupations, skills and competences to stay relevant and useful it is necessary to capture also these widely demanded skills, and not just focus on occupation-/sector-specific ones, the latter having the disadvantage of becoming obsolete more easily due to technological change, modifications of operational procedures or other developments reshaping the world of learning and work.

6.2 Independent use of the TSC structure

In line with the mandate of the expert group, notably as requested by the EQF Advisory Group, the proposed structure can be used independently of the recently implemented general skills hierarchy, and even independently of ESCO. Designed as a map of transversal skills and competences, the approach allows users to clarify the orientation of own applications (along a continuum from the internal personal to the interaction with the external world). This logic is critical when (for example) defining and writing learning outcomes statements to be used for an education or occupation standard, when designing a curriculum for vocational training or writing the specifications for an assessment procedure. As for ESCO, the TSC structure should be a resource and a reference point for addressing transversal skills and competences in a variety of practical applications.

7. Next steps to complete the development of transversal skills

Chapters 3 and 4 both points in some detail to issues requiring further development for the TSC structure to fully support ESCO. To finalize the revision and elaboration of TSC and ensure its integration into the overall skills pillar, the following main tasks need to be addressed:

- Ensure that all current transversal KSCs are considered for the new structure
- Complete the identification of skills gaps for all clusters (particularly for Life skills)
- Compose descriptions and (where necessary scope notes) for skills concepts
- Allocate alternative labels to skills concepts
- Link transversal skills concepts to already existing contextualisations, or suggest contextualisations of broader relevance as example for further developments
- Develop guidelines for contextualising transversal skills.

Guidelines for contextualisation are critical, and should be developed describing which aspects should be further specified in contextualisations (e.g. method used, object of action, or level of autonomy), and which not (e.g. the sector in which the transversal skill is used, e.g. „manage time in tourism“, „manage time in forestry“ etc.) and which format and level of specificity is appropriate (e.g. to distinguish two related yet distinct occupational profiles) and which is only obscuring mobility paths between occupations..

DRAFT

DRAFT

References

Bundesministerium für Bildung und Forschung (2013). Deutscher Qualifikationsrahmen für Lebenslanges Lernen: German EQF Referencing. Available at https://ec.europa.eu/ploteus/en/referencing-reports-and-contacts (Last accessed 07.12.19)

Cedefop (2008). Terminology of European Education and Training Policy: a selection of 100 key terms (Luxembourg). Available at https://www.cedefop.europa.eu/files/4064_en.pdf [last accessed 29.12.19]

Cedefop (2017), Defining, writing and apl;lying learning outcomes: A European Handbook

https://www.cedefop.europa.eu/en/publications-and-resources/publications/4156

Cedefop (2018), Analysis and overview of NQF level descriptors in European countries

https://www.cedefop.europa.eu/en/publications-and-resources/publications/5566

Cedefop (2019). Skills Panorama. Online at https://skillspanorama.cedefop.europa.eu/en/glossary [last accessed 29.12.19]

Council of the European Union (2017). Council Recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning and repealing the recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning. Available at https://publications.europa.eu/en/publication-detail/-/publication/ceead970-518f-11e7-a5ca-01aa75ed71a1/language-en (Last accessed 10.04.18)

Council of the European Union (2018). Council Recommendation of 22 May 2018 on key competences for lifelong learning. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2018.189.01.0001.01.ENG&toc=OJ:C:2018:189:TOC (Last accessed 29.12.19)

Delamare-Le Deist, F. and Winterton, J.. (2005). What is competences? Human Resource Development International, Vol. 8, No. 1, 27 – 46, March 2005.

European Commission (2008) The European Framework for Lifelong Learning (EQF). Available at https://ec.europa.eu/ploteus/documentation (Last accessed 09.06. 16).

European Commission. (2018). ESCOpedia. Online at https://ec.europa.eu/esco/portal/escopedia/European_Skills_44__Competences_44__Qualifications_and_Occupations__40_ESCO_41_ (Last accessed 27.10.19)

European Commission (2019a). What is ESCO? Online at https://ec.europa.eu/esco/portal/howtouse/21da6a9a-02d1-4533-8057-dea0a824a17a (Last accessed 30.10.19)

DRAFT

European Commission (2019b). ESCO Handbook: European Skills, Competences, Qualifications and Occupations. Available at https://ec.europa.eu/esco/portal/document/en/0a89839c-098d-4e34-846c-54cbd5684d24 (Last accessed 20.10.19)

European Commission (undated). ESCO Service Platform Data Model. Available at https://ec.europa.eu/esco/portal/document/en/87a9f66a-1830-4c93-94f0-5daa5e00507e (Last accessed 20.10.19)

European Economic and Social Committee (2012). Active Citizenship for a better European Society. Brussels: EESC Visits and Publications Unit. Available at https://www.eesc.europa.eu/resources/docs/eesc-2011-35-en.pdf (Last accessed 06.08.14)

French Working Group (2010). Referencing of the French National Framework of Qualifications (NFQ) in the light of the European Qualifications Framework for Lifelong Learning. Paris: Commission Nationale de la Certification Professionelle. Available at https://ec.europa.eu/ploteus/en/referencing-reports-and-contacts (last accessed 07.12.19)

UNESCO-International Bureau of Education (2007). The UNESCO-IBE Education Thesaurus, sixth ed., 2nd rev. Available at http://www.ibe.unesco.org/en/unesco-ibe-education-thesaurus (Last accessed 18.11.19)

Lippman, L. et al. (2015), Key Soft Skills that Foster Youth Workforce Success; Toward a Consensus Across Fields, Child Trends Publishing, Washington, DC. Available at https://www.childtrends.org/wp-content/uploads/2015/06/2015- 24WFCSoftSkills1.pdf (Last accessed 31.12,19).

Logai, V., et al (2014). Referencing the Slovenian Qualifications Framework to the European Qualifications Framework for Lifelong Learning and the Qualifications Framework for the European Higher Education Area: Final Report. Ljubljana: Institute of the Republic of Slovenia for Vocational Education and Training (CPI). Available at https://ec.europa.eu/ploteus/sites/eac-eqf/files/Final%20Report%20SI_2014.pdf (Last accessed 13.10.17)

Martin, J. P. (2018). Skills for the 21st Century: Findings and Policy Lessons from the OECD Survey of Adult Skills. OECD Education Working Paper No, 166. OECD Publishing, Paris. Available at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2018)2&docLanguage=En (Last accessed 31.12.19)

OECD (2014). Competency Framework, Available at https://www.oecd.org/careers/competency_framework_en.pdf (Last accessed 30.12.19)

PwC, Tipik, 3s, FGB (2016). ESCO Terminological Guidelines v1: General section. *Update of September 23. 2016*

PwC, Tipik, 3s, FGB (2016). Language-specific rules for English.

Republica Italiana (2012). First Italian Referencing Report to the European Qualifications Framework – EQF. Available at https://ec.europa.eu/ploteus/en/referencing-reports-and-contacts (last accessed 07.12.19)

UNESCO/UIL, ETF, Cedefop (2019) Global Inventory of Regional and National Qualifications Frameworks, Volume II: National and Regional Cases. Hamburg: UNESCO. https://www.cedefop.europa.eu/files/2225_en.pdf [Last accessed 09.10.19]

UNESCO-UNEVOC. (2014). TVETipedia Glossary. Online at https://unevoc.unesco.org/go.php?q=TVETipedia+Glossary+A-Z&id=577 (Last accessed 27.10.19)

Wikipedia: Big Five Personality Traits. Online at https://en.wikipedia.org/wiki/Big_Five_personality_traits (Last accessed 06.01.20)

Wikipedia: HEXACO model of personality structure. Online at https://en.wikipedia.org/wiki/HEXACO_model_of_personality_structure (Last accessed 06.01.20)

DRAFT

ANNEX I – TSC categories, clusters and concepts
ANNEX II – Concepts and their sources
ANNEX III – Identified sources

DRAFT