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THEMATIC PRIORITY

INNOVATION

ROADMAP ON THE MINIMUM TECHNICAL SKILLS AND SOCIAL COMPETENCIES REQUIRED IN HORTICULTURE IN NWE

Lycée Technique Agricole

Forum pour l'emploi.

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CONTENTS

1 INTRODUCTION

A. Competencies and skills within the IMAGINE Project

IMAGINE is a social innovation project part-funded by the EU InterregNorth West Europe.It will last for 45 months from January 2019. It comprises a transnational delivery team of ten partners and sub-partners from Belgium, France, Luxembourg, the Netherlands and the United Kingdom, under the leadership of the Bureau Economique de la Province de Namur (Belgium).

IMAGINE aims to tackle unemployment by creating sustainable job prospects in the horticultural sector for people aged 18-34 with low-skills who are not in education, employment or training (NEET). The Project is being delivered by partners in areas of North West Europe where many young people face barriers in obtaining employment. Our ambition is to develop, test and implement a series of innovativenew models to support our target group into sustainable jobs, sharing the learning from the project so that our work might be replicated across North West Europe over time.

To do this, this roadmap on the minimum social competencies and technical skills required in horticulture in NEW Europe was established. It is a tool for local authorities, small to medium sized enterprises (SMEs) and other involved parties to identify competencies and skills needed in a specific work area in horticulture and understand the need to acquire certain competencies/skills and the needs of each individual NEET.

B. Importance of competencies and skills in a professional action

The words competencies and skills are often interchanged as definitions are vague and vary in scientific publications. In general, a competence is "the ability to do something successfully or efficiently" whereas a skill "is the ability to do something well" (Oxford Dictionary). However, slight differences in meaning are made. A skill is often related to an ability that has been acquired by training. For purposes of easiness, these two words are used synonymously in this roadmap.

Nowadays, competences and skills have become more and more important to teach students and pupils at school or in higher education next to the classical knowledge. This demand results from industry. It is not sufficient for a company to build on work processes that are carried out according to given instructions with always the same routine, they want complete actions. A competent employee is needed which is flexible to every new situations, adapts quickly to fast changing environments and is able to cope independently with problems. Competent employees should continuously learn from work experience and perform tasks not only technically, but also socially.

For example, a NEET starts a job as market gardener in a SME specialized in growing salads. What could a preparation to the job look like in order to master it competently? Classically, the market garden entrepreneur tells the prospective employee what to know about growing and processing salads. The NEET would then learn, for example, how to seed the plants from specialized information with rules that he should follow in seeding salads. Such knowledge (in terms of learning content) is important, but it is not enough to master the task competently. The step of knowledge to the step of doing requires further efforts.

A step further, the employer could exactly show the prospective market gardener on ground what he later has to do. This way, the NEET would learn to do the work as accurately as possible since an expert showed it to him. However, even this procedure is not enough to prepare NEETs for the needs of this job. While the NEET might have learned how to deal in a particular setting, he would probably have great difficulties when slight changes occur in the procedure (i.e. different quantities of seed, climate extremes or tools missing/broken). The NEET has to demonstrate a certain flexibly beyond only grounded routines. **A flexibility in thinking and acting - besides know-how also know-why – is needed.**

A professional action is not sufficient anymore, but a competent action. This means that the professional action requires only not only the knowledge. Rather, a competent employee is able to meet the requirements in one field of work. Thus, an employee needs both :

- to cope with his knowledge, skill and attitude aspects
- to cope with its professional, social and personal dimensions

Consequently, the technically experienced marked gardener remains unsuccessful if he cannot fix an unforeseen problem. The socially competent marked gardener will also be unsuccessful if he is technically overwhelmed.

A vocational training must satisfy these higher demands in the job. It is no longer enough to have extensive book training skills and practical work to train only on the performance of certain activities. A training needs to follow the approach of teaching and learning that aims to impart competencies/knowledge to the students in such a way that they become capable of dealing actively with new information and unknown situations (= competence orientation). Therefore, three key areas become indispensable in trainings :

- Appropriate assessment of competences in training profiles and curricula
- Sustainable communication of competences in learning and training processes
- Valid assessment of competences in the evaluation

2 THE MINIMUM TECHNICAL SKILLS REQUIRED IN HORTICULTURE IN NWE

A. The professional profile

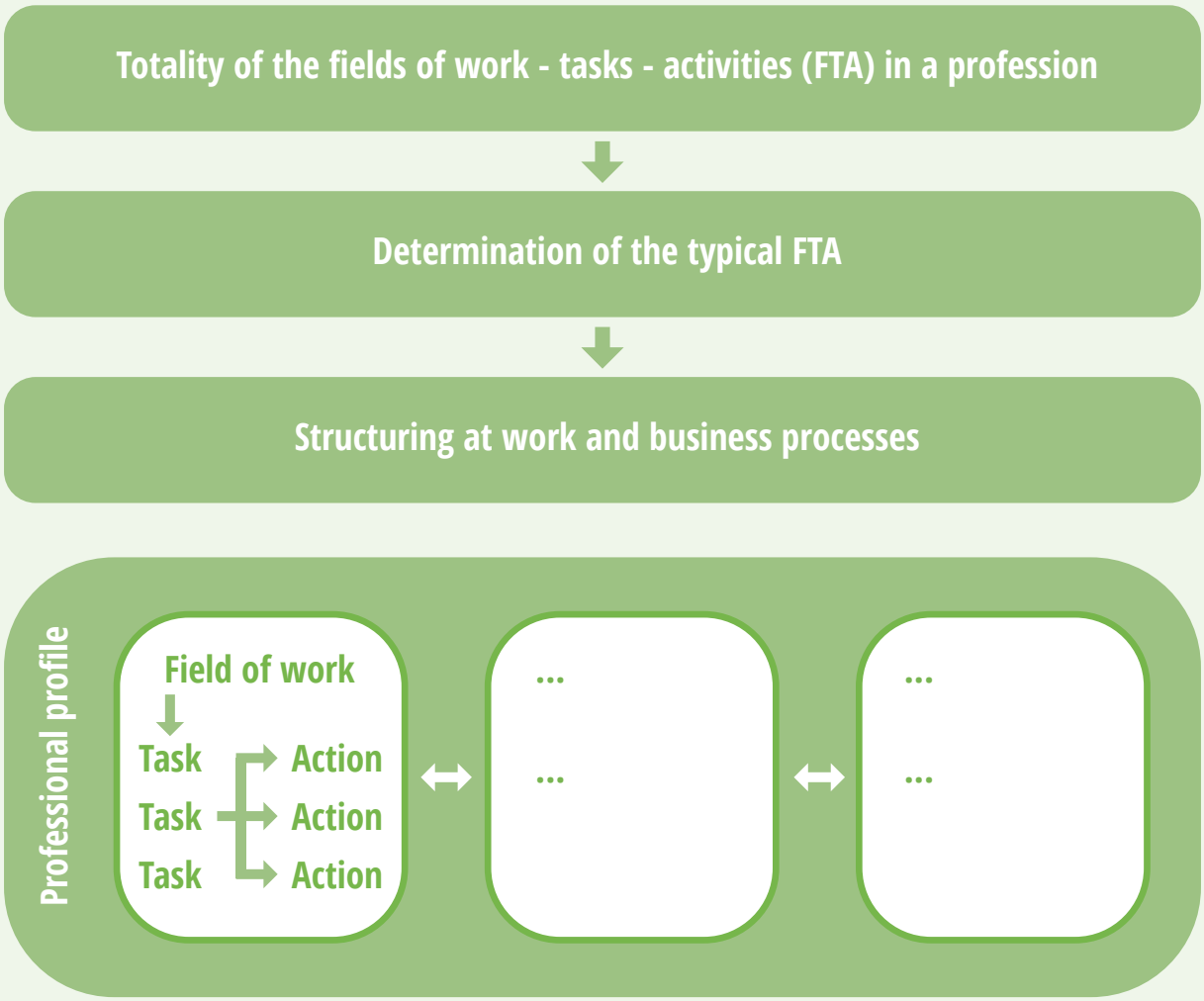
To know which skills and competencies are needed in a job, it is indispensable to elaborate a professional profile. This profile describes the occupation-typical fields of work, tasks and activities performed by a current professional (with at least two years of professional experience).

Occupational profiles are described overall by the following components :

- Official job title
- Legal framework
- Description of the labor market (job prospects, possible jobs)
- Information about future developments of the profession
- Brief description of the profession (field of application in 4-6 sentences)
- Differentiation from related and similar occupations
- Fields of work - Tasks – Actions

An efficient methodology to elaborate the professional profiles is by starting with the structure. First start with a list of all possible fields of work, tasks and activities (FTAs) in a profession. From this list the FTAs are identified for the specific job (see section 2.2). Once the FTAs are determined, the fields of work are broken down to its sum in tasks which are then described by its different actions. Different tasks and actions from specified field of works may depend on other tasks and actions from other field of works, however, each action and task must be unique within the totality of field of works.

Figure 1 : Structure of an occupational profile



The different fields of work in market gardening are reflected by the production cycle of vegetables :

- preparation of land,
- seeding, plant care,
- maintenance of tools and equipment,
- plant propagation,
- harvest,
- follow-up of land,
- storage of vegetables,
- sale of vegetables,
- business management

These categories can be subclassified into many different techniques/methods all depending on the production system and the produced vegetables.

B. List of knowledge needed in horticulture

As there is a wide range of professional profiles, there is also a multitude of careers possible in horticulture. One task may demand work that is more physical whilst another task involves thinking efforts. In general, the more educated a person is, the more conceptual tasks he gets. Hence, different levels of knowledge in horticulture are important in the fields of work. Moreover, a specific task needs knowledge from different areas. Here is a list with which knowledge is needed in horticulture :

Administration and Management - Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modelling, leadership technique, production methods, and coordination of people and resources.

Production and Processing - Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Personnel and Human Resources - Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labour relations and negotiation, and personnel information systems.

Sales and Marketing - Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.

Biology - Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.

Customer and Personal Service - Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Mathematics - Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Chemistry - Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Economics and Accounting - Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.

Transportation - Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.

Education and Training - Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.

English Language - Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Mechanical - Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Design - Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Public Safety and Security - Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.

Psychology - Knowledge of human behaviour and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioural and affective disorders.

Law and Government - Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Clerical - Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Engineering and Technology - Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Philosophy and Theology - Knowledge of different philosophical systems and religions. This includes their basic principles, values, ethics, ways of thinking, customs, practices, and their impact on human culture.

Building and Construction - Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Geography - Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.

3 THE MINIMUM SOCIAL COMPETENCIES REQUIRED IN HORTICULTURE IN NWE

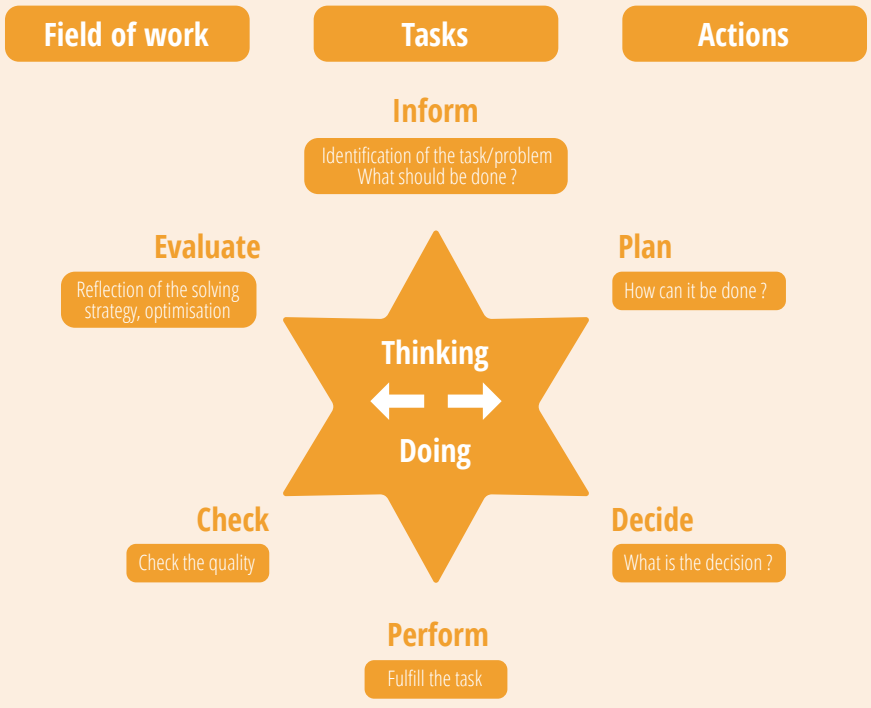
A. Complete actions in a professional action

While in the past professional profiles often involved a variety of fixed processes, modern professional profiles are characterized by the fact that they reflect so-called "complete actions". A competent professional practice requires besides fixed tasks also planning, controlling and evaluating. In short: doing and thinking, interlinking action and reflection, practice and theory.

A complete action includes the following areas :

- **Inform :** The trainee gets the necessary information, to edit a complex task / problem for him. He should carry out this information gathering as independently as possible. He should ask himself : what is the goal ? What is the problem ? Which information do I need to work on the problem ?
- **Planning :** The trainee creates a workflow as independently as possible. He should ask himself : how do I proceed? Which materials, tools etc. need I?
- **Decide :** The trainee makes sure (for example in a conversation with the teacher or instructor), whether the planning is consistent. The result decides about the actual procedure. He should ask himself: what solution would you take ? I?
- **Execute :** The apprentice manages the planned work steps independently out. He should ask himself : How do I lead my work plan under the given Conditions ?
- **Check :** The apprentice compares the target and actual status. He should ask himself : was the work order carried out properly ? Has the goal been achieved ?
- **Rate :** The trainee evaluates the work result as far as possible independently. He reflects on his own approach. He should ask : What succeeded ? What can I do better in the future ?

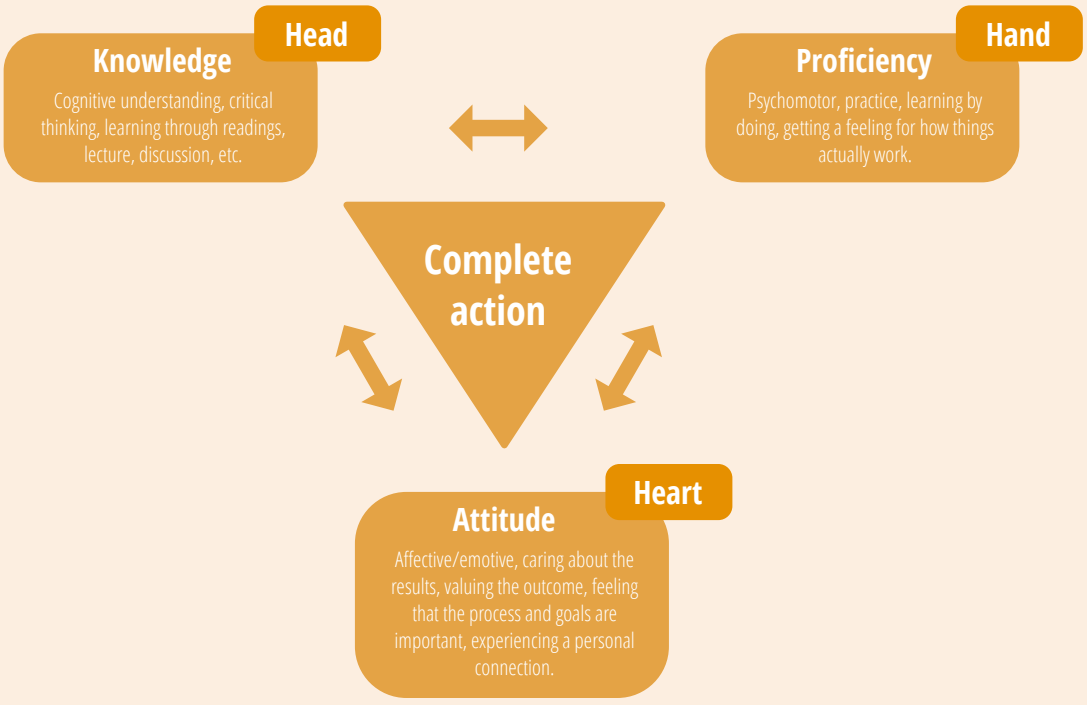
Figure 2 : Model of a complete action



B. Head, heart and hand model in a complete action

It becomes evident that the knowledge of doing something is not sufficient to complete a task successfully. The head, heart and hand model (HHH model) integrates besides the knowledge as well as the proficiency and the attitude in a complete action. The head refers to the engagement of the cognitive understanding and critical thinking through learning, reading and discussions. The hand represents the psychomotor domain. Here you get a feeling how things work by doing. The heart refers to the attitude and values which are translated into behaviours.

Figure 3 : Head, heart and hand model and the 3 pillars of a complete action



C. Areas of competencies

To achieve the complete action we saw that next to the knowledge it is important to have the proficiency and attitude to perform the task. These three pillars go along with different areas of competencies. We distinguish :

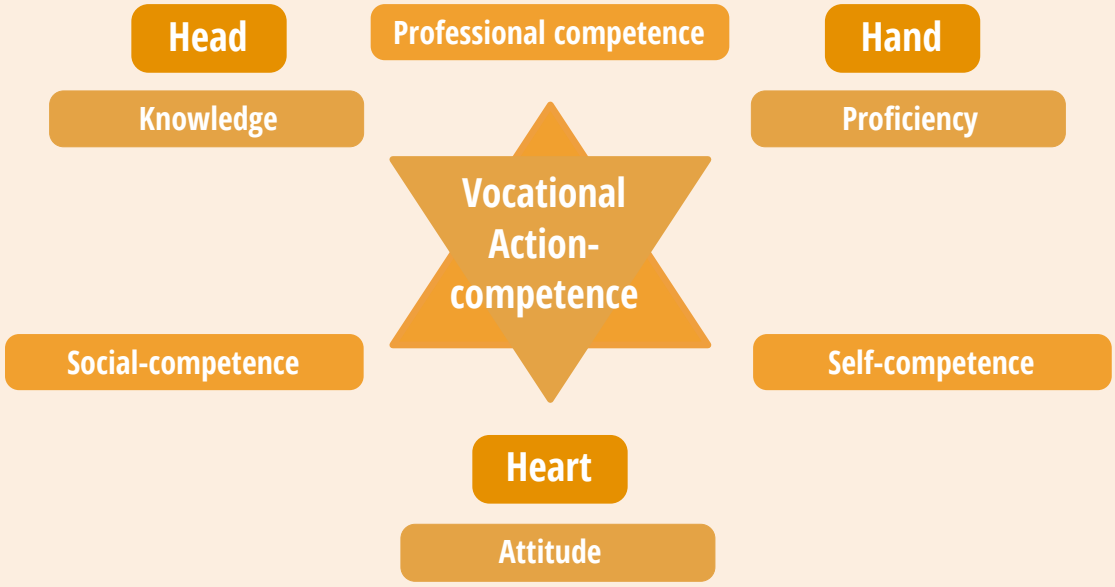
- **Competence** (or technical expertise) refers to the ability to perform tasks and to solve goal-oriented problems based on technical knowledge, working autonomously and judging the result. → hard skill

  It includes as well working in a method-guided manner, which refers to the **method competence** → soft skills

- **Social competence** refers to ability to shape social relationships, to deal with others responsibly, and to communicate. This includes the development of social responsibility and solidarity. → soft skills

- **Self-competence** refers to the ability to make demands, to clarify and to shape one's own personality. This includes the development of one's own learning competence and the development of values. → soft skills

Figure 4 : Interdependence of the three pillars of a complete action with different areas of competencies



D. List of competencies in horticulture

COMPETENCIES (TECHNICAL EXPERTISE) AND METHOD COMPETENCIES

- **Analytical Thinking** - Job requires analyzing information and using logic to address work-related issues and problems.
- **Innovation** - Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
- **Critical Thinking** - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- **Monitoring** - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- **Judgment and Decision Making** - Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- **Complex Problem Solving** - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- **Reading Comprehension** - Understanding written sentences and paragraphs in work related documents.
- **Active Learning** - Understanding the implications of new information for both current and future problem-solving and decision-making.
- **Writing** - Communicating effectively in writing as appropriate for the needs of the audience.
- **Systems Evaluation** - Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- **Management of Material Resources** - Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- **Management of Financial Resources** - Determining how money will be spent to get the work done, and accounting for these expenditures.
- **Learning Strategies** - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- **Science** - Using scientific rules and methods to solve problems.
- **Operation Monitoring** - Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Quality Control Analysis** - Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- **Systems Analysis** - Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

SOCIAL COMPETENCE

- **Leadership** - Job requires a willingness to lead, take charge, and offer opinions and direction.
- **Cooperation** - Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
- **Social Orientation** - Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
- **Concern for Others** - Job requires being sensitive to other's needs and feelings and being understanding and helpful on the job.
- **Management of Personnel Resources** - Motivating, developing, and directing people as they work, identifying the best people for the job.
- **Instructing** - Teaching others how to do something.
- **Coordination** - Adjusting actions in relation to others' actions.
- **Speaking** - Talking to others to convey information effectively.
- **Active Listening** - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Social Perceptiveness** - Being aware of others' reactions and understanding why they react as they do.
- **Negotiation** - Bringing others together and trying to reconcile differences.
- **Persuasion** - Persuading others to change their minds or behaviour.
- **Service Orientation** - Actively looking for ways to help people.

SELF-COMPETENCE

- **Dependability** - Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- **Self-Control** - Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behaviour, even in very difficult situations.
- **Initiative** - Job requires a willingness to take on responsibilities and challenges.
- **Persistence** - Job requires persistence in the face of obstacles.
- **Attention to Detail** - Job requires being careful about detail and thorough in completing work tasks.
- **Adaptability/Flexibility** - Job requires being open to change (positive or negative) and to considerable variety in the workplace.
- **Stress Tolerance** - Job requires accepting criticism and dealing calmly and effectively with high stress situations.
- **Integrity** - Job requires being honest and ethical.
- **Achievement/Effort** - Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
- **Independence** - Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
- **Time Management** - Managing one's own time and the time of others.
- **Physical Fitness** – Job requires a physically fit person, no major restrictions in mouvements.

4 HETEROGENEITY OF NEETs

It is difficult to portrait a classical NEET. They form a heterogeneous population highly different in competencies, skills and life situations. This heterogeneity has two implications in terms of public policies: on the one hand, not each NEET needs help from public action. On the other hand, public action must be specific and need a policy adapted to one category of NEET but not necessarily to another. Hence, the heterogeneous group of NEETs are differently distanced from labour market and social life.

A. Classification of NEETs

Based on cognitive capacities, deviant behaviour and material deprivation, NEETs can be grouped into three broad categories which themselves are subdivided into groups (G1-G7). This classification helps to portrait, assess and specifically train NEETs to acquire the necessary competencies and skills for a successful (re)integration to the labour market.

The first category, which brings together the first three groups (G1, G2 and G3), is characterized by the intensity of the active steps NEETs have to take on order take to enter the labor market, a training or to resume their studies. In other words, NEETs belonging to this first category, whose low cognitive abilities are noticeable, remain close to the labor market or the training system and show the willingness to do something.

- G1 "NEETs in transition": The NEETs do not seem vulnerable and they do not accumulate any of the problems studied. The status of the NEET is therefore probably transient since these young people in the integration phase have a significant chance of success given their employability.

- G2 "NEETs with health problems": This group connects NEETs who report having health problems that have led to school failure and have in consequence a low level of education despite high cognitive abilities. The vulnerability of this group is more worrying in that their health problem seems to hinder their insertion.

- G3 "NEETs actively searching for a job, but finding it difficult to integrate": Despite their active approaches, NEETs have great difficulties of integration as evidenced by the frequency of the recurrence of the status of NEET. This group is characterized by going back and forth between activity and inactivity or unemployment. A form of social isolation and a certain financial precariousness aggravates their situation. On the other hand, the intensity that they put in the search for a solution to leave the inactivity or the unemployment conducts them in the "radar" of the institutions in charge of NEETs in difficulty. This is a necessary condition, but not sufficient, for public support and thus a better chance of integration.

The second category of NEETs groups G4 and G5 and is characterized by the virtual absence of active approaches to exit the status of a NEET but demonstrate the existence of a certain employability. Young people in this category have moved away from the job market or training system but seem to be able to fit in with their employability.

- G4 "NEETs by choice": This status seems to be a choice since the youth belonging to this group assume their inactivity.

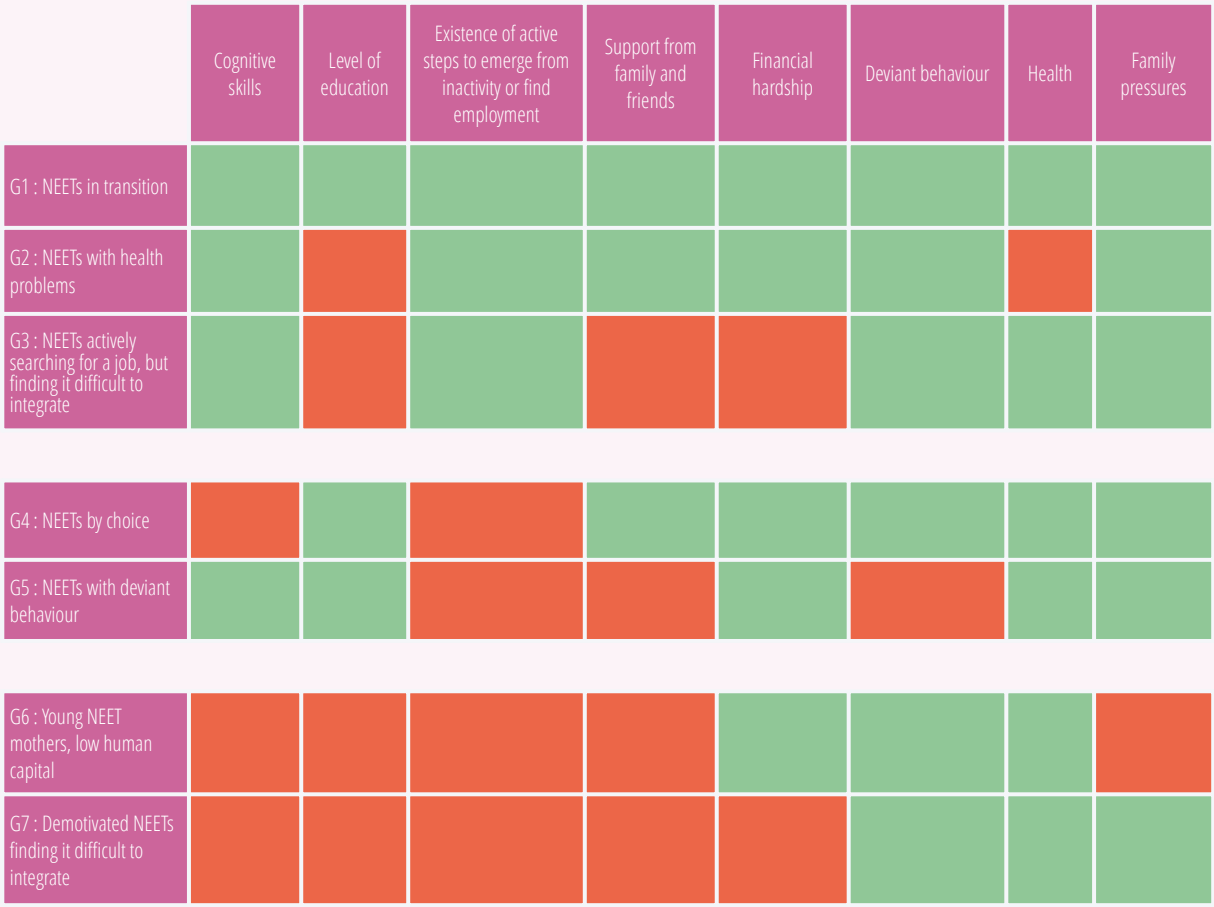
- G5 "NEETs with deviant behavior": This group gathers young people displaying deviant behaviors that need specialized care to find their way back into society. The implementation of this care, however, depends on the possibility and difficulty of getting in touch with these young people. The later frequently experience persistence in NEET status. This second category of youth is considered employable but does little to get out of their inactivity.

The third category of NEETs, composed of groups G6 and G7, assemble young people who declare that they do not take many steps to get out of inactivity or unemployment. They also have a low level of qualification and cognitive abilities which does do not allow them to acquire a training compatible with an insertion on the primary market.

- G6 "NEETs young mothers with low human capital": These women are thought to have withdrawn into the private sphere and into the education of children.
- G7 "demotivated NEETs with integration difficulties": NEETs are confronted with the persistence or recurrence of NEET status. Young people in this group have many problems: a certain distance from the labor market, associated with a lack of significant motivation, a form of social isolation, a certain financial precariousness situation and especially low employability. The level of vulnerability of this group is very high because they are young people from disadvantaged backgrounds who are part of a trajectory already marked by failure and exclusion since they are very numerous to have been in situation school dropout. These young people are far away from the labor market or the training system and are not integrated.

Figure 5 : A summary description of the 7 groups NEETs are classified based on their cognitive capacities, deviant behaviour and material deprivation.

(Figure adapted from Le Gouvernement du Grand-Duché de Luxembourg, Service National de la Jeunesse. (2017). Etudes et Conférences: Les Jeunes NEETs au Luxembourg. *Étude initiée par le Service National de la Jeunesse*, 22 pages)



The heterogeneity of NEETs becomes also apparent by the diversity of measures that may help them to get out of the NEET status. Hence, each group of NEETs need tailor-made trainings to improve their status. NEETs from G1-3 need more to be trained in hard skills and NEETs from G4-7 need training in soft skills.

B. Assessment of NEETs following Bloom's taxonomy

For a successful training, it is indispensable to know at which level of the knowledge dimension (hard skills) and the cognitive dimension (soft skills) the NEETs are. Therefore, the Bloom's taxonomy is a very useful tool for systemic classifications of the processes of thinking and learning. It provides a clear, concise visual representation of the alignment between standards and educational goals, objectives, products and activities.

Bloom's taxonomy is a very useful tool to assess the level of students/NEETs and to develop learning objectives as it includes the complete process of learning and the kind of knowledge to be learned. The cognitive process dimension (learning process) represents a continuum of increasing cognitive complexity :

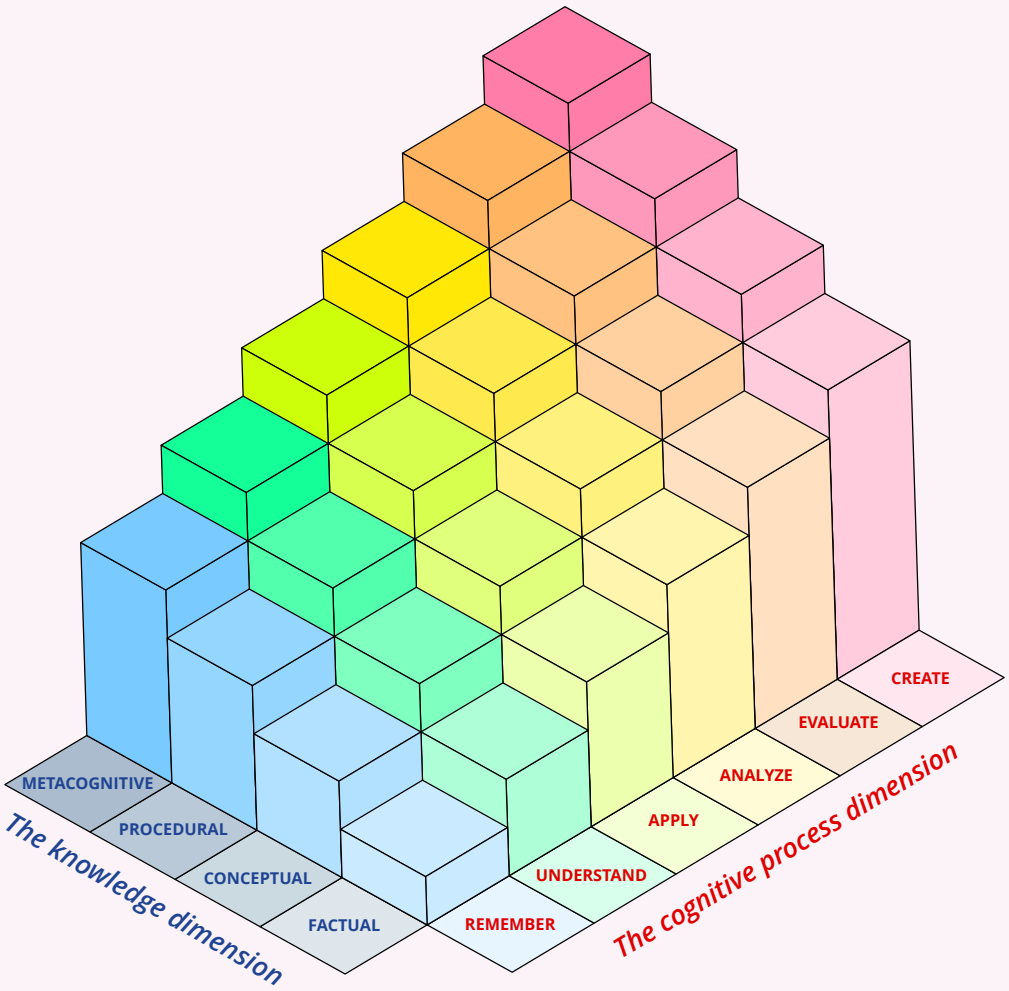
- Remember – Retrieve relevant knowledge from long-term memory
- Understand – Construct meaning from instructional messages, including oral, written and graphic communication
- Apply – Carry out or use a procedure in a given situation
- Analyse – Break material into constituent parts and determine how parts relate to one another and to an overall structure or purpose
- Evaluate – Make judgments based on criteria and standards
- Create – Put elements together to form a coherent whole, reorganize into a new pattern or structure

The knowledge dimension represents a range from concrete (factual) to abstract (metacognitive) steps of knowledge :

- Factual knowledge – The basic elements students must know to be acquainted with a discipline or solve problems in it (terminology, specific elements, and details)
- Conceptual knowledge – The interrelationships among the basic elements within a larger structure that enable them to function together (models, structures and theories, generalizations, principles, categories, and classifications)
- Procedural knowledge – How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques and methods
- Metacognitive knowledge – Knowledge of cognition in general as well as awareness and knowledge of one's own cognition

Figure 6 : Revised Bloom's taxonomy : a tool for assessing, learning and teaching

(Figure adapted from Rex Heer, Iwo State University, Center for Excellence in Learning and Teaching, March 2009)



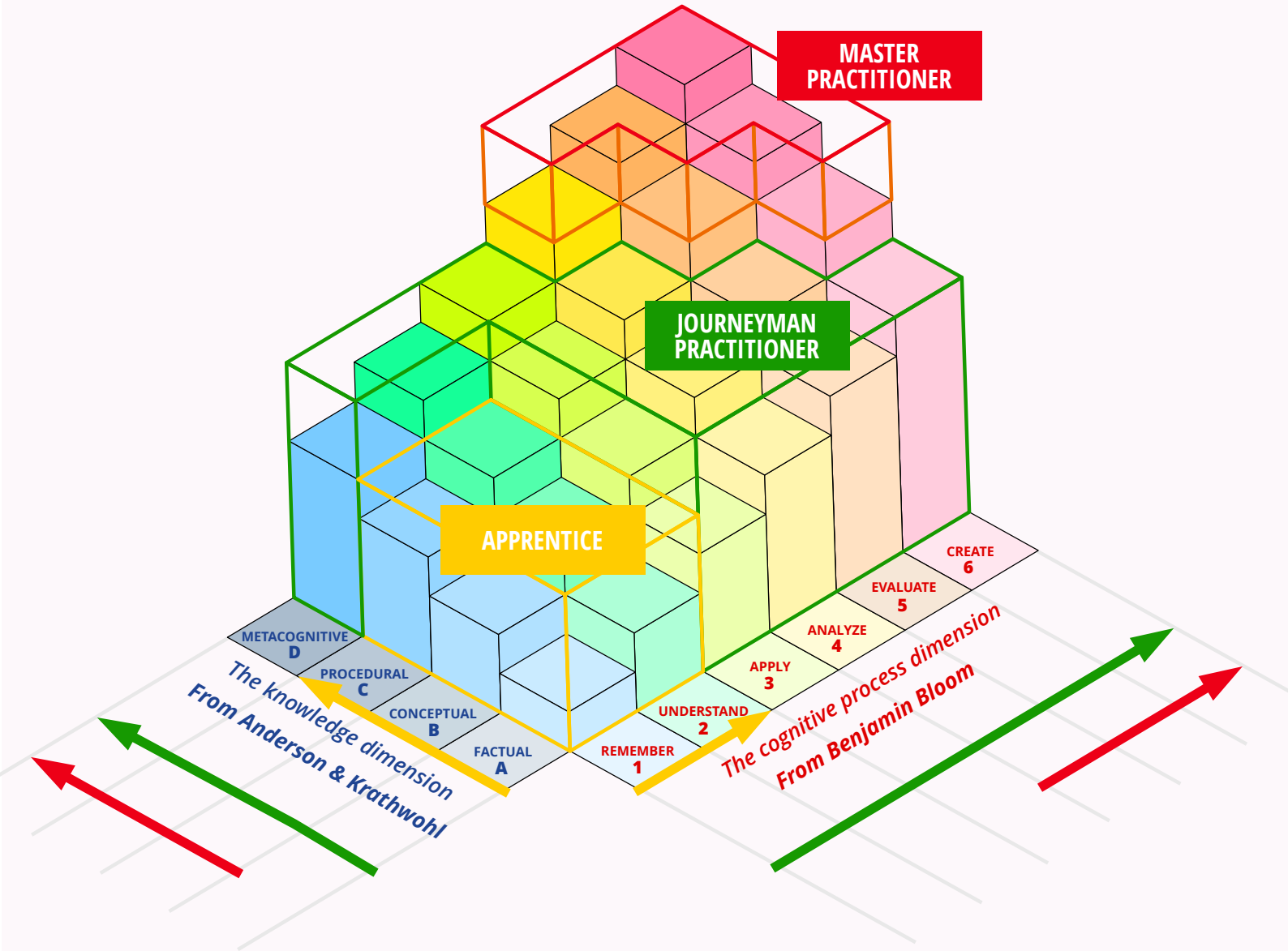
It is important to note that not everyone has to start from the lowest knowledge and learning step to improve. Starting always at the lowest level becomes tedious and long-lasting for the students and the teachers and may hamper the process of acquiring new skills and competencies. To properly assess the level of students/NEETs the following questions might help :

- Is some previous knowledge present? If not, adapt the training/course to a lower level as starting at a level to far up can cause frustration and unachievable goals.
- Are your students juniors and seniors? Graduate students? If so, the training should not include too many objectives at the ***remembering*** and ***understanding*** level as students might become bored.

Based on the level of students, the Bloom's taxonomy can be divided into 3 areas: apprentice, journeyman practitioner and master practitioner.

Figure 7 : Bloom's taxonomy divided into three levels of training

(Figure adapted from Rex Heer, Iwo State University, Center for Excellence in Learning and Teaching, March 2009)



Once the level of the training has been defined, learning objectives needs to be developed. A statement of a learning objective consists of an action and an object. These are visualized in the Bloom's Taxonomy as verbs and refer to an intended cognitive process while objects are determined by the knowledge. The combination of each verb and objective results in a "verb table" (Table 1) that indicated which learning objective is needed at a defined step in Bloom's Taxonomy.

Table 1 : Verb tables help to define learning objectives for each step in Bloom's Taxonomy

(Table from https://tips.uark.edu/using-blooms-taxonomy/)

Level	Description	Verbs – Knowledge dimension: Factual	Conceptual	Procedural	Metacognitive	Examples
Creating	Using diverse elements to build a completely new structure. It also involves putting various parts together to form a whole	**Generate** (a daily activity log). **Write** (a short story) **Combine** (the components)	**Gather** (an experts team) **Divise** (a classification system) **Plan** (the activities)	**Design** (a workflow project) **Develop** (an approach to solve the problem) **Compose** (poetry)	**Produce** (a therory of learning style) **Create** (a portfolio) **Actualize** (the plan)	Turn a "regular" recipe for lasagna into a "healthy" recipe by finding replacements for certain ingredients. Explain why the chosen substitutes are better than the original ingredients. Write a working manual for company's employees.
		Invent, categorize, compile, compose, explain, modify, organize, plan, arrange, summarize, tell, build, choose, construct, estimate, formulate, imagine, invent, make up, originate, predict, propose, solve, discuss, modify, change, improve, adapt, minimize, maximize, elaborate, test, improve.				
Evaluating	Defending your own opinion, or presenting a new one. Judging the value and quality of work, information and ideas. The judgment is based on certain criteria and standards	**Check** (the consistency of sources) **Criticize** (an article) **Rank** (the current issues)	**Define** (the relevance of an outcome) **Review** (the objectives) **Assess** (the likeliness of a result)	**Judge** (the efficiency of a process) **Evaluate** (The rightness of a technique) **Conclude** (the system's working mechanism)	**Reflect** (on the progress). **Rate** (the effectiveness of a strategy) **Prioritize** (the use of programs)	Choose the best blogging platform for beginners. Explain the reasons for such a choice. Judge the effectiveness of a learning style and select an option that is more efficient.
		Appraise, compare, conclude, defend, describe, discriminate, explain, justify, relate, summarize, support, award, decide, determine, dispute, measure, mark, recommend, select, agree, prove, perceive, value, estimate, influence, deduct.				
Analyzing	Examining the information and separating it into component parts. Determining and understanding the organizational structure and relation between those parts. Distinguishing facts and hypothesis.	**Choose** (the fullest activity list) **Classify** (the words) **Order** (the importance of the events)	**Distinguish** (the attitudes) **Identify** (the level of awareness) **Explain** (the importance of understanding the rule)	**Integrate** (the approved framework) **Compare** (the opposing approaches) **Différentiate** (the related terms)	**Match** (the learning styles) **Analyze** (one's prejudice) **Achieve** (a level of understanding)	List 4 apps for keeping notes and talk about the advantages of each one. Add references. Gather the information about new students and select the best studying program for them.
		Break down, contrast, deconstruct, illustrate, infer, outline, select, separate, categorize, discover, dissect, divide, examine, inspect, simplify, survey, list, assume, conclude.				
Applying	Solving problems and dealing with issues by using acquired knowledge. Applying the rules, facts and techniques to new situations and scenarios.	**Use** (a certain algorythm) **Answer** (the common question) **Classify** (the principles of fundraising)	**Give** (the advices) **Set** (the objectives) **Experiment** (with the reactions between components)	**Carry out** (the laboratory trials) **Employ** (the method) **Calculate** (the amount of possible damage)	**Select** (the matching solution) **Enhance** (the professional skills) **Construct** (the section of a site)	Deciding whether or not increased the consumption of carrots improves eyesight. Measure the reliability of a test using statistics laws.
		Apply, change, compute, construct, demonstrate, manipulate, modify, operate, predict, prepare, produce, show, solve, build, choose, develop, interview, make use, organize, experiment, plan, utilize, model, identify.				
Understanding	Delivering the main ideas, as well as translating, comparing, interpreting, organizing, ans describing information. Stating a problem, idea, or a fact in your own words to demonstrate your comprehension.	**Interpret** (a paragraph) **Categorize** (a product's features) **Summarize** (an article in your own words)	**Categorize** (the species) **Describe** (the rule in your own words) **Consider** (the connection between structure and its function)	**Paraphrase** (the definition for better understanding) **Clarify** (the given instructions) **Predict** (the future of an industry)	**Foresee** (the experiment's outcome) **Explain** (the working principles) **Execute** (a particular technique)	Compare the main characteristics of two devices with different types of processors. Make a step-by-step explanation of how to use a tool for gathering statistics.
		Comprehend, convert, distinguish, estimate, extend, generalize, translate, compare, contrast, demonstrate, illustrate, outline, rephrase, show, classify, infer, exmplify, tag, comment, annotate.				
Remembering	Answering the questions, as well as describing terms, facts and basic concepts through retrieving or recalling previously learned information. This doesn't necessarily involve a complete understanding of the meaning.	**Label** (routes on the map) **Spell** (a difficult word) **List** (the European capitals)	**Recognize** (the author of a composition) **Name** (the levels of Bloom's taxonomy) **Describe** (the history of a nation)	**Recall** (how to research keywords) **Recap** (Ithe steps in reaching the agreement) **Tabulate** (the elaborate process)	**Outline** (the process of finding an insipration) **Identify** (the downsides of a learning method) **Omit** (the irrelevant terminology)	Recite a poem or a passage from a novel. Name the prices for the products and services of a company from memory.
		Retrieve, state, define, know, match, reproduce, select omit, choose, find, show, relate, tell, locate, point out, highlight, bookmark, search.				

5 LITERATURE

Chapter 1

Le Gouvernement du Grand-Duché de Luxembourg, Ministère de l'Éducation nationale et de la Formation professionnelle. (2011). Berufsbildung neu gestalten: Entwickelung von modularen und kompetenzorientierten Ausbildungsgängen. *Rapport lors de la Réforme de la Formation Professionnelle: Formation Professionnelle Initiale*, 59 pages

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Lists adapted from https://www.mymajors.com/career/horticulturist/skills/

Chapter 3

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NOTES

Interreg
North-West Europe
IMAGINE
European Regional Development Fund

EUROPEAN UNION

Avec le soutien de la
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Paysans Artisans
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