

Implementing the Learning Outcomes Approach in Estonia

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European Initiatives to Promote Quality, Transparency & Mobility

- European Qualification Frameworks (EQF)
- European Quality Assurance Reference Framework for VET (EQARF)
- European Credit System for VET (ECVET)
- Europass
- Recognition of non-formal and informal learning

Estonian National Reference Points to Implement the EU Initiatives

Estonian Qualification's Authority (*Kutsekoda*)

- national reference point, for questions pertaining to national qualifications, certificates, and certificate supplements
- responsible for supporting and coordinating the connection between NQF and EQF
- organizes the work of *Europass Centre*

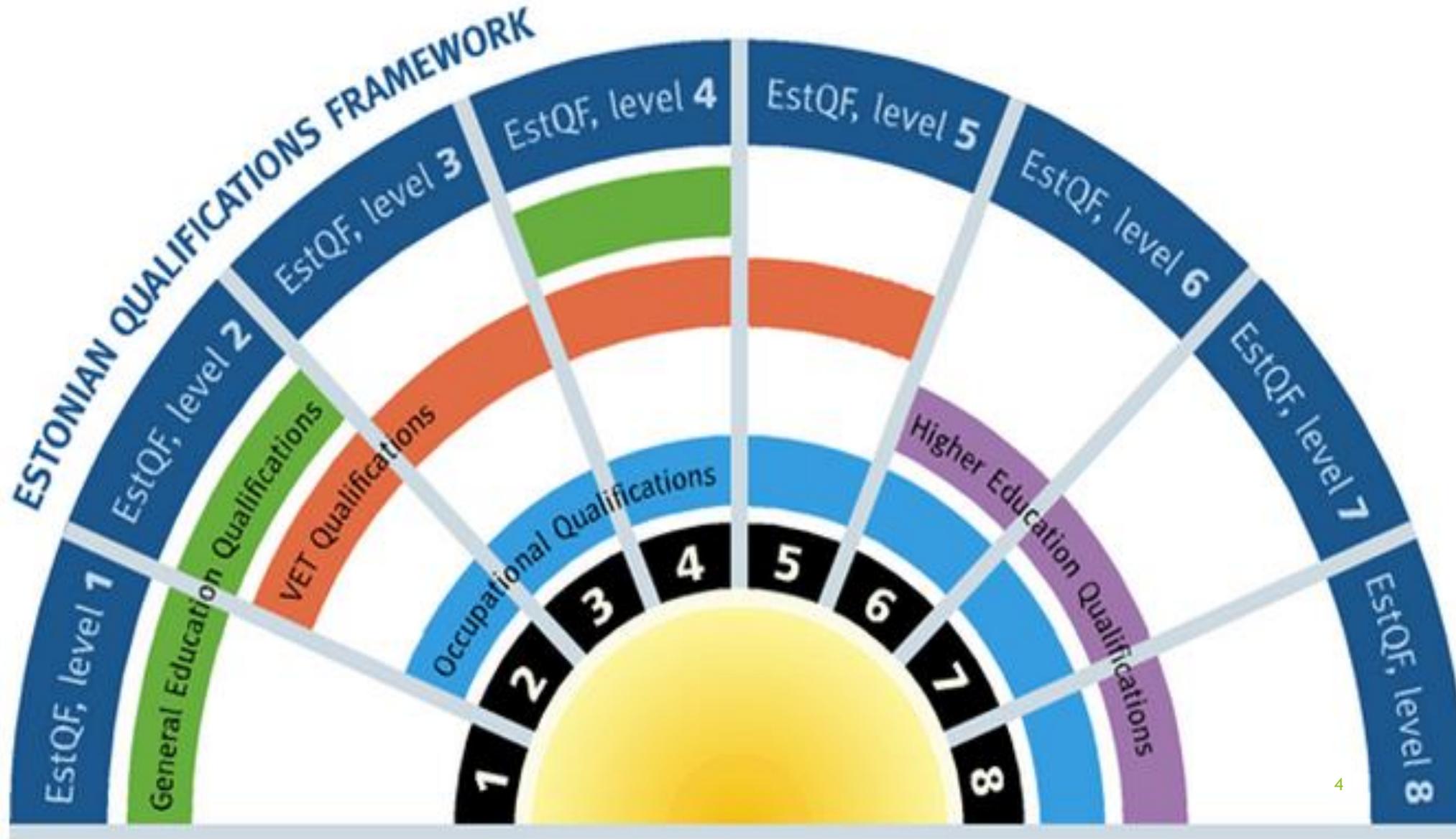
Foundation Innove

- coordinates the VET curriculum development
- contact point for RPL in VET, and also for questions relating to ECVET implementation

Foundation Archimedes

- implements the principles of EQARF at institutional accreditation and quality assessment of both vocational and higher education
- the implementing body of *Erasmus+*

Estonian Qualification's Framework



Descriptors Defining Levels in the EstQF

| Knowledge | Skills | Competence |
|---|---|---|
| is described as theoretical and/or factual | are described as cognitive and practical | is described in terms of responsibility and autonomy |
| Level 1. basic general knowledge | Level 1. basic skills required to carry out simple tasks | Level 1. work or study under direct supervision in a structured context |
| Level 2.... | Level 2... | Level 2... |
| Level 3... | Level 3... | Level 3... |
| Level 4. factual and theoretical knowledge in broad contexts within a field of work or study | Level 4. a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study | Level 4. exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities |
| Level 5... | Level 5... | Level 5... |
| Level 6... | Level 6... | Level 6... |
| Level 7... | Level 7... | Level 7... |
| Level 8. knowledge at the most advanced frontier of a field of work or study and at the interface between fields | Level 8... | Level 8... |

Professional qualifications in the area of *installation of building water supply, sewage, heating and ventilation systems*

- Kütte ja jahutussüsteemise lukksepp (*Cooling and heating system technician*)
- Veevärgilukksepp (*Water system technician*)
- Ventilatsioonilukksepp (*Ventilation duct fitter*)
- Termiliste päikeseküttesüsteemide lukksepp (*Solar heating system installer*)
- Soojuspumpade paigaldaja (*Heatpump installer*)

Definition of the LO

- In occupational standard which describes the job and competence requirements, the LO are defined as a set of skills, knowledge and attitudes required for successful job performance in a particular profession
- In curriculum that describes the requirements for professional training the LO mean the knowledge, skills and attitudes acquired as the result of learning which have been described in the minimum level necessary for the completion of a curriculum, module or subject

The Purpose of Learning Outcomes

The main purpose of learning outcomes are **to describe the successful performance of the work in a measurable way** in terms of skills, knowledge and attitudes

The LO are used as the basis of

- compiling curriculum and training programmes, who meet the requirements of the labour market
- assessing ones particular competence
- comparing occupational qualifications certificates internationally

The definition and writing the LO is **prepared by the working groups**, which include the specialists of the respective field - employers, specialists and trainers

How to Define the LO

- 1) Mapping the area of professions, and including professional qualifications - based on the International classification of the "International Standard Classification of Occupations, 2008,, (ISCO-08)
- 2) Define parts of the work or the work processes for one specific professional qualification (*mandatory competences*)
- 3) Describe indicators of successful work performance, in term's on skills, knowledge and attitudes
- 4) Define the EstQF level of professional qualifications, on the basis of LO

Example 1

„Cooling and heating system technician, EstQF level 4“

Mandatory competences:

- 1) Installation of heating and cooling systems inside a building
- 2) Construction of outdoor terraces and structures
- 3) Performing repairs and maintenance works of heating and cooling systems and equipment
- 4) Implementing the principles of the energy-efficient construction

Example 2

„ Water system technician, EstQF level 4“

Installation of water and sewerage systems inside a building

Tasks:

- Measuring, cutting and deformation of pipes
- Making bushings
- Making pipe cuttings, installation of pipes and pipe sockets
- Installation of pipelines
- Pressure testing and quality control
- Performing insulation works
- Installation of sanitary fittings, household appliances and pool equipment
- Installation of water treatment equipment
- Installation of sanitary accommodations and appurtenant equipment
- Construction and installation of drainage and sewage pumping stations

Key Questions to Define the LO

Some questions for brainstorming about LO:

- What do you want the persons to be able to do in a successful job performance?
- What knowledge, skills or abilities should the person demonstrate?
- How will a person must be able to demonstrate their competence's?
- What would you accept as evidence that a person (learner) has achieved a certain level or the required result?

DO WHAT? HOW? In WHICH CONTEXT? WHERE? WITH WHAT?

General Principles to Describe the LOs

Learning outcomes:

- based on occupational activities/tasks
- describe exactly what skills, knowledge, attitudes one is expected to acquire for successful job performance, in a particular occupation
- are measurable and assessable
- are realistic and meet the objectives set
- acquired and performed within the specified period

How to Write the LO

It is recommended to:

- 1) Identify the most important tasks
- 2) Draw up 3-6 LOs (you have to be able to measure all of them!)
- 3) formulate the LO in the way of "doing what? on how? in what context?"

How to Formulate the LO

Formulate the LO in the way of "doing what? on how? in what context?"

1) start the sentence with using the active verb - use the

Bloom's Taxonomy of Cognitive Skills

Bloom's Taxonomy

Examples of learning outcomes verbs for library instruction include:

- **Knowledge**/Remembering: define, list, recognize
- **Comprehension**/Understanding: characterize, describe, explain, identify, locate, recognize, sort
- **Application**/Applying: choose, demonstrate, implement, perform
- **Analysis**/Analyzing: analyze, categorize, compare, differentiate
- **Evaluation**/Evaluating: assess, critique, evaluate, rank, rate
- **Synthesis**/Creating: construct, design, formulate, organize, synthesize

Verbs to avoid:

- Understand
- Appreciate
- Become familiar with
- Learn about
- Become aware of

How to Write the LO

Formulate the LO in the way of "doing what? on how? in what context?"

- 1) start the sentence with using the active verb
- 2) used a noun or a direct object of the verb to define the objectives to which the performance is directed

Example 3

The learner is able to install the plumbing and sewer and water treatment devices including the sanitary and household appliances connected to them, on the basis of a project and installation instructions

How to Write the LO

Formulate the LO in the way of "doing what? on how? in what context?"

- 1) start the sentence with using the active verb
- 2) used a noun or a direct object of the verb to define the objectives to which the performance is directed (või the verbal object= tegusõnaline sihitis)
- 3) indicate in which context the activity is carried out

Example 4

The learner is able to localize the water and sewer emergency, on the basis of the current situation, the limits of their competence, the equipment and systems maintenance and usage instructions, and a given task

How to Write the LO

Formulate the LO in the way of "doing what? on how? in what context?"

- 1) start the sentence with using the active verb
- 2) used a noun or a direct object of the verb to define the objectives to which the performance is directed (või the verbal object= tegusõnaline sihitis)
- 3) indicate the context of the performance
- 4) indicate the tools and work equipment which shall be used in the performance

Example 5

The learner is able to measure, cut and bend of pipes on the basis of a given task, using hand and electrical tools or machines (pipe cutting and bending benches and presses)

The LLL Key Competences & LO

- The LLL key competences and generic skills are both referred as **transversal competences**
- In some qualifications they are integrated into the LO but in others transversal competences are described independently

Examples The learner...

- is open to cooperation, participates in team work, adapts to the team and is ready to learn from others
- is developing the social and interpersonal competence's and behaves in a manner that promotes interaction
- analyse the strengths and weaknesses, and is looking for opportunities for self-development, participates in the professional in-service training
- follow the requirements of the occupational health and safety in the planning of the work and the workplace, the organisation takes into account human and environment around you

The Challenges We Faced

HOW to

- 1) describe performances that are *significant, essential* and *verifiable*
- 2) preferably state only **ONE performance per outcome**
- 3) not describe the ideal employees, but define the knowlege, skills and competences in a threshold level
- 4) compile the LO in different qualification levels
- 5) represent the **minimal acceptable level** of performance that a person needs to demonstrate in order to be considered successful
- 6) keep it simple? - refer to learning that is *transferable*
- 7) not dictate curriculum content
- 8) reflect the overriding principles of equity and fairness and accommodate the needs of diverse learners

Thank you for your attention!