

The present paper was made using the following materials:

- 1. National Qualifications Framework Guide;*
- 2. Qualification framework of the European space of higher education;*
- 3. Dublin Descriptors;*
- 4. Manual of European Credit Transfer and Accumulation System (ECTS);*
- 5. Law of Georgia on Higher Education;*
- 6. Wilson, O. L. (2020). Understanding the Revised Version of Bloom's Taxonomy;*
- 7. Kennedy, D. (2007). Writing and Using Learning Outcomes;*
- 8. Bloom's Taxonomy, University of Florida;*
- 9. Taxonomies of Learning, Harvard University.*

The National Qualifications Framework, as a set of levels, describes a progression of learning outcomes from simple to complex.

The levels of the framework, like the European Qualifications Framework, are described by 3 categories:

1. Knowledge and awareness;
2. Ability;
3. Responsibility and autonomy.

Within each category of learning outcomes of the National Qualifications Framework, subcategories or aspects are distinguished, which are described by certain characteristics (see Table #1).

Table #1 - National Qualifications Framework descriptor categories

Category	Knowledge and Awareness	Skill	Responsibility and autonomy
----------	-------------------------	-------	-----------------------------

Subcategory/Aspects	Theoretical and/or factual knowledge and comprehension.	Skills to complete the task and solve the problem. Communication skills.	Responsibility. Ability to learn.
Features	Range and depth	Type and complexity	Context of knowledge and skill use (environment)
Helpful questions	<p>What type of knowledge is it?</p> <p>What is the range and depth of knowledge?</p> <p>To what extent can a person put this knowledge into context?</p>	<p>- How difficult is the task to be performed and the problem to be solved?</p> <p>-What types of cognitive and/or practical skills are used to perform a task of given complexity and to solve a problem?</p> <p>- What is the complexity of the information to be transmitted: what kind of information is to be transmitted?</p> <p>- Who is the information intended for (target group)?</p> <p>- What methods are used to transmit information?</p> <p>- What is the difficulty of using information and communication technologies?</p>	<p>How predictable is the learning/activity environment where knowledge and skills are applied?</p> <p>What is the degree of independence of the person/his/her role in the activity process?</p> <p>What are the responsibilities of a person in the process of activity?</p> <p>To what degree can a person take responsibility for his own and others' activities?</p> <p>To what extent can a person develop his own and/or others' learning and professional development (independently and responsibly)?</p> <p>What methods does he use for this?</p>

Definition of categories and aspects of frame-level descriptors

1. Knowledge and Awareness

Knowledge - assimilation of information, facts, principles, theories, concepts, procedures, theoretical and practical methods related to the field of study and/or activity.

Comprehension - the application of knowledge in a relevant context, which includes recalling, selecting, identifying, interpreting, classifying, explaining, evaluating, systematically and critically understanding an issue / topic / problem (in general, knowledge).

In the framework descriptors, the range and depth of knowledge and understanding varies from knowledge of one or a few basic facts and principles and recall of simple facts to in-depth knowledge of an inter/multi-disciplinary field of study and systematic understanding of the latest developments.

2. Ability

Ability refers to the ability to apply knowledge relevant to a specific task and is described using cognitive and practical skills.

The framework refers to the following skills:

1. Skills needed to complete the task and solve the problem:

The skills needed to perform a task and solve a problem are of two types: cognitive and practical.

a. Cognitive skills - include logical, intuitive and creative thinking;

b. Practical skills - includes the ability to use appropriate methods, materials, equipment and tools.

2. Communication skills:

a. Communication skills refer to the ability to communicate ideas and information effectively and vary with increasing complexity of information, target group, and forms and/or means of communication.

3. Responsibility and autonomy

According to the legislation, responsibility and autonomy refers to the use of knowledge and skills by a person with values and an appropriate degree of independence and is described by taking into account the following:

1. Responsibility:

a. Responsibility, on the one hand, refers to duties and obligations related to a person's role or position in the process of study/activity; On the other hand, responsibility (as moral responsibility) includes a person's attitude towards his own and others' actions in both professional and academic, as well as general ethical contexts; to evaluate one's own and others' actions; To act on the basis of universally recognized values.

2. Learning ability:

a. Learning ability includes the ability of a person to understand and recognize the limits of his own learning outcomes; To plan, organize and implement further learning/professional development according to one's own needs, to adapt to a constantly changing environment.

When formulating learning outcomes using Bloom's taxonomy, active verbs corresponding to cognitive, behavioral and socio-emotional domains are used; Accordingly:

1. Knowledge and awareness - cognitive domain;
2. Ability (cognitive and practical skills) - cognitive and behavioral domain;
3. Responsibility and autonomy: emotional domain and cognitive domain.

According to Bloom's taxonomy, the cognitive process is divided into 6 categories:

1. Remembering

Describe, define, relate, review, and etc. of relevant material, facts/concepts.

Category	Verbs
Cognition	<ul style="list-style-type: none">✓ establishes✓ connects✓ recognizes✓ chooses✓ names✓ restores✓ discovers✓ describes

	<ul style="list-style-type: none"> ✓ determines ✓ identifies ✓ writes ✓ remembers ✓ reviews ✓ indicates ✓ makes relevant ✓ listing ✓ quotes ✓ explains
--	--

1. *Understanding*

Understand relevant material, facts/concepts, gist, interpret, exemplify, classify, summarize, draw conclusions, compare, and more.

Category	Verbs
Understanding	<ul style="list-style-type: none"> ✓ brings closer ✓ compares ✓ generalizes ✓ clarifies ✓ observes ✓ adds ✓ checks ✓ processes/develops ✓ divides ✓ concludes ✓ makes a difference ✓ appreciates ✓ forms ✓ characterized by ✓ interprets

	<ul style="list-style-type: none"> ✓ classifies ✓ paraphrases ✓ summarizes ✓ recycles ✓ depicts ✓ will calculate ✓ differentiates ✓ discusses ✓ determines ✓ describes in detail ✓ protects ✓ reviews ✓ predicts ✓ connects ✓ divides / differentiates ✓ changes ✓ represents ✓ explains
--	--

1. Usage

The use of appropriate material, facts/concepts, accumulated knowledge in practice, connecting, determination, etc.

Category	Verbs
	<ul style="list-style-type: none"> ✓ Builds ✓ Sets ✓ Connects ✓ Prepares ✓ Extracts ✓ Processes ✓ Distributes

Usage	<ul style="list-style-type: none">✓ Reports✓ Regulates✓ Fulfills✓ Appreciates✓ Restores✓ Prints✓ Reaches✓ Shows✓ Produces✓ Calculates✓ Depicts/portrays✓ Exhibits✓ Separates✓ Examines✓ Expresses✓ Defines✓ Consistently sorts✓ Translates✓ Avoids✓ Uses✓ Acquires✓ Classifies✓ Manages✓ Adjusts✓ Searches✓ Operates/works✓ Uses in practice✓ Creates✓ Elaborates✓ Explores✓ Decodes
-------	--

	<ul style="list-style-type: none"> ✓ Explores ✓ Changes ✓ Represents ✓ Decides
--	--

2. Analysis

Analysis, description, classification, depiction, research, study and etc of relevant material, facts/concepts.

Category	Verbs
Analysis	<ul style="list-style-type: none"> ✓ Analyzes ✓ Compares ✓ Confirms ✓ Fills ✓ Connects ✓ Checks ✓ Contrasts ✓ Concludes ✓ Differentiates ✓ Improves ✓ Mentions ✓ Describes ✓ Arranges ✓ Diagnoses ✓ Documentaries ✓ Classifies ✓ Grouping ✓ Reveals ✓ Exams

	<ul style="list-style-type: none"> ✓ Transforms/changes ✓ Plans ✓ Graphically depicts ✓ Explores ✓ Chooses ✓ Investigates ✓ Opens ✓ Indicates ✓ Links ✓ Divides ✓ Explores ✓ Removes ✓ Leads
--	---

3. Evaluation

Decision making based on criteria and standards.

Category	Verbs
Evaluation	<ul style="list-style-type: none"> ✓ Compares ✓ Establishes compliance ✓ Specifies ✓ Criticizes ✓ Checks ✓ Contrasts ✓ Concludes ✓ Appreciates ✓ Interprets ✓ Sums up ✓ Distinguishes/differentiates ✓ Exams

	<ul style="list-style-type: none"> ✓ Defines ✓ Measures ✓ Protects ✓ Discusses ✓ Supports ✓ Predicts ✓ Advises ✓ Opens
--	--

4. Create

Using accumulated knowledge, categorization of issues, compilation; Generating new knowledge, relevant formulation of issues, establishing logical connections and others.

Category	Verbs
Create	<ul style="list-style-type: none"> ✓ Builds ✓ Generates ✓ Develops ✓ Generalizes ✓ Specifies / highlights ✓ Connects ✓ Prepares ✓ Programs ✓ Fixes / corrects ✓ Improves ✓ Forms ✓ Establishes ✓ Produces ✓ Abstracts ✓ Integrates ✓ Combines

	<ul style="list-style-type: none">✓ Compiles✓ Reconstructs✓ Sums up✓ Reviews✓ Depicts✓ Plans✓ Consistently sorts✓ Divides into categories✓ Gathers✓ Participates/engages✓ Organizes✓ Predicts✓ Provides✓ Indicates✓ Copes with✓ Creates✓ Elaborates✓ Matches✓ Changes✓ Promotes✓ Explains
--	---

Note:

It is not allowed to transfer the study results determined by the field characteristic in an unchanged form to the study results of the educational program.

When formulating learning outcomes, the focus should always be on the fact that the outcomes are written from the student's perspective, that is, it is a statement about what the student knows, what he learns and what he can do after completing his studies (the program and its individual components).

When formulating the learning outcomes of the educational program, it is necessary to take into account generally accepted principles. These principles can be found in various European documents, such as the ECTS Guidelines, the Europass Diploma and Certificate Annex Guidelines. In particular:

1. The learning outcome corresponds to the level of the stage, the nature of the qualification, the content and specificity, the goals of the educational program, the content of the program, the learning outcomes of the sectoral characteristics (if any) and is specific (in contrast to the general nature of the framework descriptors), but not too detailed;
2. Learning outcomes are consistent;
3. The level of the learning result is determined in accordance with the level of qualification granted by the program;
4. Each outcome is achievable, realistic and measurable within the time frame defined by the program. Accordingly, each learning outcome is related to the relevant teaching-learning and research component work activities, assessment methods and criteria;
5. Determining the optimal number of learning outcomes is a part of educational program planning. The number of learning outcomes of the educational program in higher education is 10-12 outcomes as recommended by the ECTS guidelines; However, depending on the specifics of the course, it may be more or less.
6. Learning outcomes are formed in the present tense.

In order to determine the compliance of the learning outcomes of the educational program with the level descriptor of the qualifications framework, it is necessary to consider the following three interrelated issues:

1. Learning outcomes;
2. Methods of achieving learning outcomes;
3. Methods and criteria for evaluating learning outcomes.

When determining the compliance of the learning outcomes of a particular educational program with the framework level descriptor or field characteristic, first of all, the peculiarities of the field should be taken into account.

Scheme according to the study results of the University of Georgia:

Knowledge and Realization	Skill	Responsibilities& Autonomy
Cognition	Usage	Review
Understanding	Analyze	Create
Memorizing		

Knowledge and understanding (cognition/awareness/remembering)	Ability (Use/Analysis)	Responsibility and autonomy (evaluation/creation)
Sets	Builds	Compares
Connects	Sets	Establishes compliance
Detects	Connects	Specifies
Chooses	Prepares	Criticizes
Names	Extracts	Checks
Restores	Processes	Opposes
Finds	Distributes	Concludes
Describes	Reports	Appreciates
Defines	Regulates	Interprets
Identifies	Appreciates	Sums up
Writes	Restores	Distinguishes/differs
Recalls	Reflects	Exams

Reviews	Reaches	Defines
Indicates	Shows	Measures
Matches	Produces	Protects
Listing	Calculates	Discusses
Quotes	Depicts /portrays	Supports
Explains	Exhibits	Predicts
Brings it closer	Separates	Advises
Compares	Exams	Explains
Generalizes	Expresses	Builds
Specifies	Defines	Generates
Observes	Consistently sorts	Develops
Adds	Translates	Generalizes
Checks	Avoids	Specifies / highlights
Processes / develops	Uses	Improves
Divides	Acquires	Forms
Concludes	Classifies	Produces
Differentiates	Manages	Abstracts
Appreciates	Adjusts	Integrates
Establishes	Searches	Combines
Describes	Operates/works	Compiles
Interprets	Uses in practice	Reconstructs
Classifies	Creates	Sums up
Paraphrasing	Develops	Reviews
Sums up	Explores	Depicts
Recycles	Decodes	Plans
Depicts	Changes	Consistently sorts
Calculates	Represents	Divides into categories
Distinguishes	Decides	Gathers
Discusses	Analyzes	Participates/engages
Protects	Compares	Organizes

Predictes	Confirms	Predictes
Links	Fills	Provides
Divides/ differentiates	Connects	Indicates
Changes	Checks	Resists
Represents	Confronts	Creates
Explains	Concludes	Elaborates
	Differentiates	Matches
	Improves	Changes
	Lists	Promotes
	Describes	
	Arranges	
	Diagnoses	
	Documentaries	
	Classifies	
	Grouping	
	Reveals	
	Examines	
	Transforms/changes	
	Plans	
	Praphically displays	
	Explores	
	Chooses	
	Investigates	
	Opens	
	Indicates	
	Links	
	Divides	
	Explores	
	Removes	
	Leads	
