



**HERITAG**

561555-EPP-1-2015-1-ES-EPP KA2-CBHE-JP

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# **ERASMUS+ HERITAG Project**

***Organization of Learning Outcome Based  
Education: Quality Assurance Practice at  
NUACA***

***BATUMI 2017***



# QUALIFICATION

***Capacity, knowledge, or skill that matches or suits an occasion, or makes someone eligible for a duty, office, position, privilege, or status. Qualification denotes fitness for purpose through the fulfillment of necessary conditions such as attainment of a certain age, taking of an oath, completion of the required schooling or training, or acquisition of a degree or diploma.***

*You'll never get a good job if you don't have any qualifications. One of the qualifications you need to take part in the Batumi workshop is a sense of humor!*



# Qualification Framework

It describes the qualifications of an education and training system and how they interlink.

National Qualifications Frameworks (NQF) describe what learners should know, understand and be able to do on the basis of a given qualification. These frameworks also show how learners can move from one qualification, or qualification level, to another within a system.

*47 countries participating in the [Bologna Process](#) are committed to producing a NQF. Other countries not part of this process also have NQF.*



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## **The Government of the Republic of Armenia**

### **DECISION**

July 7, 2016 N 714-Ն

**National Qualification Framework of Republic of Armeni**

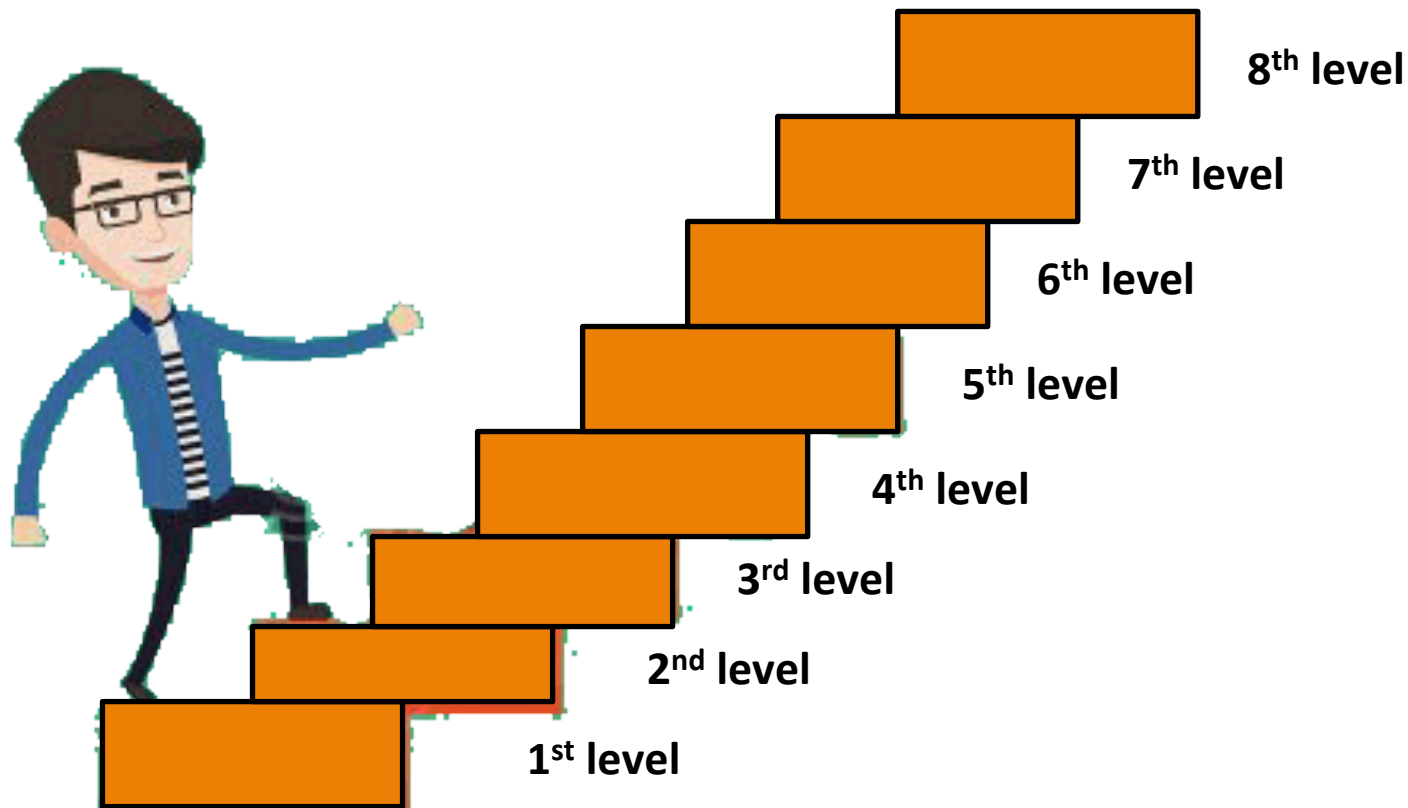
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DocumentView.aspx?docid=107371](http://www.arlis.am/DocumentView.aspx?docid=107371)



## **The Purpose Of National Qualification Frameworks**

- **The NQF provides a way to compare qualifications and to describe the relation between the different levels of a national educational system, and the level, workload and learning outcomes of specific qualifications.**
- **This should also help recognition abroad.**
- **It is a useful tool for employers and educational/training institutions to better understand the level of a national and foreign qualification, in particular with regard to further study opportunities and occupational/professional outcomes.**

**The core of the NQF of the Republic of Armenia concerns eight reference levels describing what a learner knows, understands and is able to do – 'learning outcomes'.**



# Qualification descriptors

**Qualification descriptors are generic statements of the outcomes of study (cf. learning outcomes). They provide clear points of reference that describe the main outcomes of a qualification often with reference to national levels.**



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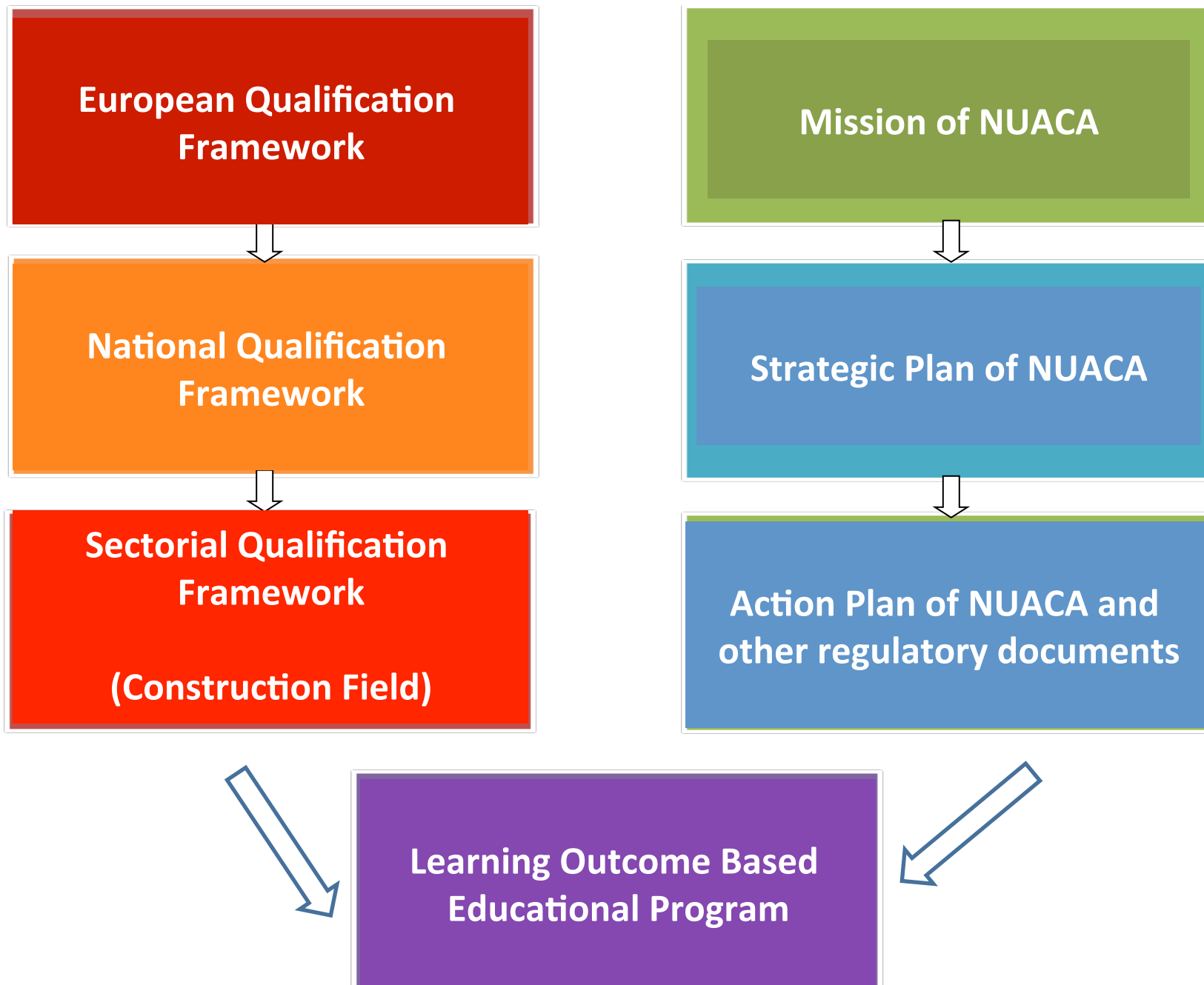
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# Sectorial Qualification Framework





<b>NQF: Bachelor (6th level)</b>	<b>SQF: Bachelor (6th level)</b>
<p><b>General description (characteristic) of the Qualification</b></p> <p>The Bachelor degree qualifies individuals who have broadband coherent knowledge and skills in a range of fields to undertake professional work and/or further learning.</p> <p><b><u>KNOWLEDGE</u></b></p> <p><b>1. Knowledge and understanding</b></p> <p>Demonstrates advanced knowledge and understanding of basic and state-of-the-art concepts, theories and methods within the field of professional work or study.</p>	<p><b>General description (characteristic) of the Qualification</b></p> <p>The Bachelor Degree qualifies individuals who have a broad and coherent knowledge and skills in a range of fields to undertake professional work and/or further study.</p> <p><b><u>KNOWLEDGE</u></b></p> <p><b>1. Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>- demonstrates a basic knowledge of construction and field advanced practice, traditional and new technologies and building materials, as well as is aware of modern research and practical work in the field</li> <li>- demonstrates a basic knowledge of mathematics and natural sciences related to the field</li> <li>- demonstrates knowledge of basic and modern concepts, theories and methods of engineering systems and processes</li> <li>- demonstrates a general knowledge of adjacent subjects regarding the construction and other interdisciplinary subjects</li> <li>- carries out the activities in the professional field, demonstrates the general knowledge in the field of urban development, environment and cultural heritage protection.</li> </ul>

**NQF: Bachelor (6th level)**

**SKILLS**

**2. Applying knowledge and understanding**

Can apply acquired knowledge and understanding, basic principles and methods of the field for solving problems during the professional work or study.

**SQF: Bachelor (6st level)**

**SKILLS**

**2. Applying knowledge and understanding**

- using the modern and innovative techniques can apply knowledge and understanding to identify, formulate, and analyze the processes related construction and solve engineering problems, taking into account the ethical, social, legal, environmental and economic factors, as well as work safety and hygiene rules
- can critically and systematically use his/her knowledge to analyze and present a range of events on the basis of relevant information
- within the relevant authorization can use his/her knowledge during a project planning, engineering research, design, construction, management, operation and monitoring.

**NQF: Bachelor (6th level)**

**SKILLS**

**3. Communication, ICT and numeracy skills**

- Can communicate and explain information, arguments, ideas, problems and their solutions that are related to the given field to the specialist and non-specialist audiences.
- Can apply ICTs to solve problems and intensify work in the specialty area.
- Can collect, process, analyse and interpret relevant quantitative and qualitative data within the specialty area to make reasonable judgments.

**SQF: Bachelor (6th level)**

**SKILLS**

**3. Communication, ICT and numeracy skills**

- has interpersonal communication and teamwork skills and ethical obligations
- can communicate by native and at least by one foreign language, negotiate effectively, present and explain to professional and non-professional society information, ideas, problems, facts and solutions
- can use the necessary methods, skills and modern tools, including information and communication technologies to solve problems and to facilitate the work in the professional field
- can collect, process and interpret quantitative and qualitative data related to the field to carry out logical justifications and necessary analysis of the construction process.

NQF: Bachelor (6th level)	SQF: Bachelor (6th level)
<p><b><u>SKILLS</u></b></p> <p><b>4. Generic cognitive skills (including making judgments)</b></p> <ul style="list-style-type: none"> <li>- Can analyse and make judgments applying critical thinking, as well as demonstrate creativity to identify and provide different solutions to the problems of the specialty area.</li> </ul>	<p><b><u>SKILLS</u></b></p> <p><b>4. Generic cognitive skills (including making judgments)</b></p> <ul style="list-style-type: none"> <li>-is able to present critical and self-critical thinking</li> <li>-is able to understand the role of principles and approaches of the leader (manager) and leadership (management)</li> <li>-is able to understand the interactions of the technical and environmental aspects and take them into account during the planning, designing and implementing the construction works maintaining the requirements of quality assurance and standards of the field</li> <li>- is able to demonstrate a creative approach during the field challenges identification and proposing of the solutions, as well as the skills to adapt to new situations and to learn.</li> </ul>

**NQF: Bachelor (6th level)**

**SQF: Bachelor (6th level)**

**COMPETENCES**

**5. Autonomy and responsibility  
(including learning skills)**

- Can undertake full-fledged professional activity, manage professional functions and projects, and make autonomous decisions.
- Can manage working team and take on responsibility for the professional activity of its members.
- Is able to identify one's educational needs and/or career opportunities to decide on the ways of further study.
- Is able to take personal responsibility for the nation and the State, follow up the realization of democratic principles and dissemination of national and human values.

**COMPETENCES**

**5. Autonomy and responsibility (including learning skills)**

- is able to operate within the framework of its authority, to make decisions and take responsibility for the team members and their professional development, maintaining democratic principles
- can develop separate parts of design documents of the construction objects within respective authority and professional specialization (based on the requirements of the urban development documents)
- can consider the experts' opinions and specify procedural documents and reports
- can present relevant information within the framework of the authority granted to him
- is able to realize professional, ethical and environmental responsibility of construction engineer and understand the impact of decisions made for the construction works in universal and public context
- can work within an interdisciplinary team and assess the role and multiculturalism of related disciplines,
- can promote through his/her activity the dissemination of national and universal values
- is able to identify his/her educational needs and make decision regarding further study.



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# **Learning Outcome Based Educational Programs' Development Principles**

## **Matrix of the Courses of Educational Program**

### **Development of Learning Outcomes of Courses**

**One of the most widely used ways of organizing levels of expertise is according to Bloom's Taxonomy of Educational Objectives.**



**Benjamin Bloom created a taxonomy of measurable verbs to help us describe and classify observable knowledge, skills, attitudes, behaviors and abilities.**

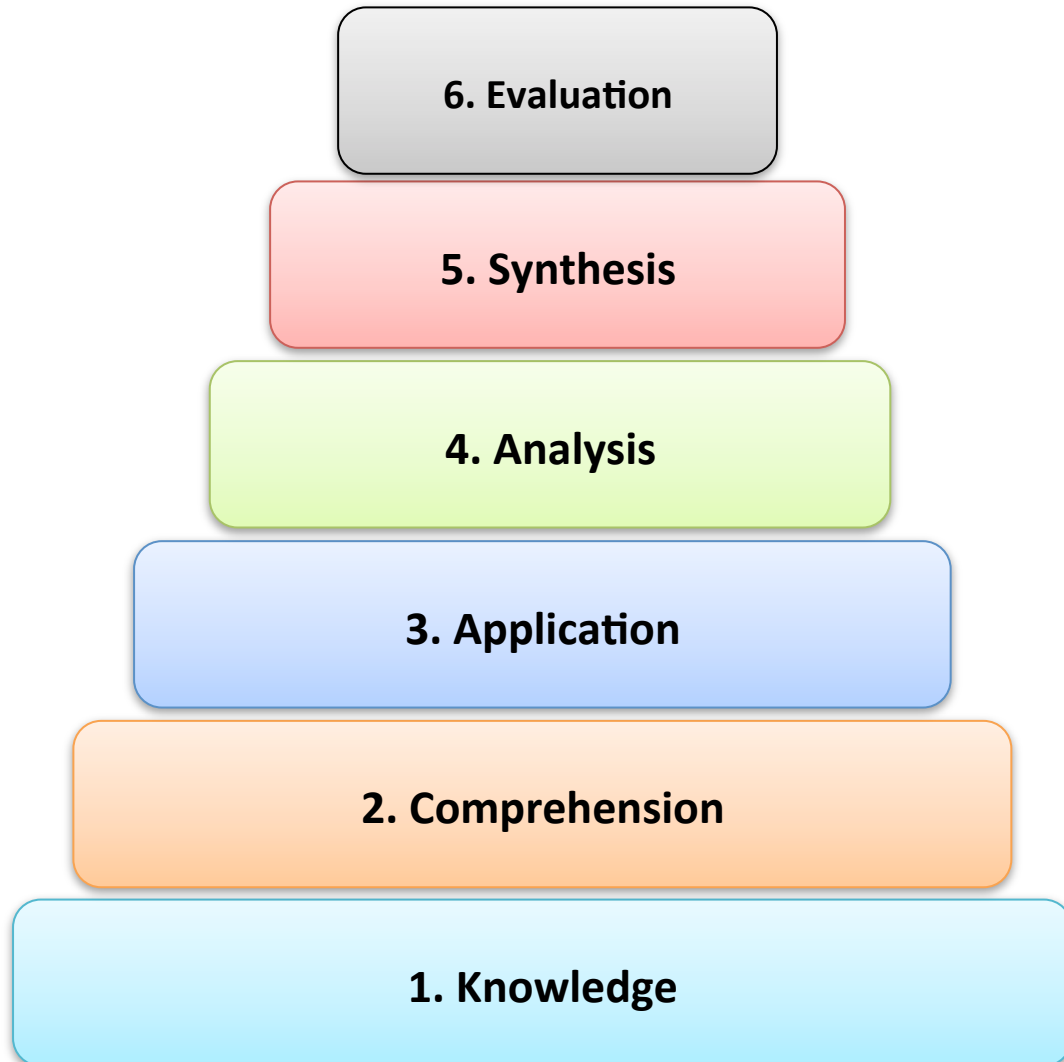


In 1956, Bloom edited the first volume of *Taxonomy of educational objectives: the classification of educational goals*, which outlined a classification of learning objectives that has come to be known as Bloom's taxonomy and remains a foundational and essential element within the educational community.



**Dr. Benjamin Bloom**  
*(American educational psychologist)*  
**(1913-1999)**

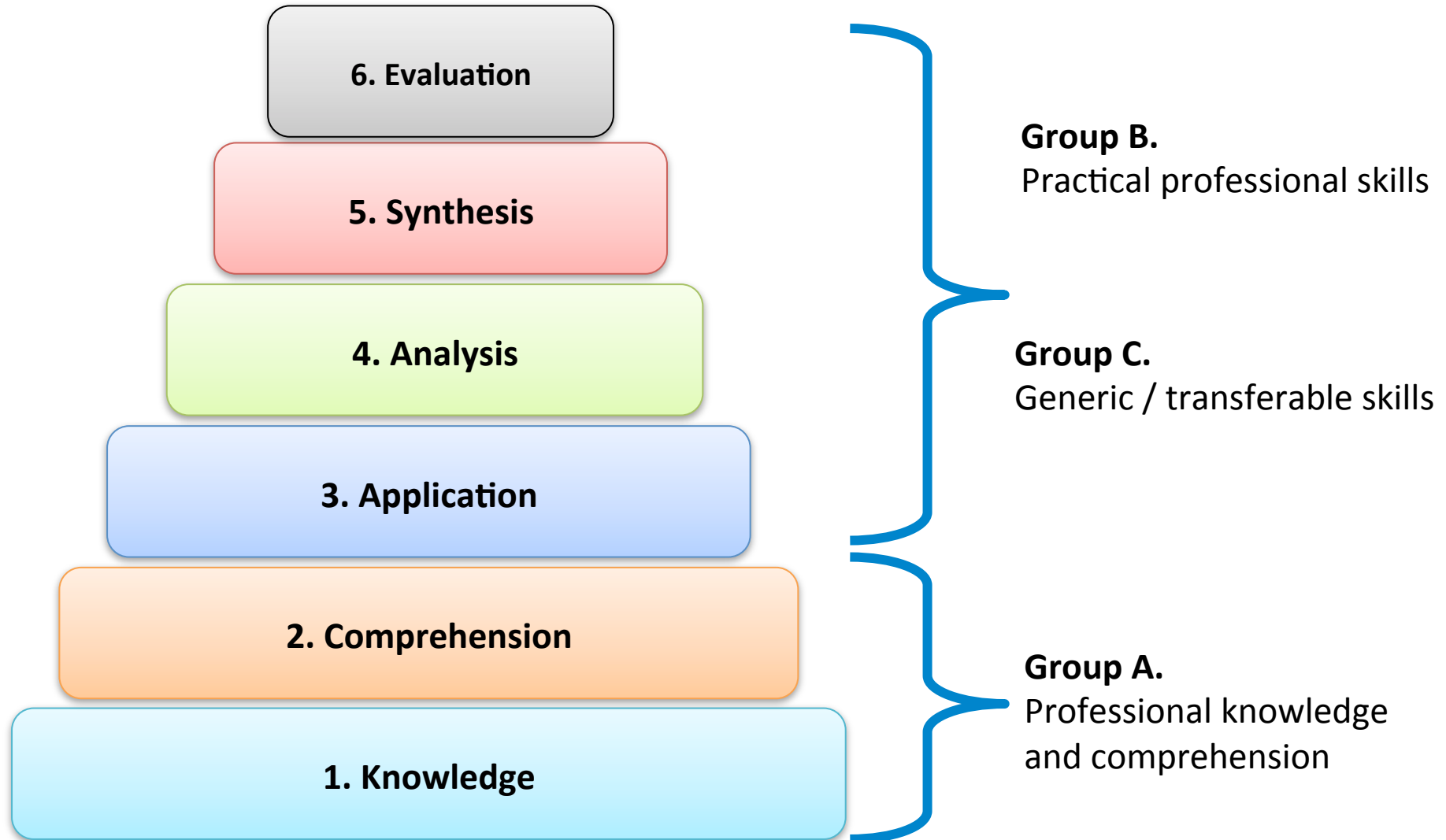
# Bloom's taxonomy



## *Six levels of learning according to Bloom*

The levels are thought to build on one another. The six levels in the figure pertain to thinking, the so-called cognitive domain.

# Development of learning outcomes based on Bloom's taxonomy



1. Knowledge – remembering previously learned information

6. Evaluation

5. Synthesis

4. Analysis

3. Application

2. Comprehension

1. Knowledge

**Illustrative Verbs:**

arrange, define, describe,  
duplicate, identify, label, list,  
match, memorize, name,  
order, outline, recognize,  
relate, recall, repeat,  
reproduce, select, state



## 2. Comprehension – grasping the meaning of information

6. Evaluation

5. Synthesis

4. Analysis

3. Application

2. Comprehension

1. Knowledge

### Illustrative verbs:

classify, convert, defend,  
discuss, distinguish,  
estimate, explain, express,  
extend, generalize, give  
example(s), identify,  
indicate, infer, locate,  
paraphrase, predict,  
recognize, rewrite, report,  
restate, review, select,  
summarize, translate

### 3. Application – applying knowledge to actual situations

6. Evaluation

5. Synthesis

4. Analysis

3. Application

2. Comprehension

1. Knowledge

#### Illustrative verbs:

apply, change, choose,  
compute, demonstrate,  
discover, dramatize, employ,  
illustrate, interpret,  
manipulate, modify, operate,  
practice, predict, prepare,  
produce, relate schedule,  
show, sketch, solve, use,  
write

4. Analysis – breaking down objects or ideas into simpler parts and seeing how the parts relate and are organized

6. Evaluation

5. Synthesis

4. Analysis

3. Application

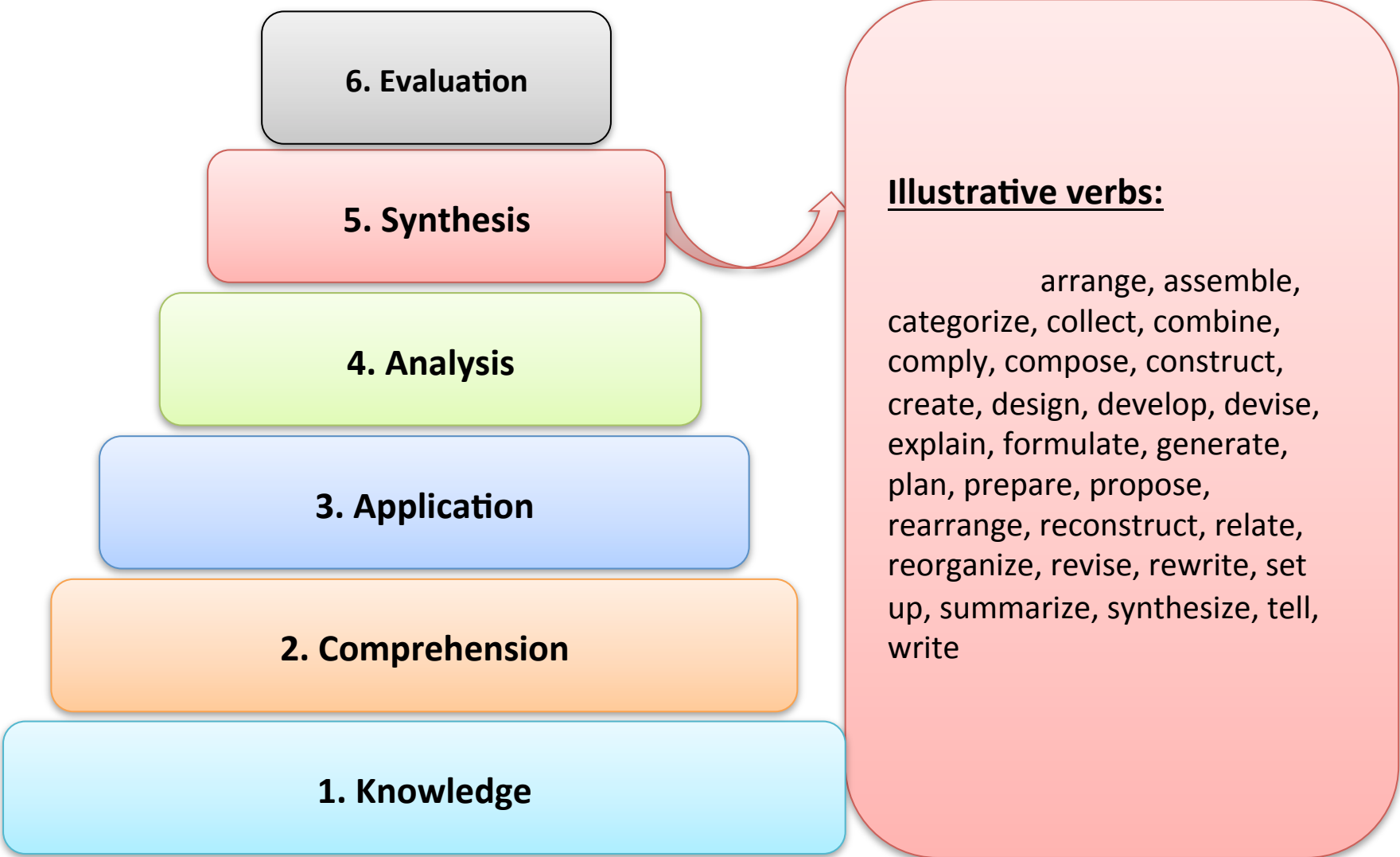
2. Comprehension

1. Knowledge

**Illustrative verbs:**

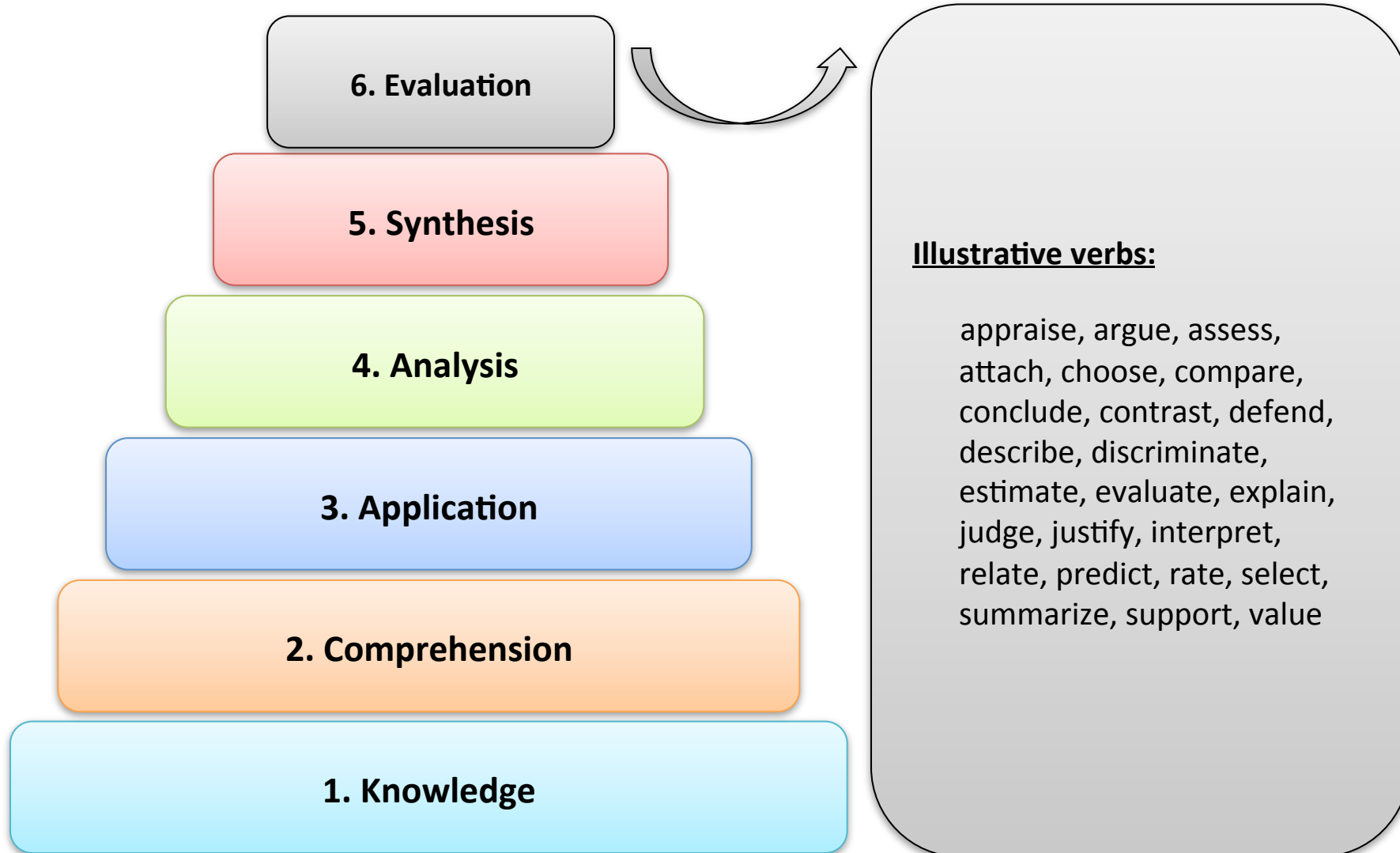
analyze, appraise,  
breakdown, calculate, categorize,  
classify, compare, contrast,  
criticize, derive, diagram,  
differentiate, discriminate,  
distinguish, examine, experiment,  
identify, illustrate, infer, interpret,  
model, outline, point out,  
question, relate, select, separate,  
subdivide, test

5. Synthesis – rearranging component ideas into a new whole





6. Evaluation – making judgments based on internal evidence or external criteria



## **Development of Learning Outcomes of Educational Program**

<b>Learning Outcomes of Educational Program (Bachelor)</b>	<b>SQF (Construction field) (Bachelor)</b>
<p><b><u>KNOWLEDGE</u></b></p> <p>1. Knowledge and understanding</p> <p><b><u>SKILLS</u></b></p> <p>2. Applying knowledge and understanding</p> <p>3. Communication, ICT and numeracy skills</p> <p>4. Generic cognitive skills (including making judgments)</p> <p><b><u>COMPETENCES</u></b></p> <p>5. Autonomy and responsibility (including learning skills)</p>	<p><b><u>KNOWLEDGE</u></b></p> <p>1. Knowledge and understanding</p> <p><b><u>SKILLS</u></b></p> <p>2. Applying knowledge and understanding</p> <p>3. Communication, ICT and numeracy skills</p> <p>4. Generic cognitive skills (including making judgments)</p> <p><b><u>COMPETENCES</u></b></p> <p>5. Autonomy and responsibility (including learning skills)</p>





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# ***Quality Assurance Practice at NUACA***



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## Institutional Accreditation of NUACA

- **NUACA has international institutional accreditation for 5 years (from Sep 2015 to Sep 2020)**  
*(French High Council for Evaluation and Higher Education / HCERES/ and National Agency for Quality Assessment and Accreditation of Spain /ANECA/)*





thank you!