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QUATREC comparative study: results, conclusions and recommendations

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Erasmus+ NARIC project
“Comparing qualifications for
reliable recognition” (QUATREC)

1 March 2018 – 29 February 2020

QUATREC aims and objectives

Aim:

To encourage the use of **learning outcomes** in credential evaluation for improved recognition in line with existing and emerging qualification frameworks

Main objective:

To conduct **horizontal comparison** of qualifications and their learning outcomes and search whether learning outcomes of the same level qualifications have substantial differences

QUATREC activities

Desk study in the partner countries (HE systems, NQFs, qualifications, recognition practices)

The methodology of the comparative study

Horizontal comparison of particular samples of HE qualifications and their learning outcomes

Proposals for effective use of the qualification frameworks and learning outcomes in the recognition

Dissemination of the project results

QUATREC partners

Academic Information Centre – coordinator (Latvia)

National Information Center for Academic Recognition and Mobility (Armenia)

National Centre for Information and Documentation (Bulgaria)

Archimedes Foundation (Estonia)

UK NARIC (United Kingdom)



The background is a soft watercolor illustration. A large, white, multi-petaled flower is the central focus, rendered with delicate, layered washes of white and light green. Surrounding the flower are various green leaves in different shades, from pale lime to a slightly darker sage green, with some showing subtle veining. The overall style is gentle and artistic, with a white background that allows the colors to stand out softly.

Comparative study

Methodology

Common template for describing qualifications (**fiche**):

- **Source of inspiration:** EQF Advisory Group pilot horizontal comparison working group coordinated by Poland (2016-2017)
- **Adopted** in the QUATREC project kick-off meeting (22.08.2018)



Structure of fiche

I. Contextual information:

- Title of qualification
- Level of NQF/EQF
- Information about studies leading to the qualification
- Formal rights
- Awarding institution
- Diploma Supplement
- Quality assurance

II. Learning outcomes

- Information about learning outcomes
- Learning outcomes as defined by qualification authority

Qualification:

Level of NQF/EQF:

Country	
Full title of qualification (EN)	
Full title of qualification (national lng)	
Access requirements	
Admission requirements	
Workload (amount of ECTS credits)	
Mode of study (if relevant)	
Profile (academic, professional) <i>If relevant, add contextual information</i>	
Access to further studies	
Professional rights (if exists)	
Awarding of qualification	
• Requirements for graduation	
• Awarding body: <ul style="list-style-type: none"> ▪ Name of institution ▪ Type of institution (for example, higher education institution) 	
• Procedure (if relevant)	
• Diploma Supplement (according to model developed by the European Commission, Council of Europe and UNESCO/CEPES) is awarded (Yes/No)	
• Other documents issued (Yes/No) <ul style="list-style-type: none"> ▪ If yes what title and type 	
External quality assurance	
• Type of accreditation (e.g. programme, field, institution) <i>Please mention all types of accreditation necessary for this qualification to be state recognised in the country</i>	
• Title of quality assurance body (national, other)	
Learning outcomes	
• Visibility of learning outcomes (e.g. Diploma Supplement, website) <i>Please add links if available</i>	
• Formulation of learning outcomes (who defines, who approves, ownership)	
• Learning outcomes are subject to quality assurance (Yes/No)	
• Terminology of learning outcomes (e.g. knowledge, skills, competences, and definitions)	
• Generic learning outcomes (e.g. national, sectoral)	
• Learning outcomes (as defined by qualification provider or awarding body)	
Any other relevant information regarding the qualification	

Selection criteria of sample qualifications for the comparison

- Study field or sector (STEM field and soft sciences)
- Non-regulated professions
- Popular study programmes (or fields of study)
- Awarded in all the partner countries
- Availability of learning outcomes for the selected qualifications
- Different EQF levels – one Bachelor level and one Master level qualification



Selected three qualifications

1. Bachelor's degree in Physics (EQF level 6)

2. Master's degree in Psychology (EQF level 7)

3. Master's degree in Business Administration (EQF level 7)

3 qualifications – 3 different sectors



Data processing

Qualification: Master's degree in Psychology

	ARM	BG	EE	LV	UK
Level of NQF/EQF	NQF/EQF:7/7	NQF/EQF:7/7	NQF/EQF:7/7	NQF/EQF:7/7	NQF/EQF:7/7
Full title of qualification (EN)	Master of Psychology	Educational and qualification degree of Master in Applied Psychology	Master of Arts in Social Sciences (Psychology)	Professional Master's Degree in Psychology	Master of Science in Psychology
Full title of qualification (national lng)	<i>Hogebautyān magistros</i>	<i>Образователно-квалификационна степен Магистър по Приложна психология</i>	<i>Sotsiaalteaduse magister (psüholoogia)</i>	<i>Profesionālā maģistra grāds psiholoģijā, Psihologs</i>	<i>Master of Science in Psychology</i>
Access requirements	Bachelor degree (bakalavri orakavorum) or a corresponding first HE cycle qualification/Level 7	Диплома за висше образование – Бакалавър, 240 ECTS, 4 години (Diploma for Higher Education – Bachelor's degree, 240 ECTS, 4 years)	Bakalaureuse kraad (Bachelor's degree) or a corresponding first cycle qualification	Bachelor's diploma or Second level professional higher education diploma (after at least 4 year full-time studies)	Bachelor (Honours) degree in Psychology or a related discipline, with an Upper Second Classification, or equivalent, with an Upper Second Classification in the final-year research project
Admission requirements	Bachelor degree (bakalavri orakavorum) or a corresponding first cycle of HE qualification	Completed higher education and successfully passed competitive examinations (essay). The rating is formed by the sum of the assessment from the competition examination and the average result of the higher education diploma.	First cycle degree in Psychology; admission examination in Psychology; average grade in Bachelor's programme; interview	Full-time - 3 years (6 semesters) Previous education: Bachelor of Social Sciences in Psychology Formula for calculating the competition score: final average grade (50 x 10 = 500) + entrance exam (1 x 500 = 500). Additional condition: submitting an essay on study motivation and sub-sector selection Eligibility for non-competition registration: 2018/2019 ac.y. graduates of Bachelor's study program "Psychology" of the University of Latvia	800-word personal statement English language qualifications, as per university requirements: https://www.birmingham.ac.uk/postgraduate/pgt/requirements-pgt/international/index.aspx

Data analysis

Analysis of the contextual information

- **similarities** between the countries
- **differences** between the countries

Analysis of the learning outcomes

- **quantitative** methods
- **qualitative** methods

Comparative analysis of the context information: Bachelor's degree in Physics

	Similarities	Differences
Level of NQF/EQF	All partner countries – the same level of EQF (level 6)	ARM, BG, EE, LV – NQF level 6 UK – NQF level 6 in England, Wales and Northern Ireland, NQF levels 9 or 10 in Scotland
Access requirements	All partner countries – secondary school qualification with access rights to HE	LV and UK – more detailed requirements, e.g. specific grades or points in certain study subjects UK – IELTS exam score 6.5 overall (minimum 6.0 in all elements) for non-native speakers of English
Admission requirements	ARM, EE and LV – national language exam results ARM, BG, EE and LV – exam in physics or mathematics (UK not specified) ARM, BG, EE and LV – a specific grade in the state exams and average school grades (UK not specified)	UK – in some cases an interview and an admission test
Workload (amount of ECTS credits)	ARM, EE, LV, UK – 180 ECTS credits	BG – 240 ECTS credits
Mode of study	ARM, LV – only full-time studies	BG, EE and UK – full-time and part-time studies
Profile	All partner countries – academically oriented profile	ARM and EE – both academically and professionally oriented profile
Access to further studies	All partner countries – access to the second cycle programmes	UK – access to the third cycle programmes is discretion of HEIs
Professional rights	ARM, BG, EE and LV – the qualification leads to a non-regulated profession	UK – the qualification leads to a chartered physicist, which is a regulated profession
Requirements for graduation	ARM, BG, EE and LV – final thesis	ARM, BG, EE and LV – final thesis is worth different amount of ECTS credits UK – every study year different requirements
Awarding of qualification		
Awarding body	All partner countries – HEI	
Diploma Supplement is awarded (Yes/No)	BG, EE, LV and ARM – Y BG, EE, LV and ARM – DS in national language and in English	UK – N (some HEIs issue the DS but it is not mandatory)

Analysis of learning outcomes: quantitative methods

1. **Number** of learning outcomes statements, generic and specific learning outcomes
2. **AntConc toolkit** quantitative analysis

Quantitative analysis I

Number of:

- learning outcomes statements
- generic learning outcomes
- specific learning outcomes

	Type of learning outcomes	ARM	BG	EE	LV	UK
Bachelor's degree in Physics	Generic	1	1	4	6	8
	Specific	7	8	3	4	4
	Total	8	9	7	10	12
Master's degree in Psychology	Generic	1	3	2	7	15
	Specific	9	4	4	11	6
	Total	10	7	6	18	21
Master's degree in Business Administration	Generic	4	0	1	0	0
	Specific	9	6	7	5	10
	Total	13	6	8	5	10



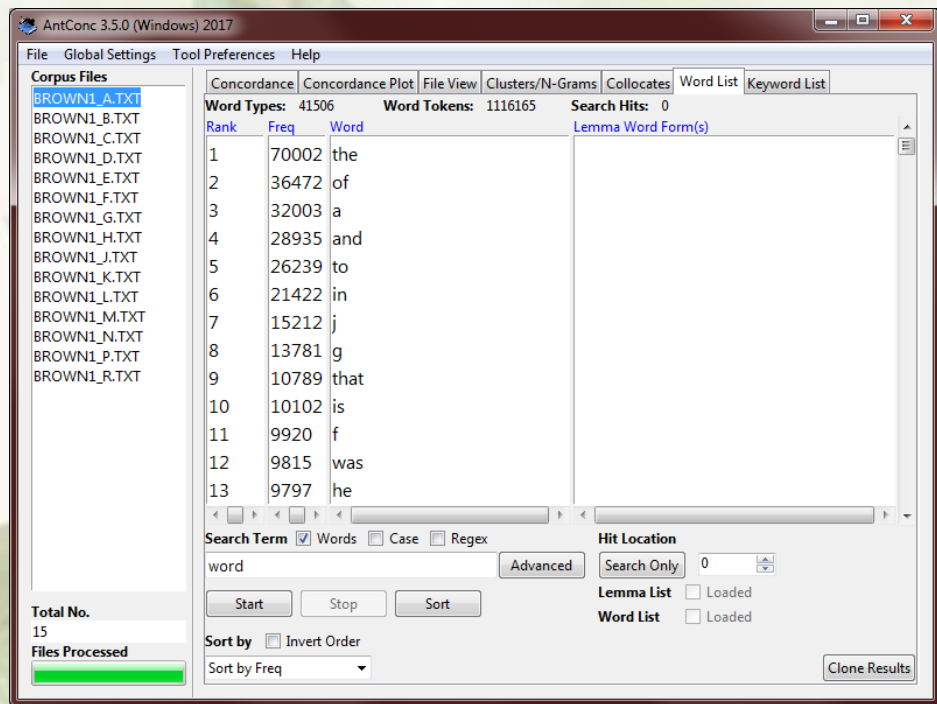
Quantitative analysis II

Analysis with a free software **AntConc toolkit**:

- Most frequently used words

Top 20 most often mentioned words

Bachelor's degree in Physics		Master's degree in Psychology		Master's degree in Business Administration	
Freq.	Word	Freq.	Word	Freq.	Word
29	physics	30	research	37	management
17	use/using	29	able	29	business
13	knowledge	22	knowledge	11	able/can
10	methods	20	psychology	8	problems
9	problems	19	professional	7	issues
7	data	17	use/using	7	marketing
7	understanding	15	graduates	7	research
6	able	14	skills	6	economics
6	information	13	work	6	effective
6	scientific	11	methods	6	knowledge
5	demonstrate	9	apply	5	decisions
5	measurements	9	psychological	5	environment
5	results	9	results	5	including
4	ability	9	scientific	5	innovative
4	analysis	8	specific	5	know
4	classical	7	critically	5	making
4	experimental	7	present	5	skills
4	fundamental	7	understand	5	tools
4	mechanics	6	appropriate	4	approaches
4	principles	6	assessment	4	different



Analysis of learning outcomes: qualitative methods

1. Grouping the learning outcomes by **keywords (topics)**
2. Content analysis with the **AntConc toolkit**
3. **UNESCO World Reference Levels (WRL)** online tool for the profiling of learning outcomes

Qualitative analysis I

Grouping the learning outcomes by keywords (topics):

- knowledge
- research
- problem solving
- data analysis
- communication
- self-education and professional development
- professional activity

EXAMPLE: Keyword analysis in the learning outcomes: Master's degree in Business Administration					
Topic	Armenia	Bulgaria	Estonia	Latvia	United Kingdom
Knowledge	Upon successful completion of the programme students will have wide knowledge in economics and management disciplines	Theoretical foundations and basic principles for forming/building the economic and administrative management practice	Knows categories and terminology used in economics and management sciences	Ability to demonstrate in-depth knowledge and understanding of the competitiveness of enterprises on the basis of innovative solutions that provide the basis for sustainable business leadership, creative thinking and research	
Research	Know how to prepare reports, present results of scientific research	Modelling, forecasting, strategic management and financial models in management for the purposes of targeted market and innovation research	Has gained experience in scientific research	Skills to independently apply the latest theories, methods and problem-solving skills to carry out research and highly professional activities for the creation of new knowledge and innovative	Conduct research into business and management issues and use the findings to solve business and management problems, making suitable recommendations to organisations
Problem solving	Able to classify marketing and innovation problems	Solving the problems arising in the economic management as a result of the influence of the business environment of the business organisations			The integration of different business management functions and tools and how they can be applied to solve business problems
Communication and presentation skills	Discuss strategical and financial management of an organisation in terms of resources, technological developments			Skills to argue, explain and discuss complex business issues in local and international environment for the promotion of innovative business	

Qualitative analysis II

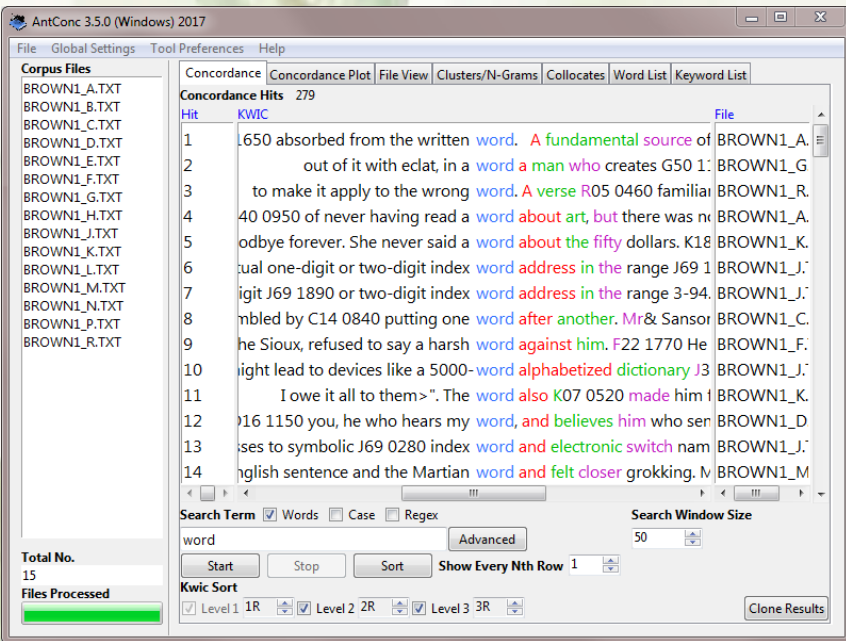


The content analysis with a free software **AntConc toolkit**:

- How words and phrases are commonly used in corpus of texts
- Grouping learning outcomes by concepts

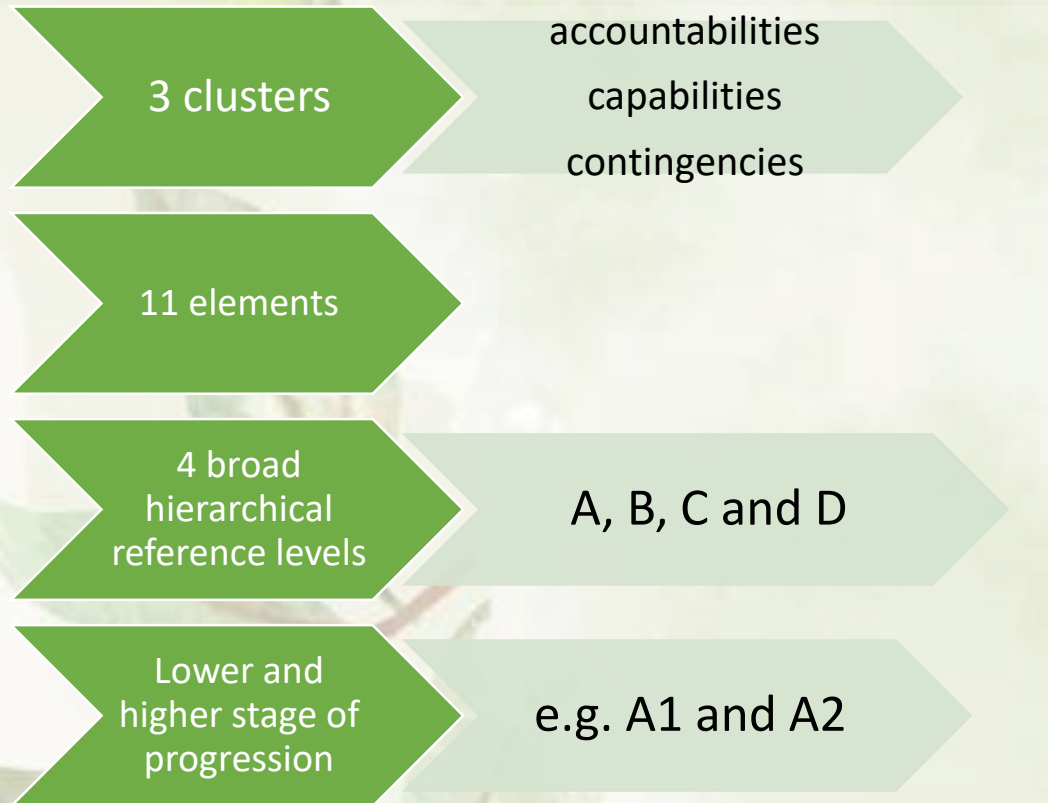
The summary of the content analysis of the learning outcomes: Bachelor's degree in Physics (frequency of concepts)

Short version of learning outcomes	Armenia	Bulgaria	Estonia	Latvia	United Kingdom
Ability to use	0	2	3	3	4
Knowledge	1	0	2	1	1
Problem solving	1	0	2	2	2
Analysis and critical thinking	1	0	1	4	3
Communication	0	0	2	2	2
Ability to develop	1	2	0	0	0
Research	0	2	1	1	4
Professional work	0	1	0	0	0



Qualitative analysis III

UNESCO World Reference Levels (WRL)
online tool for the profiling of learning
outcomes



World Reference Levels Graphical Profile

Bachelor's degree in Physics: Latvia

Selected stage of Activities Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Responsibilities Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Working With Others Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Quality Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Skills and Procedures Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Communication Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Data Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Knowledge and know-how Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Context Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Problems and issues Element

○ A1 A2 B1 B2 C1 C2 D1 D2

Selected stage of Values Element

○ Not fully relevant

World Reference Level website (2019)

<https://worldreferencelevels.org>

Profiling of the learning outcomes: Bachelor's degree in Physics

Element	Armenia	Bulgaria	Estonia	Latvia	United Kingdom
Activities	N/R	C1	C2	D1	C2
Responsibilities	C1	B2	C1	C2	C1
Working with others	N/R	N/R	B2	B2	C1
Quality	B1	C2	A2	D1	B1
Skills and procedures	B1	D1	B2	D1	C1
Communication	B1	C1	C2	D1	D1
Data	C2	B2	C1	D1	C2
Knowledge and know-how	C2	C2	C2	D1	C1
Context	B1	B1	B1	C1	N/R
Problems and issues	C2	N/R	C1	C2	B2
Values	N/R	N/R	N/R	N/R	N/R

Notes: A1, A2, B1, B2, C1, C2, D1, D2 – stages of the WRL elements (A1 – the lowest, D2 – the highest), N/R – the element is not relevant.

The background is a soft watercolor illustration. A large, white, multi-petaled flower is the central focus, rendered with delicate, layered washes of white and light green. Surrounding the flower are several green leaves of various shapes and sizes, some with subtle yellow and blue tints, suggesting a natural, garden-like setting. The overall style is gentle and artistic.

Conclusions

Contextual information of fiches

- **Bachelor's degree in Physics:** similarities – level of EQF (level 6) and the awarding body (particular HEI)
- **Master's degree in Psychology:** similarities – level of EQF (level 7), the access to further studies (access to the third cycle (doctoral) studies) and the awarding body (particular HEI)
- Master's degree in Psychology had **more similarities** than Bachelor's degree in Physics
- **Master's degree in Business Administration:** the most similarities (5 categories)
- The qualification examples are not fully similar, yet the **differences are not substantial**

Content of the learning outcomes I

- The learning outcomes of the qualifications were designed using **similar references** as regards knowledge, skills and competences necessary for the qualifications
- Some examples of qualifications have a rather **balanced division** of the learning outcomes between the topics (keywords), while others are more focused on particular area(s)
- Learning outcomes of all the qualification samples include aspect of **research** and (in most cases) **knowledge**
- Learning outcomes **comprise rather varied concepts and ideas**, which may hinder recognising the qualifications automatically between all the partner countries

Content of the learning outcomes II

- Learning outcomes of the **Master's degree in Business Administration** are rather diverse covering too many fields (although similar) to be easily compared
- UNESCO World Reference Levels tool indicates that the **Bachelor's degree in Physics** has clearly lower reference levels than both Master's degree qualifications
- The learning outcomes of the qualification samples are different in terms of the **scale of their detail**
- The analysis of learning outcomes had a certain limitations due to their **English translations** (except the British qualifications)

The recognition of these qualifications

- Considering the contextual information and learning outcomes:
 - **Bachelor's degree in Physics** could be automatically recognised between the partner countries in terms of the qualification level (EQF level 6)
 - **Master's degree in Psychology** could be automatically recognised between the partner countries in terms of further access to the doctoral studies
 - **Master's degree in Business Administration** could be automatically recognised between the partner countries
- **Regarding the contextual information**, all the three qualifications could be automatically recognised between all the partner countries
- **Differences or variations in the learning outcomes acceptable for them not to be a substantial obstacle for automatic recognition should still be explored and determined**

General conclusions

- In order to facilitate the automatic recognition, **Diploma Supplement** should be issued
- In order to ensure efficient use of learning outcomes in recognition, credential evaluators need to have **thorough knowledge** about reading, understanding, formulating and role of learning outcomes

Recommendations



Recommendations about learning outcomes

- The structure, formulation of learning outcomes should be improved by creating **common guidelines** on how HEIs should write learning outcomes **in relation to the recognition practice**
- The **content of the learning outcomes** (topics, themes) would remain at the discretion of each provider. Depending on the national context, the guidelines could be designed by the ENIC/NARIC offices engaging with HEIs and relevant local government authorities
- The **availability of learning outcomes** (and their translation into a commonly language) should be promoted by introducing discussion among HEIs and ENIC/NARIC offices about the sources of learning outcomes
- **Updating** ENIC and NARIC networks, as well as HEIs about the relevance and importance of learning outcomes of qualifications to ensure comparability and recognition of qualifications

Recommendations about the NQFs in EHEA

- Reliable information about the QF-EHEA and EQF level descriptors should be **updated** regarding the current tendencies in the EHEA and published in reliable online sources
- **Improve** the level descriptors of the NQFs or provide **more guidelines** for HEIs on how to formulate the learning outcomes in accordance with the NQF level descriptors



Recommendations about the recognition procedures

- In order to gain the overview of the current situation on how the ENIC/NARIC offices use learning outcomes in the recognition procedures, a **survey of ENIC/NARIC offices** should be elaborated and conducted
- **Regular trainings and methodological guidance** for credential evaluators about learning outcomes and their use in recognition should be provided
- Implementing and presenting **standardised learning outcome analysis methods and tools** to ENIC/NARIC offices and HEIs for their use of analysing the learning outcomes in recognition
- In order to use learning outcomes of qualifications in recognition more efficiently, **more evidence** should be gathered to design guidelines about steps of using the learning outcomes during the evaluation of credentials
- **Closer cooperation** between the ENIC/NARIC offices and strengthening communication and collaboration with HEIs should be ensured, since HEIs are responsible for the structure, formulation, content of the learning outcomes of the qualifications they provide



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QUATREC comparative study: results, conclusions and recommendations

QUATREC results and report available on the website of AIC:
<http://www.aic.lv/portal/en/par-aic/projects/quatrec>

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