STUDY PROGRAMME MAPPING METHODOLOGICAL MATERIAL

"RISEBA" University of Business, Arts and Technology

APPROVED
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Introduction

The **objective** of the study programme mapping methodological material is to reveal the essence, content, methods and stages of the mapping of study programmes at the "RISEBA" University of Business, Art and Technology , explaining terminology and describing methodology.

The methodological material consists of 4 parts: term definitions, description of the mapping of study programmes, bibliography and annexes.

The methodological basis of study programme mapping are the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015), the requirements of the European Qualifications Framework (hereinafter - EQF) and the Latvian Qualifications Framework (hereinafter - LQF), Cabinet of Ministers Regulations on the Classification of Education in Latvia, the assessment levels of Bloom's Taxonomy and the SOLO Taxonomy's principles of assessing learning outcomes, student centered approach conclusions regarding the organisation of the study process. The formulated study outcomes result from the mission and vision of the university, and are in accordance with the requirements formulated in the standards of the relevant profession.

The essence of study programme mapping is revealed by the mapping model illustrating the evaluation and assessment of study programme outcomes, study courses, study papers and theses in accordance with professional standards, the mission and vision of the department, EQF and LQF requirements. The model is portrayed as a dynamic diagram, which, having analysed all assessment levels, returns to the outcomes of the programmes and the study courses, study papers, internships and theses therein with the objective of re-examining, adjusting and improving them in accordance with the requirements of professional standards and the mission and vision of the department.

The study programme mapping tool are elaborated *Microsoft Excel* tables, through which the content of the Academic Information Centre accreditation mapping tables is substantiated and explained. The *Microsoft Excel* tables provide a comprehensive compilation of the study programme outcomes in comparison to study course outcomes in accordance with the mission and vision of the department, the requirements of professional standards in the categories of knowledge, skills and competences. The elaborated *Microsoft Excel* tables are available electronically.

1. Definitions of terms

Study (programme, course) outcomes - statements regarding the student's knowledge, skills and abilities to perform tasks at the end of the programme (study course, module or separate lesson) (Rauhvargers, 2009). Study outcomes are a set of knowledge, skills and competences that a person has acquired during the study process and is able to demonstrate (AIC, 2016, p.17). Study outcomes are identified for both the study programme and each individual study course.

Principles of formulating study outcomes - an explanation of how study outcomes are formulated. These are:

1. Study outcomes must be observable and measurable. Outcomes must be formulated in a way that allows for them to be verified (how the student demonstrates them) and assessed (proving that the outcomes have been achieved);

2. Study outcomes must be attainable considering the time allocated for the course or programme;

3. To abstain from generalised and unclear wording, such as "to know, understand, get acquainted with", because these terms pertain to study objectives rather than measurable, verifiable outcomes.

Bloom's Taxonomy - assessment of study outcomes in accordance with 6 levels:

1. Knowledge - the ability to remember facts without the need to understand them (recalling already known facts, terms, key concepts and answers, definitions, laws, acquiring specific information).

2. Comprehension - the ability to understand and interpret learned information (through comparison, interpretation, revealing the most essential, the level of comprehension, processing and understanding of facts and ideas is demonstrated).

3. Application - the ability to use learned material in new situations, apply learned ideas and concepts in problem solving (use of existing knowledge, facts, skills, strategy, rules in new situations and different ways).

5. Analysis - the ability to break down learned information into its component parts, including identifying relationships and ideas, understanding organisational structures (breaking down information into parts, determining causes and motives, proving comprehension of interconnections).

6. Synthesis - the ability to combine various parts, ideas, concepts, methods to form a new approach (collection of information, elaboration of alternative solutions to problems by

combining existing knowledge in new ways, creation and application of original conclusions and judgements in the solution of problems).

SOLO Taxonomy - construction of knowledge and creation of skills in order for the student to use their knowledge and skills in a new context, the learning activity has an interdisciplinary objective. The principles of SOLO Taxonomy: immersion, definition, analysis, creation.

Immersion - use of information. Identification, ability to name things, follow simple instructions.

Definition - combination, description, application of skills, classification of facts.

Analysis - explanation of causes, criticism, comparison and contrast, arguing, defending.

Creation - formulation, generation, formation.

(http://www.iksd.riga.lv/upload_file/Izglitiba_pievienotie/0_2016/04_2016/IT_konference/Lielvards%20-%20Musdienu_macibu_vide_Riga_Marts_2016.pdf)

Assessment - the ability to judge the value of the provided material in accordance with its objective (assessment of content, knowledge, notions in accordance with criteria).

Study programme mapping - analysis and comparison of programme content and outcomes in accordance with the mission and vision of the university and department, according to professional standards, the requirements of the Latvian Qualifications Framework (LQF) and the European Qualifications Framework (EQF). The mapping of study courses is a part of the mapping of the programme, where the content of the course is analysed and the learning outcomes assessed in accordance with the study programme outcomes.

Student centered education - a study process, where:
✓ the student, who is studying independently, is at the centre of the study process;
✓ study outcomes are clearly formulated and known, and the student is studying in order to achieve them;
✓ students know and understand the outcomes intended for the study programme or course;
✓ assessment of the student's achievements is done in a way that allows for the verification of whether and to what extent intended study outcomes have been attained;
✓ the role of the lecturer is to promote the student's studies so that the student achieves the intended outcomes;

✓ it is observable how sets of outcomes of individual study courses (hereinafter - courses) form the study outcomes of study programmes (hereinafter - programmes).

2. Mapping of study programmes: principles, models, stages, methods

The mapping of a study programme is a focused, structured process based on three principles or the explanation of how study programme outcomes are compared to the vision and mission of the university and department, the relevant professional standards and how the study programme outcomes can be attained through the learning outcomes of study courses, study papers, internships and theses. These principles are:

1. Assessment of the study outcomes formulated within the study programme in accordance with the mission and vision of the university and department, the relevant professional standards, the EQF/LQF levels of the study programme and legislative requirements;

2. Verification of the ensuring of study programme outcomes in accordance with the content of study courses and learning outcomes defined therein - how is the opportunity to achieve the requirements described in the mission and vision of the relevant department and stipulated in the professional standard ensured in accordance with the courses included in the study programme schedule and the study outcomes defined within these courses;

3. Verification of the validity of the courses included in a study programme in accordance with the study outcomes defined in the study programme, the mission and vision of the university and department, specific professional standards and other legislative acts applicable to the content of the study programme.

The content and process of study programme mapping is illustrated in the mapping model, which depicts the assessment and comparison of study programme outcomes and study course outcomes in accordance with professional standards and the mission and vision of the department. The model is portrayed as a dynamic diagram, which, having analysed all assessment levels, returns to the outcomes of the programmes and the study courses therein with the objective of re-examining, adjusting and supplementing them in accordance with the requirements of professional standards and the mission and vision of the department.
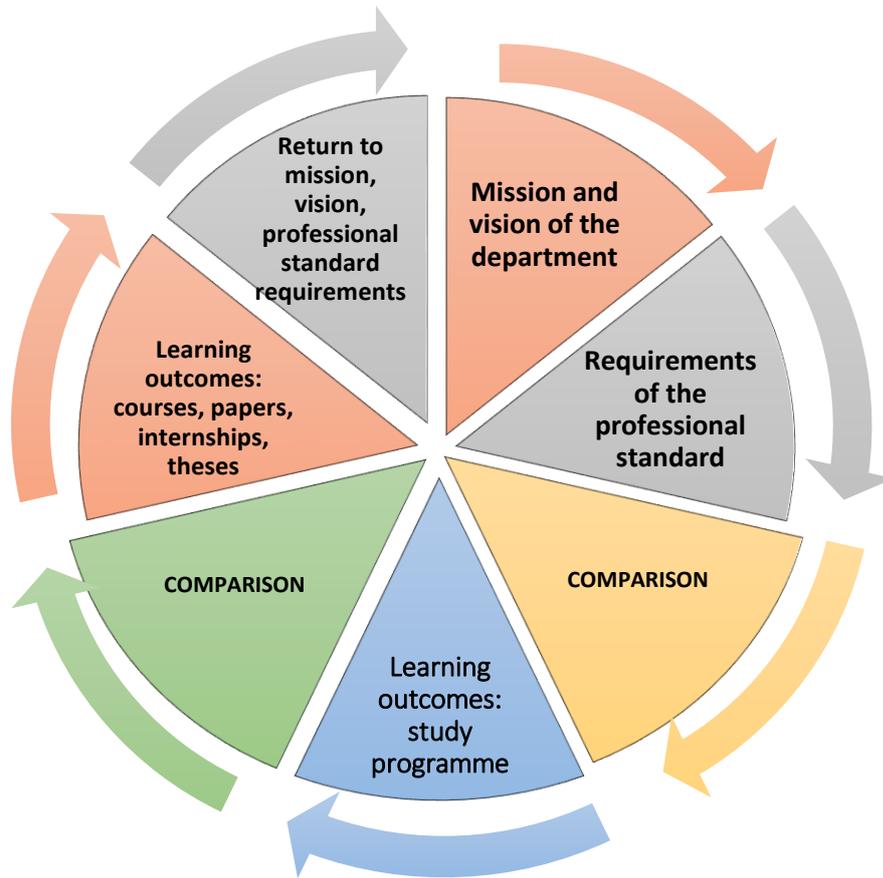
Study programme mapping model

Mapping results in an overview of how study courses, study papers, internships and theses ensure the achieving of study programme outcomes, to what extent are they in line with the vision and mission of the department and how do they ensure the fulfilment of professional standard requirements.

Study programme mapping has 4 stages:

1. Review:

   a) Study outcomes of the programme are reviewed;

   b) Study outcomes included in course descriptions are reviewed.

2. Comparison:

   a) Reviewed study outcomes of the programme and courses, study papers, internships and theses are compiled into a table;

   b) Observations from the mapping process, outcomes, identified problems are formulated and possible improvements are defined.

3. Analysis:

   Analysis of the objective of each course included in the study programme schedule, i.e. why are students learning this course:

a) In order to attain a specific outcome defined for a study programme, the specific outcome must be identified;

b) In order to fulfil requirements of the relevant professional standard, the specific requirement must be identified;

c) In order to fulfil requirements stipulated in the Cabinet of Ministers regulations on study programmes, the relevant Cabinet regulation must be identified (academic education standard / vocational education standard);

d) In order to achieve the goals set in the RISEBA mission and vision or the study area, they must be identified;

e) In order to comply with labour market requirements, they must be identified (requirements stated on alumni surveys/ interviews with employers).

4. Evaluation and application of results:

1) Creation of mapping overviews provides the following results:

a) Are all of the programme outcomes achieved through completion of the specified courses, internships, elaboration of study papers and theses?

b) Is studying courses, working in internships, writing study papers and theses sequential and adequate?

c) Has an objective been identified for each course, internship, study paper and thesis included in the programme and is it compliant with the requirements set for the programme?

d) Is the category (compulsory, restricted elective, fully elective) of the study course, internship, study paper, thesis adequate?

Specific criteria are set for programme outcomes in each level of the LQF/EQF, i.e. the higher the level, the more improvements to knowledge, skills and competences are necessary.

Study outcomes in accordance with LQF/EQF levels (see Annex 2):

1. Knowledge - knowledge and comprehension (every consecutive level includes the knowledge acquired in previous levels);

2. Skills - the ability to apply knowledge in practice, communication and general skills (every consecutive level includes the knowledge acquired in previous levels);

3. Competence - analysis, synthesis and assessment (every consecutive level includes the indicators set in previous levels), values and practical demonstration thereof (responsibility, initiative, critical thinking, etc.).

ESG standard requirements - the programmes should be designed so that they meet the objectives set for them, including the intended learning outcomes(ESG, 2015).

The qualification resulting from a programme should be clearly specified and communicated, and refer to the correct level of the national Latvian Qualifications Framework (LQF) for higher education and, consequently, to the European Qualifications Framework (EQF). LQF/EQF requirements for study programme outcomes are listed in Cabinet of Ministers Regulations No. 322 of 13.06.2017 "Regulations on the Classification of Education in Latvia".

Description of the mapping tool

The study programme and mapping tool is designed as *Microsoft Excel* files summarising information about the study programme study schedule, the learning outcomes defined in the study course descriptions (knowledge, skills and competences), as well as the knowledge, skills and competences necessary to perform basic professional duties as defined in the professional standard, in accordance with the vision and mission of the university and in compliance with the levels stipulated in the EQF and LQF,

The mapping file consists of several sheets entitled "Knowledge", "Skills", "Competences" where the attainable knowledge, skills and competences in each study programme and study course are entered.

Mapping results are available in the *Microsoft Excel* file sheets "Map - Knowledge", "Map - Skills", "Map - Competences" and "Map - Study Courses". The elaborated *Microsoft Excel* tables are available electronically.

Study programme mapping is a dynamic process, which, having analysed all assessment levels, returns to the outcomes of the programmes and the study courses, study papers, internships and theses therein with the objective of re-examining, adjusting and supplementing them in accordance with the requirements of professional standards and the mission and vision of the department.

3. Bibliography

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Annexes

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Annex 1

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Description of the six hierarchical levels of Bloom's Taxonomy

Description of the six hierarchical levels

Knowledge - the ability to remember facts without the need to understand them (recalling already known facts, terms, key concepts and answers, definitions, laws, acquiring specific information).	
Key activities	**Verbs**
show, name, relate	recognise, find, define, identify, describe, label, list, number, memorise, order, name, organise, recall, present, document
Comprehension - the ability to understand and interpret learned information (through comparison, interpretation, revealing the most essential, the level of comprehension, processing and understanding of facts and ideas is demonstrated).	
compare, contrast, show, interpret, explain, illustrate, summarise, classify	interpret, anticipate, discuss, translate, calculate, classify, differentiate, explain, verify, generalise, predict, overview, estimate
Application - the ability to use learned material in new situations, apply learned ideas and concepts in problem solving (use of existing knowledge, facts, skills, strategy, rules in new situations and different ways).	
use, construct, select, develop, organise, experiment, plan, solve, model	use, apply, solve, compute, predict, test, improve, change, modify, explain, work with, organise, produce, operate, employ
Analysis - the ability to break down learned information into its component parts, including identifying relationships and ideas, understanding organisational structures (breaking down information into parts, determining causes and motives, proving comprehension of interconnections).	
Key activities	**Verbs**
analyse, compare, order, appraise, contrast, subdivide, test, conclude, identify relationships, establish assumptions	analyse, differentiate, relate, order, separate, classify, trace back, subdivide, debate, experiment, study, distinguish, breakdown, test
Synthesis - the ability put together various parts, ideas, concepts, methods to form a new approach (collection of information, elaboration of alternative solutions to problems by combining existing knowledge in new ways, creation and application of original conclusions and judgements in the solution of problems).	
combine, produce, construct, imagine, predict, modify, adapt, test, connect, develop	integrate, mix, combine, derive, design, discuss, substantiate, categorise, formulate, invent, design, plan, modify, construct, restructure, change, improve
Assessment - the ability to judge the value of the provided material in accordance with its objective (assessment of content, knowledge, notions in accordance with criteria).	
appraise, justify, criticise, decide, argue, approve, prioritise, set criteria, set values	contrast, appraise, justify, challenge, criticise, compare, decide, defend, assess, evaluate, rank, solve

(Rauhvargers, 2009)

Criteria for study outcomes in accordance with LQF/EQF levels

Knowledge, skills and competences in accordance with LQF/EQF levels

(Cabinet of Ministers Regulations No. 322 of 13.06.2017)

3. Annex

Study programme levels in accordance with the requirements of the Latvian Qualifications Framework (LQF) and the European Qualifications Framework (EQF)

LQF/EQF levels (Regulations on the Classification of Education in Latvia)