

Work Package 3

Business and Administration: Student-Centered Active-Learning Study Programme

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Executive summary

This report presents Work Package 3. The purpose of this Package has been to conduct a study on the implementation within the Academy of Economic Studies of Moldova (AESM) of Problem Based Learning (PBL). In order to achieve the proposed goal, according to a methodology elaborated in the project, the system of higher education in the Republic of Moldova in general and the AESM in particular was analyzed. The analysis was carried out following the same methodology, the same levels and the same criteria as in Work Package 2, where the analysis of the education system in Denmark and Great Britain, and the Aalborg (AAU) and Gloucester (UoG) universities, respectively was performed.

Particular attention was paid to studying the “Business and Administration” study programme at AESM and comparing, according to some indicators, the similar programme at the Universities of Aalborg and Gloucester.

As a result, we did the cross-analysis for the proposed indicators for all three universities, we highlighted some common moments, but also the peculiarities that appear. We have found that the particularities are largely determined by the customs, the traditions existing in that country, the mentality, but also by some legislative and normative acts, by the degree of academic freedom that the universities have.

Following the analysis, we have developed a study programme outline for the „Business and Administration” specialty at AESM that will be implemented from 1 September 2017.

In its elaboration, we started from the experience of the universities in the European Union, analyzed in the Work Package 2, from the current educational plan of the mentioned specialty, from observance of certain statutory provisions existing in the Republic of Moldova. We have developed the Roadmap, which is an action plan, in order to implement this plan, indicating both the measures and the deadlines, the necessary resources, the responsible persons.

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Introduction

The Moldovan higher education is in a continuous change, at the moment, these changes are meant to bring it to the highest level, as competitive as possible with the ones of the European countries. In this Report we highlighted the existing situation in the field based on the example of the Academy of Economic Studies of Moldova. The Bachelor's degree study programme at cycle I, „Business and Administration”, served as a research subject.

A major concern was to use and capitalize on a current, top-level bibliography, the research of internationally recognized specialists with reference to the use of student-centered learning methods in general and problem-based learning in particular. In this regard, the team members studied a set of books on the use of Problem-Based Learning (PBL), the analysis of which is presented in Chapter II of the Report.

We have also focused greatly on practical aspects, studying the legislation and the multiple normative acts that regulate the didactic activity of the universities, which represent a consistent, appreciable part of the volume of the work.

The purpose of this Report is to carry out an extensive analysis of the higher education system in the Republic of Moldova and, in particular, the Academy of Economic Studies of Moldova, based on the methodology elaborated within the project. The methodology was also applied in Work Package 2 to develop a similar report for the Danish university system (based on Aalborg University) and the UK university system (based on Gloucester University). As a result of the comparison of the elements of the methodology used in the European and Moldovan universities, a modified educational plan for the Business and Administration specialty, which will be based on the use of PBL, has been proposed.

Table 1. Team responsible for the study programme

Nr. d/o	Name, surname	Title, function in AESM	Position in the team
1.	Cotelnic Ala	University professor, First vice-rector responsible for the teaching activity	Team leader
2.	Solcan Angela	Associate professor, Dean of the Faculty of Business and Business Administration	Team member
3.	Gaugaș Tatiana	Lecturer, Department of Marketing and Logistics	Team member
4.	Țîmbaliuc Natalia	Lecturer, Department of Management	Team member

1. Review of literature and synthesis of sources

1.1 Introduction

The use of student-centered methods, and especially problem-based learning, requires a deeper study of this method. A starting point was the study of the method during the study visits that the project team had in the universities in the member countries of the given project. The study of bibliographic sources with reference to this topic is of great importance as well. In this regard, they have been consulted, and we will continue to briefly review the key elements of the following sources:

1. *The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline*/edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen

2. *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni

3. *Problem-based Learning Online*/ edited by Maggi Savin-Baden and Kay Wilkie

4. *New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*/ edited by Terry Barrett and Sarah Moore

5. *Problem-Based Learning: Case Studies, Experience and Practice*/ edited by Peter Schwartz, Stewart Mennin and Graham Webb

6. *Teaching for Quality Learning at University: What the Student Does*, 4th edition/ edited by John Biggs and Catherine Tang

The books analyzed are particularly important and useful for teachers and management staff in the academic environment. The latest tendencies in higher education show an increasing focus on the responsibility of teaching, so the teaching process is not only seen as the individual responsibility of the teacher, but as a responsibility of the entire institution, with policies, staff development strategies and quality assurance methods of the teaching process. Being concerned with improving the teaching process, many universities create and fund staff development centers or teaching and learning centers and focus on research into the enhancement of teaching quality in higher education.

The authors of the book „*Teaching for Quality Learning at University: What the Student Does*”, John Biggs and Catherine Tang, claim that one of the best ways to improve the teaching process is changing the emphasis from teacher to learner, i.e. clear definition of learning outcomes that students should achieve at the end of the subjects taught by teachers. In this context, the book builds on the concept of *constructive alignment*, used in the implementation of results-based learning. The *constructive alignment* identifies the learning outcomes to be achieved and helps teachers to develop teaching-learning activities that will help students achieve these results and be able to assess how well these outcomes have been achieved. Each chapter includes tasks that provide ideas and recommendations on how constructive alignment can be implemented. Another advantage of the book is that it includes a wide variety of fields and disciplines, as well as examples from the authors' experience in implementing constructive alignment in different countries: Australia, Hong Kong, Ireland, North America, etc.

The book „*New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*”, edited by Terry Barrett and Sarah Moore, is an excellent professional guide that embraces various aspects of PBL. The PBL method, being a pedagogical approach, has the ability to

promote an active learning method within the upper school. The basics of PBL are to create real problems for students who will work in small teams.

The book describes in detail the practices of several higher education institutions in the world on the involvement of students, teachers and other stakeholders in the use of PBL. All approaches with regard to PBL are focused on the potential of the method to revitalize teaching and learning methods in higher education institutions.

The book consists of 20 chapters, which are grouped in three parts:

1. *Stakeholders designing PBL initiatives* (chapters 1-8);
2. *Students using PBL to enhance capabilities* (chapters 9-14);
3. *Sustainability and building capacity in PBL initiatives* (chapters 15-20).

The reference work „*The Power of Problem-Based Learning: A Practical “How to” for Teaching Undergraduate Courses in any Discipline*” / edited by Barbara J. Duch, Susan E. Groh and Deborah E. Allen emphasizes that transformations that take place in various fields of activity are undoubtedly reflected in the higher education system. Fast changes in the business environment, ubiquitous access to information, cutting-edge technology, all set requirements regarding acquiring and transmitting knowledge in universities. Any change in society imposes its requirements on the education system as it provides a basis for its further development, laying the foundations for the formation of a certain vision, perceptions and, ultimately, prosperity.

It was in 1994, in Wingspread (USA), within a joint conference organized by state and federal authorities, representatives of corporations, philanthropists, representatives of higher education and accreditation institutions, when a list of the most important qualities necessary for a college or university graduate was elaborated:¹

- High level of communication skills, use of modern technologies and finding of information, which can be used when needed,
- Ability to make informed decisions - in other words, to effectively identify the problem, collect and analyze information on this problem and identify solutions,
- Skills to operate within the global community by possessing various abilities, including adaptability, flexibility, diversification, persistence - for example, in self-organization, ethical and social development, creativity and ingenuity, teamwork,
- Technical competence in his/her field of activity,
- Ability to use the above mentioned features to solve concrete problems in complex real world conditions.

All these qualities establish the need to change the traditional training style in favor of new methods, focused on the acquisition by students of skills to identify, analyze and solve concrete problems.

The book „*Problem-Based Learning case studies, experience and practice*” by Peter Schwartz, Stewart Mennin, and Graham Webb is addressed to people who already use the PBL and those for whom this method is still unknown . Thus, for the more „experienced” readers, the book can serve as a source of inspiration in the application of PBL, and for those who are faced with learning through PBL for the first time, the work provides a series of instructions that will facilitate successful understanding and development of a new PBL teaching and learning strategy.

¹ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J. Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 4-5

The main objective of this paper is to help readers acquire a bag of knowledge and skills based on the experience experienced by the teaching staff who applied the PBL methodology in their work, in the light of specific situations and cases presented in the paper².

This book summarizes a significant number of 22 *case studies written by 37 teachers from 6 countries, who specialize in various fields of science such as medicine, dentistry, biomedicine, natural sciences, architecture, engineering and optometry*. Common to these cases is that they present some of the most important and frequently encountered difficulties and challenges that may arise in applying the PBL method.

*The case studies presented in this book are focused on problems in three core areas, which are divided into 3 sections, namely*³:

1. political / administrative / resource problems (there are 8 case studies on this topic in the book);
2. teacher-related problems, including their perception of this method, defining their role in PBL, and teacher training for PBL (7 case studies on this subject);
3. student related problems, including their perception of the PBL method, classroom activities / dynamic / difficulties and student performance assessment (7 case studies on this subject are presented).

Case studies are made up of at least two parts, each ending with questions for readers. Thus, the reader is invited to take over the role of the author and to reflect on what actions are to be undertaken after he / she becomes aware of the circumstances of the first part of the case study. Moving forward in reading, the reader discovers what has really been done in each case to apply the PBL method.

The book „*Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*”, edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, is structured in 6 basic chapters, List of Tables and Figures, Preface, References, and Index. The basic compartments have been titled: Developing Bachelor’s degree studies in psychology and the need for change; Problem-based learning; Evaluating students’ knowledge in a problem-based study programme; Problem-based learning study programme in psychology; Examples of problem-based learning case studies in psychology; Epilogue.

The paper includes a detailed description of the emergence and development of psychology as a subject of study. The book highlights the etymology of the word „psychology”⁴ (Friedman 2013, Kant 1786), and the establishment of psychology as an independent study subject in medical sciences⁵ (Thijssen, Luthy 2012).

Further, the authors highlight the research branches of psychology and the emergence of university / academic discipline called „Psychology”⁶ (Fuchs 2012). The analysis continues with the identification of the early stages of establishment of higher education in psychology and their development at present⁷ (Brewer 1997). It is worth mentioning the changes that the study discipline of psychology currently undergoes, namely the role of higher education in the training of

²Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p.6

³ idem, p.6

⁴ Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.3

⁵ Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.4

⁶ idem, p.7

⁷ idem, p.12

future specialists in psychology⁸ (Trapp 2011). Last but not least, the authors highlighted the disadvantages and limitations of current studies in psychology and emphasized the need to change the teaching system to improve the training of future psychologists as professionals⁹ (Goedeke 1997).

The book „*Problem- based Learning Online / edited by Maggi Savin-Baden and Kay Wilkie*” offers an optimal solution to the challenges that arise between modern learning technologies and their complicated association with psycho-pedagogical approaches in the educational field.

The purpose of this book is to provide effective solutions for the implementation of the problem-solving oriented training system through information technologies and the information space.

The main objective is to convince the specialists of different educational institutions to opt for modern training methods, to apply information technologies on a large scale and to develop the training system focused on problem solving in the specialization courses.

The content of this book is structured into four core chapters. In Chapter I, the authors describe the possibilities and challenges of the problem-solving training system. In the second chapter the authors offer examples such as how a classic teacher can turn into a modern teacher. The most important thing is to overcome all constraints and barriers to implementing innovations.

Chapters III and IV contain information that contributes to the development of modern education and education through information technologies and on-line platforms. A great attention is paid to the development of technological and techno-pedagogical mechanisms for the successful implementation of problem-solving training programmes.

1.2 Policies to modify student-centered study programmes and curricula

Under the current conditions, more and more universities focus on student-centered learning and teaching, based on curriculum development taking into account the learning outcomes that students have to achieve at different levels¹⁰.

Learning outcomes should be reflected on 3 levels:

- *At institutional level*, as an affirmation of what university graduates are supposed to be able to do;
- *At programme level*, as an affirmation of what graduates of a study programme should be able to do;
- *At the discipline level*, as an affirmation of what students should be able to know and use at the end of a course¹¹.

The finality of the learning process for graduates is conceived in two directions: as generic knowledge and skills that must be displayed in all circumstances or as attributes embedded in the field or within a discipline.

The authors recommend the next steps before developing the learning outcomes:

1. we have to decide which knowledge to be involved;
2. selecting topics to be taught;

⁸ idem,p.14

⁹ idem,p.17

¹⁰ Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p.9

¹¹ idem, p.113

3. we need to decide on the purpose of teaching the subject and determining the level of performance achieved by students¹².

Once the course outcomes are established, it is necessary to check whether there is a matching and coordination between the graduation, programme and course results. We can do this by representing the curriculum map, which is the systematic review between the expected learning outcomes of the programme and the final graduation results, and the targeted results of the course and the programme¹³.

A key role in delivering new educational approaches, namely training programmes or student - centered curricula, lies with the responsibility of the university management. Most importantly, they must set a right balance between upward and downward innovation approaches, develop a proper incentive system, recognize the different needs of the faculties, monitor and find a compromise between the cost-benefit ratio of innovation, to provide support for innovation and to collect relevant data demonstrating the effectiveness of innovation.¹⁴

John C. Cavanaugh thinks that „in order to implement this change, it is essential that it be sustainable and long-term oriented. The secret of sustainability is relatively simple: a) establishing a sustainable programme of faculty development, b) maintaining an appropriate combination of incentives, c) creating the need for a new training plan or curriculum, etc.) generating advertising and recognition”.¹⁵

New curricula should be developed on the basis of the following provisions: organization of content around problems, orientation of learning on accumulation of experience and individual perspectives for students, use of students' personal knowledge and experience as a starting point for analysis, development of critical thinking competences, analytical skills and skills for continuous development.¹⁶

In the book „*Problem-Based Learning case studies, experience and practice*” it is mentioned that among the pioneers of the introduction of the PBL method was the *University McMaster Medical School in Canada* which resorted to the introduction of the PBL study programme in the second half of the '60s. After which a growing number of educational institutions implemented the PBL in their curricula. Relevant are the results of research into the effects of the student-centered PBL study programme (*Albanese and Mitchell, 1993; Schmidt, 1987; Vernon and Blake, 1993*). Among the results obtained, we note the following¹⁷:

- Students who studied under the PBL study programme had the same performances as students in the traditional curriculum;
- Students who studied under the PBL study programme are superior to the students in the traditional curriculum in the following aspects: the approach to studies; knowledge gained for a long period of time; motivation towards studies; perception of stress during studies;
- The teaching staff of the interviewed faculty appreciate more positively the involvement and role of the students who studied under the PBL study programme;

¹² idem,p.130

¹³ idem,p.127

¹⁴ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.36

¹⁵ idem, p.34

¹⁶ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.200

¹⁷ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 3

- The costs of applying the PBL study programme are comparable to those of the traditional curriculum in a class of about 100 people.

The idea of an effective management within PBL is actively promoted in the first section of the book, which includes 8 case studies related to PBL study programmes.

Thus, at an extreme it is presented the case of „Retreat direction”¹⁸ where maladministration was one of the major factors that condemned the proposal to introduce PBL into the study programme.

At the other extreme it is presented the case of „Overcoming obstacles”¹⁹ illustrating the successful vertical implementation of the PBL method in a medical institution that until then was a fan of the traditional teaching-learning method.

Problem-based learning is explained and developed in the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*. The authors provided a summary of teaching theories, namely the origins of problem-based learning²⁰ (Barrows 1980), how to apply modern theories of teaching in practice²¹ (Schmidt 1983) and ways of organizing classes so that students learn skills to solve problematic situations.

It is important to note the competences developed by students through problem-based learning, namely: systematic learning abilities, leadership skills, responsiveness to teamwork, development of explanation, listening and negotiation skills, etc.²² (Dolmans, 2005).

The authors have identified various methods of applying problem-based learning and have argued in favor of developing a problem-based curriculum, compared to traditional study programmes²³ (Colliver, 2000).

Various ways of assessing students’ knowledge were identified and explained in the chapter „Evaluating students in problem-based study programmes”. The authors highlighted the principles of knowledge assessment, process orientation versus outcome orientation, feasibility of evaluation criteria, validation of evaluations, and examples of questions to evaluate students’ knowledge²⁴ (Hays, 2008).

In chapter 4 – „problem-based psychology study programme” - the authors included an example of a study programme, there were identified the subjects studied in each year of study, the professional and personal skills developed in each semester and the possible themes for case studies and group projects²⁵.

Currently, more and more experts support the idea of training specialists in various fields through modern technologies. The authors of the *Problem-based Learning Online* book illustrate a number of advantages and features of PBL-based training through the figures on pages 63, 68, 83, 95.

The participants in the training process have undergone a great deal of positive change, the roles and rules of communication and the setting of objectives for each category of participant in the learning process have changed. New training programmes (curricula) should focus on three basic

¹⁸ idem, p. 60

¹⁹ idem, p. 52

²⁰ *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/* edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 19

²¹ idem, p. 20

²² *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/* edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.26

²³ idem, p.28

²⁴ idem, p.35

²⁵ idem, pp. 87-140

principles: learning through simulation and modeling, self-directed learning and learning through practice.

1.3. Changes in student, teacher and stakeholder relationships

The authors of the book *„Teaching for Quality Learning at University: What the Student Does”* claim that the efficiency of teaching in teachers depends on how to think and appreciate what the teaching process is. Three levels of teaching thinking are known. The first two are blame models, in the first case - the student, in the second case - the teacher. The third model integrates teaching and learning, appreciating effective teaching as encouraging students to use learning activities to achieve the proposed outcomes²⁶.

The first level focuses on differences between students: they are good and weak students. Thus, teachers see their responsibility as knowing the course and its clear exposure. The transmission of information takes place through traditional teaching, so the differences in material assimilation and learning among students are explained by skills, motivation, what school they have graduated, etc.²⁷

Teachers at the second level focus on what teachers do. This model is also based on transmission, but the transmission of concepts and understanding, not just information. The learning process is appreciated according to what the teacher does and not the type of student they interact with. This method of teaching is centered on the teacher²⁸.

The third level focuses on what the student does and how it relates to the teaching process. This model of teaching is student-centered, and the purpose of teaching is to provide support for learning. In order to achieve this goal, it is necessary to establish the following aspects:

- What students need to learn to accomplish the course’s outcomes;
- What it means for students to understand the content taught in the way it is stipulated in the desired outcomes;
- What kinds of learning-teaching activities are needed to reach the desired levels of understanding.

So, according to this model, the role of the teacher changes, he/she is no longer the decisive factor and the expert, and this can create psychological barriers for many teachers who are accustomed to the traditional teaching system.²⁹

In the case of PBL implementation, the relationship between student and teacher changes: the teacher is seen as a mentor, helping students to adapt as much as possible and „perceive” the problem.³⁰

Usually, PBL involves students work in groups of 3-7 persons. This interaction is more acceptable because the members of such a group feel more comfortable and this increases the degree of their involvement in the group.³¹

²⁶ Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 16

²⁷ idem, p. 18

²⁸ Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 19

²⁹ idem, p. 20

³⁰ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 200

³¹ idem, p. 197

Discussions, debates, analysis of problems in teams, and reaching consensus are the necessary conditions of democracy, which, implemented in society, offer it many opportunities. Thus, PBL allows students to overcome many obstacles and achieve both personal limits and those of society.³²

Interestingly, PBL can also be implemented in large classes (over 200-250 students), in this case it is necessary to take into account the particularities of teaching in such classes and the possible problems. The experience of the Delaware Institute (USA) shows that the potential problems of using PBL in such lecture halls can be solved by the following measures: 1. Using the help of colleagues, graduates of the same university, who would be able to control the students' team; 2. Establishing behavioral principles characteristic of small groups; 3. Organizing mini-lessons.³³

Once there is an understanding in the application of PBL, both teachers and students need adequate training and time to accept changes that will interfere with their roles and behavior. The case study „Come and see the real thing“³⁴ is a relevant example demonstrating that active involvement of teachers in PBL tasks addressed to students can raise questions and raise doubts that can not be successfully overcome until more experience is accumulated.

Also, working with external experts and potential employers can help to understand key issues in PBL, a hypothesis that is supported by the case study „Why does the faculty have teachers if they do not teach?“³⁵.

At the same time, the book presents at least two examples „Did the students do this?“³⁶ and „They did not lift their weight“³⁷, in which the collaboration between students and teachers has resulted in positive results.

Effective communication and collaboration are axiomatic to any human progress. The cases illustrated in this book show how important communication is both between the faculty members who apply PBL and the students working in the same group and of course the teacher and student involved in the PBL process.

Problem-based learning is a learning method in which the student first encounters a problem that is followed by a student-centered learning process (Barrows and Tamblyn, 1980).

The purpose of using problems in this method is rather to stimulate the learning of the information and concepts provided by these problems than to solve the problem³⁸.

In the paper „*Problem-Based Learning case studies, experience and practice*“ it is mentioned that when applying PBL students usually work in small groups supervised by a tutor, which facilitates the discussion and the study process, without being a direct source of information. This brings about a change in both the role of the teacher and the change of the teacher-student relationship.

The problem-based teaching method is also described and explained in the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching* based on

³² idem, p. 197

³³ idem, p. 44

³⁴ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p.13

³⁵ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 98

³⁶ idem, p. 111

³⁷ idem, p. 163

³⁸ idem, p. 1

teamwork. It is proposed that students create groups that will be given problematic situations to solve. These „problems” can be formulated as case studies, clinical examples, in written, graphic, visual form, etc. Then, students will be suggested to apply the seven steps to solve the problem according to the problem-based teaching method³⁹ (Schmidt, 1983). Documentation, problem research is part of the method - students are encouraged to come up with their own ideas and suggestions to solve the problematic situation, based on the theoretical knowledge previously obtained and during the application of this method.

In the case of the problem-based teaching method, the role of the teacher changes: he/she will no longer be the center of the teaching-learning process, but becomes a facilitator rather than a class teacher in the classical sense of the word. The PBL teaching method is student centered, the teacher being expert, trainer, facilitator and a monitoring tool⁴⁰ (Dolmans, 2002).

The authors tend to emphasize the importance of the reverse link in the process of teaching and assessing students' knowledge. Feedback from the teacher must be clear, objective, but also motivational. If the teacher's notes are too short and tough, the student may be discouraged, and the main goal of teaching might fail. The purpose of feedback from the teacher should be to improve and perfect students' skills as future professionals⁴¹.

The role of tutors (course developers or teachers) is very well detailed in the *Problem-based Learning Online* book on pages 90-97. Based on what is said there, it is intended to implement a type of participatory training where the relationship between teacher and student is focused on: mutual information, facilitating access to information, negotiation and training. Figure 6.2 on page 91 illustrates schematically the role of tutors in face-to-face training versus on-line training.

1.4. Innovative student-centered PBL and active study

The authors of the book *Teaching for Quality Learning at University: What the Student Does, 4th edition*, John Biggs and Catherine Tang refer to the PBL (problem-based learning) as an innovative teaching method, it is mentioned that it is most often used in professional education but can also be used in teaching basic subjects⁴².

There are several changes and versions of PBL, but it should focus on five objectives:

1. Structuring knowledge for its use in lucrative contexts. PBL is concerned about the enhancement of knowledge that can be used in practice.
2. Elaboration of justification processes, such processes include problem solving, assumptions, decision-making process.
3. Developing their own learning skills: generic skills in the field, content specific skills, and especially self-management skills.
4. Higher motivation for learning, students are placed in a context that requires their immediate involvement.
5. Developing group work skills.

Albanese and Mitchell (1993) made an analysis of the studies published between 1972 and 1992, reaching the following conclusions:

³⁹ Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 20

⁴⁰ Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 32

⁴¹ idem, p. 170

⁴² Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 179

- Both teachers and students appreciate PBL at a higher level than traditional teaching;
- In PBL, students use more complex strategies to understand the material and work individually;
- PBL students get more in-depth in their learning approaches because they use much more varied sources than regular students who usually rely on course notes or the reference manual⁴³.

There are two main reasons for resistance to PBL implementation:

1. Teachers need to change their mentality and be open to lifelong learning because they lose their position as an expert.
2. The PBL needs institutional flexibility because it requires multidisciplinary study and an appropriate infrastructure for organizing the group learning process.⁴⁴

The characteristics of a „good” problem, in Barbara J. Duch’s opinion, are as follows:

- ✓ An effective problem should attract the student, interest him/her, and motivate him/her for a deeper understanding. It must be as real as possible.
- ✓ The problem that works well encourages students to make decisions based on arguments, facts, information, logic and / or rationalization.
- ✓ The problem must be complex and require the cooperation of all team members to solve it.
- ✓ The first question at the first level of study of the problem should be open, based on existing knowledge and / or be questionable, so that all students can participate in the discussion.
- ✓ The objectives of the content of the discipline should be included in this problem and represent connectors between the students’ existing knowledge and new concepts.⁴⁵

In addition, a well-conceived problem must always be described (the basic idea, the real conditions of activity, the introduction of the student into the problem data, the description of a detailed plan how the problem will be used in the course, the identification of resources for students).⁴⁶

In the book „*Problem-Based Learning Case Studies, Experience and Practice*” it is stated that in student-centered education, students are the ones who assume responsibility for their own knowledge, this being the basic philosophy of the PBL⁴⁷.

In active learning the student usually goes through the following stages⁴⁸:

1. the student first encounters a problem without having previously documented on the subject;
2. after that they interact in groups with each other to explore the existing knowledge that is tangent to the problem subject for the study;
3. formulates and tests hypotheses that may matter in solving the problem;
4. identifies future learning objectives to progress in the proposed study;
5. studies individually between group meetings;

⁴³ Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 182

⁴⁴ idem, p.184

⁴⁵ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 47-50

⁴⁶ idem, p. 50-53

⁴⁷ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 170

⁴⁸ idem, p. 2

6. reintegrates with his / her group to share the acquired knowledge and apply them in the study of the problem;
7. repeats the step 3 to step 6, if necessary;
8. reflects on the process and the content that has been learned.

Another extremely important aspect in the book argues that the evaluation methods used in the PBL must correspond to the way students learn PBL⁴⁹.

Teacher's concerns about appropriate assessment methods are one of the basic difficulties encountered in several case studies, namely:

- „PBL redesign: solving the integration problem”, which refers to applying the PBL model from one discipline to another, making students integrate knowledge into a PBL module⁵⁰;
- „Professional Teacher Development Workshops: Challenge of PBL”, which describes the difficulties encountered in the process of PBL development workshops resulting from the different levels of training and expectations of the participants⁵¹;
- „I do not want to be a part of the Group”, describing the situation of a student who failed in the evaluation at a PBL unit because of poor group involvement⁵²;
- „Damage assessment”, which characterizes the factors that caused a hostile reaction of the students to the evaluation methods used in PBL⁵³.

The modern method of PBL teaching is superior to the traditional one in many ways, but it also faces some difficulties in the implementation process. Process orientation versus result orientation is one of the questions addressed to supporters of this method, says Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, the authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*⁵⁴. It is especially important to set criteria for assessing the tasks offered to students in order to make the teaching-learning process as objective and effective as possible. The authors provide a figure illustrating the knowledge gained by students through the use of the PBL method⁵⁵. Various methods of student assessment are listed through a variety of diverse and different sample tests. Many specialists are inclined to use essays as a reflection and meditation test, but also the method of oral presentation, multiple choice questions, true / false questions, brief case studies, etc. are used as well.⁵⁶ It is widely practiced to present individual tasks and reports, and discussions in groups on concrete situations / case studies⁵⁷. Last but not least, it is recommended that students collect information and tasks solved in a portfolio, including in it their own opinions, teacher feedback and other additional information⁵⁸.

Figures 7.1, 7.2, and 11.2 in the book entitled *Problem-based Learning Online* describe the best ways to communicate through comparative analysis - the specifics of communication in face-to-face training and training through information technology. In the PBL environment, collaborative

⁴⁹ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 149

⁵⁰ idem, p. 90

⁵¹ idem, p. 104

⁵² idem, p. 142

⁵³ idem, p. 156

⁵⁴ Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 36

⁵⁵ idem, p. 40

⁵⁶ idem, p. 52

⁵⁷ idem, p. 54

⁵⁸ idem, p. 58

interactions take place through ICT between the teachers and the students enrolled in the course. In a learning environment, assignments and tasks are transmitted and the communication also takes place in this environment, it is explained how to do them, and how are learners' outcomes / projects / solutions received.

In the book *New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*, the authors Terry Barrett and Sarah Moore pay special attention to the analysis of recent theories in the field that allow you to familiarize yourself with the latest investigations of the PBL elements⁵⁹.

Within the first chapter⁶⁰, the authors of the book make a review of the evolution of the PBL concept, of defining all the component elements of the integration process of PBL in the upper school.

They try to find answers to the following questions:

- What is the value of PBL?
- What new approaches in PBL do teachers apply?
- How can PBL improve the study process?
- How is it possible to revitalize our PBL practices?

According to the authors of the book, the concept of PBL consists of 6 basic dimensions, which served as starting points to write the book⁶¹:

a) Developing the problem in PBL

The first part of the book contains a variety of examples of problems that can be used in PBL. Chapter 2 describes several methods that streamline the problem-solving process in PBL, and chapters 3, 4 and 6 illustrate how new technologies can be used for this purpose.

Chapter 3⁶² describes the ways in which experts from the real economy and academia are involved in problem-solving in PBL.

b) PBL monitoring in small teams

Typically, teams of 5 to 8 students work under the guidance of a tutor. Chapters 9, 10, 16 propose some recommendations for increasing tutor efficiency and improving teamwork.

c) Evaluations in PBL

Appropriate evaluation methods can improve student learning (Biggs, 2003). Chapter 3 of the paper analyzes examples of how the evaluation process can be facilitated in order to achieve greater outcomes in students' learning.

d) Curriculum development in PBL

Curriculum development in PBL is a multidimensional managerial project (Conway & Little, 2000). Chapter 15 is really useful for the curriculum planning process. The ways to modify the curriculum are discussed in Chapter 17⁶³.

In the paper, it is emphasized that any activity carried out in this respect is raised by the following questions:

- What knowledge is important for the graduate to possess?
- What are the competencies, skills and key aptitudes for graduates?

⁵⁹ *New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*/ edited by Terry Barrett and Sarah Moore, p. 16

⁶⁰ *idem*, p. 3

⁶¹ *idem*, p. 4

⁶² *idem*, p. 36

⁶³ *New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*/ edited by Terry Barrett and Sarah Moore, p. 229

e) Capacity and knowledge development

Employers are constantly having requirements towards graduates from higher education: ability to communicate, work in teams, manage information, think creatively and critically, solve various problems, etc.

Namely the PBL method allows students to develop these capacities at a great extent. Chapter 5 and 9 analyze how it is possible to help the student connect different concepts.

Chapters 10, 11, 13 illustrate ways to teach the student to manage information, analyze, and generate new ideas.

f) Philosophy of PBL

It tries to determine the roles of all stakeholders involved in PBL: the tutor, the leader, the reader, the observer, etc.

Unlike the classical role of the teacher, in PBL he / she appears in a variety of roles specific to this method. In particular, chapters 6 and 16 describe how it is possible to modify the teacher's behavior in this respect.

The chapters in the book are written by several authors (theoreticians and practitioners), and a great advantage is that they analyze various aspects of PBL from their own experience, accumulated over a long time.

1.5. Influence of information and communication technologies on PBL, training, and curriculum development

Educational technologies offer teaching-learning activities that can address a wide variety of learning outcomes. E-learning can be an alternative to traditional classroom teaching and may involve students in specific activities such as, for example, online conferences, knowledge forums. Students can work online and use social networks or skype to organize teamwork, interact with teachers or colleagues, and post serious reflections.⁶⁴

The rapid development of Internet-based technologies allows them to be used in curriculum and study programmes development. Depending on the objectives of the course, the teacher can provide students with a list of websites with useful information, or give them the concrete names of the sources.⁶⁵

In addition, communication between groups or student-student communication in the case of group activity is of great importance. Often, such communications are more effective than classroom discussions in terms of saving time and speed of information exchange. Also, the teacher can communicate more intensely with students through websites, get feedback quickly from them.⁶⁶

In the book „*Problem-Based Learning case studies, experience and practice*”, the need to develop the teaching and consequently the modification of the curriculum to the application of the PBL method is actively promoted. However, none of the 22 case studies presented in the paper describes a situation where the impact of ICT in PBL student-centered education is estimated. Case studies predominantly focus on the difficulties of implementing PBL from the perspective of teachers or students, without making a connection with the use of information technologies in the cases presented in the book.

⁶⁴ Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 78

⁶⁵ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 73

⁶⁶ idem, p. 72

The PBL teaching method, considered by the authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*, involves the analysis of large volumes of information independently and the implementation of knowledge gained from the teacher and accumulated on its own. To facilitate the learning process, various techniques and technologies of communication and teaching can be used. The teacher can use the projector to make interesting and interactive presentations. The MOODLE system offers a multitude of opportunities to place specialized information for the students of a particular course, at specific disciplines; assessment of students' knowledge can also be done through MOODLE. Teachers can use Podcast to provide detailed information on the requirements of certain tasks or to provide feedback to students. The online seminars are widely used, thus reaching a common denominator in the case of time divergences. Students can attend classes at home or anywhere in the world.

It is important to capitalize on the technical possibilities offered by the modern society, and the teaching-learning process should always be in step with the new discoveries and should benefit from the novelties and innovations in the world of communication technologies.

Maggi Savin-Baden and Kay Wilkie, the authors of the book *Problem-Based Learning Online* consider that in the 21st century it has become very common to work and learn in the virtual environment. Classical learning and communication methods are gradually being replaced by modern ones. Through ICT, the following training modalities have been developed and implemented:

- ✓ Audio lessons and video lessons;
- ✓ Communication applications: Chat and forum;
- ✓ Task verification method - Drop-Box;
- ✓ Video conferencing;
- ✓ Evaluation methods: peer to peer and self-evaluation.

By means of Figure 12.2, the authors present graphically the categories of methods used in the training process. What is amazing is that „Chat”, „Drop-Box”, and „Forum” methods are more popular than face-to-face training. Thus, learners appreciate the convenience of remote communication.

1.6. Conclusions

In the process of teaching, we must focus not only on what we should teach, but on what we would like our students to know and how we can help them achieve these outcomes. Teaching materials delivery and assimilation are developed and implemented to align with these outcomes. The book *Teaching for Quality Learning at University, 4th edition, Open University Press* is an aid to university professors who want to improve their teaching quality and focus more on student-centered learning. It includes both theoretical milestones, studies, and practical recommendations for novices and experts from the academic environment. This work helps you think about how the high quality of teaching can contribute to raising the quality of learning.

Problem-based learning - is a training strategy that helps students acquire special thinking skills and communication skills that are so necessary in the modern world.⁶⁷

Today's students must be developed multilaterally, even more than 10 years ago. The problems the future professionals will face differ in their complexity and therefore require innovative interdisciplinary approaches in the field of training.⁶⁸

⁶⁷ The power of problem-based learning: a practical “how to” for teaching Undergraduate Courses in Any Discipline”, edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 3

Under the influence of PBL, all aspects of modern training change: the emphasis is on self-development of the student with the necessary support of the teacher, the relationship between students, teachers and enterprises involved in the PBL process, the teaching methods are changed, the role of information technology increases in the training process.

Summarizing the content of the book „*Problem-Based Learning case studies, experience and practice*”, we note a number of difficulties in the implementation of PBL that have repeatedly emerged in the case studies presented in this paper.

In particular, these difficulties / barriers in the application of PBL referred to the following aspects ⁶⁹:

- the reticence of teaching staff and students towards the changes imposed by the transition from a traditional study programme to the one that includes PBL elements;
- the fear of losing control and fear of the unknown;
- the lack of knowledge tangential to PBL principles and practices both from teachers and students;
- the tendency to demonstrate that PBL works at least as well as traditional teaching-learning methods.

However, from the case studies presented in the book it can be seen that in most cases all these difficulties / barriers have been overcome through effective management and by learning from one's own mistakes and the mistakes of others, acquiring new knowledge from the experience gained.

The case studies presented in the book illustrate several attempts and errors made in the application of PBL. At the same time, the book also illustrates the changes that need to be made to promote adaptation to new learning-teaching methods. Of course, there are also mentioned situations of successful implementation of the PBL method in the study programme.

The usefulness of the book results from the fact that its users will be able to apply the knowledge gained from this reading when faced with a similar situation in their own implementation of the PBL method⁷⁰.

The book "*Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*" made an attempt to introduce a problem-based curriculum in teaching psychology. In chapters 3 and 4, the authors described the basic principles of problem-based study programmes. Chapter 4 gives readers an example of a 3-year study programme for students studying psychology, and in Chapter 5 are given concrete examples of case studies and problematic PBL situations. The book also provides information about the infrastructure needed to implement, evaluate and manage such a problem-based course.

Trends in education raise a growing emphasis on new teaching, learning and participatory learning methods. In this context, the book *Problem-based Learning Online* provides useful and current information on trends in the country's education system. The information presented in this book is very well systematized and treats, quite complexly, the problem of transition from face-to-face training to distance learning through ICT and PBL.

⁶⁸ idem, p. 4

⁶⁹ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 171

⁷⁰ Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 7

The book "*New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*" is a complex collection of ideas, approaches, examples, behavioral patterns related to the use of PBL in higher education. It will facilitate finding many answers to questions that will surely appear in the process of applying the PBL method in local universities.

This book will allow teaching staff to explore new ways to involve students in the PBL method, avoiding some potential difficulties from the very beginning and being aware of certain risks.

2. Methodology

2.1 Methodological framework

The purpose of this report is to conduct an analysis of the existing situation in the field of student-centered learning in the universities of the Republic of Moldova based on the Academy of Economic Studies of Moldova. Thus, we will lead by the standard methodology developed under the project and that has served as the basis for benchmarking of problem-based learning in the partner countries of the European Union: Denmark and the UK, presented in the Report of the Working Package 2. This methodology aims at exploring the relationship between the university's internal structures and study programmes, including how the study programme is developed and supported throughout the university. The cohesion of the elaboration of the study programme with its support will be examined at different levels of the institution: the system level, the university management level, the faculty level, as well as the study programme level. Also, issues related to the integration of disadvantaged student groups as well as the available physical environment will be studied.

The use of the standard methodology for drawing up this report was necessary in order to make a reference understanding of how student-centered teaching and learning at EU partner universities is embedded in and related to general institutional structures, and then to explore the same relationship, fit-for-purpose at our own universities.

The standard methodology implies the highlighting of 6 levels: System Level, University Management Level, Faculty Level; Level of the Council of Studies; Disadvantaged groups; Physical environment. Normally, some overlay between levels is possible. In other cases, the information was only presented in a compartment in order to avoid repetitions. It is important that when addressing a problem, we consider its relationship with other levels and the impact that it may have on the domains within them and at the transversal level.

The questions that form the methodology in question have served as a landmark for collecting data for the preparation of this Report and then for their analysis. We have also led ourselves by the criteria outlined in WP2, which has facilitated cross-analysis for the Business and Administration study programme at AESM and similar programmes at Aalborg University, Denmark. and Gloucester University in the UK in the context of implementation of problem-based learning.

Studying the experience of universities mentioned regarding the use of student-centered learning methods, in general, and problem-based learning, in particular, but also of the entire education system, led us to elaborate several variants of educational plans for the „Business and Administration” specialty, which would allow the implementation of this method.

When developing the pilot study programme, we took into account the use of PBL method in the various universities we had visited and whose experience we had studied. Each university has its own peculiarities that are specific to the country. It is from this goal that we have started.

A variant was developed, which we called „revolutionary”, very close to the one existing at Aalborg University, but which is very unlikely to be implemented in universities in the Republic of Moldova, at least for the next 10-15 years . This is due to the following moments:

1. In their work, Universities base on the compliance with certain legislative documents, which are mentioned in the Report. The educational plans, but also the organization of the entire education system, are based on the compliance with certain regulatory requirements. Exit from these rules or their non-compliance will result in non-accreditation of the programme by the National

Agency for Quality Assurance in Professional Education (ANACIP), which has developed indicators according to the normative acts in force.

2. The higher education system in Denmark is provided free of charge. The state pays for the student. This makes the student responsible for the tasks he / she has to do. In the Republic of Moldova, the state offers very few scholarships for studies, especially in the field of economics, to those who wish to study in these specialties. The student pays for studies, and in this respect advances some regulatory requirements, such as a higher number of hours of direct contact with the teacher, more „attention” from universities.

3. A major importance in the successful achievement of an idea lies with the mentality of those who are about to accomplish it, as well as taking into account certain traditions and customs existing in the region. We refer here to the tradition in education in general, including the higher one, which implies the existence of a schedule for attending classes, 5 days a week, in the auditors, with a mentor.

All this allowed us to elaborate the less revolutionary plan, but which can actually be implemented, presented in the Report, Chapter VI. Obviously, in order to meet the challenges posed by problem-based learning, it is necessary to introduce this learning strategy into as many courses as possible, and this can not happen overnight. That is why we have developed an Action Plan (Roadmap) to implement the Pilot Programme.

The distant goal we draw is that PBL will turn from a learning strategy into the AESM philosophy.

2.2 Data collection

In order to elaborate this Report, following the methodology presented, the legislative and normative acts that underlie the activity of the higher education institution in Moldova in general, and AESM, in particular, in the field that interests us were analyzed. Also, the didactic and managerial experience of the project members, who participated in the data collection and the elaboration of the Report, was also of great use. The information was collected according to the following template:

Table 2. Data reporting template

Question / Problem	Source consulted	Findings	Reflections
L1: System level			
L2: University management level			
L3: Faculty / department level			
L4: Study Council level			
L5: Integration of disadvantaged students			
L6: Infrastructure (physical environment)			

L7: Study programme level			
L8: Pedagogical training level			

2.3 Data analysis

In order to analyze the data, the working team used the proposed methodology, seeking answers to the submitted questions and considering the way of action in the autochthonous universities, the impact of different phenomena on the activity of the institution.

Cross-case analysis, as shown in Table 3 (Cross-case analysis) or Comparative template (Table 4), allowed the criteria, properties and indicators to be reformulated for each level, but based on those criteria that were submitted to drafting the Report in WP2. Highlighting and taking into account these criteria allowed us to perform the cross-case analysis, to highlight some common elements, but, to a large extent, also the existing differences. This analysis served as a basis for the development of the pilot study programme.

Table 3. Cross-case analysis template

Criteria, properties, indicators	AESM	AAU	UoG
L1 criterion etc.	Main elements by domains	Main elements by domains	Main elements by domains

The table below summarizes more important criteria for the study carried out, common patterns that emerged during the analysis, as well as the variations that occurred.

Table 4. Data reduction model

	Common patterns	Peculiarities
L1: System level Criterion 1 Criterion 2 Criterion 3		

3. Bachelor's degree study programme in Business and Administration at the Academy of Economic Studies of Moldova

3.1 Introduction

The Academy of Economic Studies of Moldova (AESM) was founded on 25 September 1991, based on the faculties of Economics and Economics in Commerce of the State University of Moldova and the National Economy Institute of Moldova of the Ministry of National Economy of the Republic of Moldova.

AESM's mission is to generate and transfer knowledge through:

- a) supporting the development and affirmation of students and researchers in economic and administrative sciences, as well as in other sub-domains of social sciences and humanities;
- b) advanced scientific research in relation to social requirements through high-quality study programmes at all cycles and in all forms of graduate and post-graduate training;
- c) the generation of advanced knowledge;
- d) adult education and training⁷¹.

At present, the Academy of Economic Studies of Moldova is a university complex consisting of 6 faculties with 26 chairs, 2 departments, 7 centers, 13 services, the Master's degree Excellence School in Economics and Business, the Doctoral School, the Higher School of Tourism and Hotel Services, a business incubator; National College of Commerce.

AESM's educational offer includes 22 study programmes in the first cycle, Bachelor's degree studies, and 50 study programmes in the second cycle, Master's degree studies. Currently, 9102 students are enrolled at AESM in the first cycle, Bachelor's degree studies, including 5175 full-time students and 3927 part-time students, and 1963 students in the second cycle, Master's degree studies. Within the university, there is the AESM's Doctoral School and the Doctoral School in Law, Political and Administrative Sciences, where 150 people continue their studies in the third cycle, Doctorate.

Assuming its vocation and values laying at its foundation and respecting the institutional tradition developed over the decades by the personalities that have represented it in the country and abroad, the Academy of Economic Studies of Moldova aims to be a reference university for Central Europe.

3.2 System level

In order to ensure the minimum quality standards of the educational process, the accreditation of the study programme and / or of the educational institution is a mandatory external evaluation procedure in the Republic of Moldova. Thus, the university obtains the right to carry out the educational process, to organize the admission to studies and the examinations for completing the studies, as well as the right to issue diplomas, certificates and other study documents recognized by the Ministry of Education⁷² only if it has been accredited or has authorization for provisional operation.

⁷¹ Charter of the Public Institution Academy of Economic Studies of Moldova, DS no. 7 May 29, 2015 http://ase.md/files/documente/regulamente/interne/1.1_carta_ase2015.pdf

⁷² Government Decision no. 616 of 18.05.2016 for the approval of the Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and vocational education and training, higher education and continuous training institutions, I. General provisions, p. 2.

In order to ensure an integrated, credible, objective and transparent system of external evaluation and accreditation of institutions and study programmes in technical, higher education and continuous training, in 2015 the National Agency for Quality Assurance in Professional Education (ANACIP) was established in the Republic of Moldova.

ANACIP is an autonomous institution, independent in decision-making and organization, financed from the state budget and from its own revenues, ANACIP has the following rights:

- to involve external evaluators in its field of activity;
- to draw up, on the basis of a transparent methodology and using competence and competitiveness criteria, its own register of expert evaluators, which it trains methodologically and delegates them to conduct external quality evaluation missions;
- to delegate expert evaluators to external quality evaluation missions;
- to verify, at the end of the evaluation mission, that the expert evaluators comply with the methodology applied;
- to have in favor of its employees the right to unhindered access to the educational institution under evaluation during the course of the evaluation;
- to inform the evaluated institution and the Ministry of Education about the results of the external evaluation;
- to work under self-management conditions and to determine the amount of remuneration for employees and service providers according to the legislation in force;
- to propose to the Government, based on the decision of the Governong Board, the amount of fees for the services rendered;
- other rights provided by the legislation in force.

In accordance with the national legislation and the European framework for quality assurance in education, ANACIP developed the methodology of external quality evaluation for provisional authorization and accreditation and set accreditation standards, criteria and performance indicators for the external evaluation of the study programmes and educational institutions. According to this, accreditation can be done by ANACIP or another external quality assurance agency registered in the European Quality Assurance Register for Higher Education (EQAR).⁷³

Quality evaluation in higher education aims at:

- institutional capacity;
- educational efficiency, including academic achievements;
- quality of professional and continuous training programmes;
- institutional quality management;
- the results of scientific research and / or artistic creation;
- the consistency between the internal evaluation and the real situation.

Study programmes and educational institutions are subject to external quality evaluation every 5 years or upon the expiry of the provisional authorization period, after the first promotion of graduates.

In the case of the first external evaluation, the reference period shall be calculated from the date of provisional authorization to the required evaluation date, but not more than five years.

⁷³ Government Decision no. 616 of 18.05.2016 for the approval of the Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and vocational education and training, higher education and continuous training institutions

The external quality evaluation procedure for authorizing the provisional functioning of study programmes and educational institutions shall be completed by the Agency within 6 months from the date of registration of the request for external evaluation.

Accreditation is requested and granted, for each educational institution and for each study programme in Cycle I, Cycle II and Cycle III. The initiation of a master's degree programme is possible if the bachelor's degree programmes in the same field of professional training are accredited, the programme has obtained the provisional authorization or another master's degree programme in the same general field of study is accredited.

The accreditation of a study programme and of an educational institution is granted by a Government decision, at the proposal of the Ministry of Education and based on the decision of the Governing Board of ANACIP. Once accredited, study programmes and educational institutions are subject to an external quality evaluation for re-accreditation at least every 5 years.

According to the Education Code of the Republic of Moldova the following will depend on the results of the external evaluation of the higher education institutions:

- the ranking of universities by category within the accreditation procedure;
- provisional authorization, regular accreditation and re-accreditation of higher education institutions, as well as ranking of study programmes;
- the ranking of higher education institutions shall be based on the methodology approved by ANACIP;
- depending on the category of the higher education institution and the ranking of the study programmes, the number of places financed by the state budget awarded to the higher education institution shall be determined; budgetary funds allocated to the higher education institution for research, development, innovation and artistic creation activities;
- other norms under the law.⁷⁴

The external quality evaluation procedure for provisional authorization or accreditation of the study programme and / or the educational institution has the following stages:

- 1) the initiation of the evaluation procedure by the educational institution
- 2) internal evaluation of the quality (self-evaluation) and elaboration of the self-evaluation report:
- 3) external quality evaluation:
 - submission of the application and of the dossier in paper and electronic format;
 - approving the decision to initiate or reject the external evaluation procedure, within 45 working days of the date of registration of the application, by the Governing Board of the Agency;
 - the establishment of the external evaluation commission;
 - analysis of the self-evaluation report;
 - conducting the evaluation visit to the educational institution / institutions and filling in the „Visit sheet”;
 - elaboration of the external evaluation report;
 - presenting the results of the evaluation and taking the decision by the Governing Board of the Agency;
- 4) transmission of the decision of the Governing Board of the Agency to the Ministry of Education;

⁷⁴ The Education Code of the Republic of Moldova, no. 152 of July 17, 2014, art. 83

- 5) granting provisional authorization / accreditation by the Government in the case of vocational education and training and higher education and by the Ministry of Education for continuing adult education;
- 6) application of recommendations resulting from external evaluation

The external evaluation committee is made up of at least 3 members, selected from the Agency's Registry of Expert Evaluators, and includes academics, specialists in the evaluated area, student representatives and employers' representatives who carry out their professional work in the area under evaluation.

Accreditation may also be granted conditionally if there are shortcomings, which may most likely be remedied within six months. In this case, the accreditation period may be reduced.

3.3 University management level

The governing bodies of the universities, their structure and their number are determined by the Education Code of the Republic of Moldova. The law provides that the System of Governing Bodies of Higher Education Institutions consists of the Senate, the Institutional Strategic and Development Council, the Scientific Council, the faculty council, the council of administration and the rector of the institution⁷⁵.

The supreme governing body of the higher education institution is the Senate consisting of scientific, didactic and non-didactic staff, elected by the secret vote of the teaching staff of the faculties, departments, scientific centers, of students elected by academic formations and student associations, from representatives of the trade union bodies, according to the institutional regulation elaborated on the basis of a framework regulation approved by the Ministry of Education. The Rector, Vice-Rectors, and Deans are ex-officio members of the senate. The mandate of the Senate is 5 years, synchronized with the rector's term of office. The duration of the mandate of Senate members from among the students is one year, with the possibility of renewing the mandate. The Senate is chaired by the Rector of the institution.

Another governing body is the Council for Institutional Strategic Development with attributions determined by the Code of Education. It consists of 9 members: 4 internal and 5 external. The members of the Council for Institutional Strategic Development are appointed for a 5-year term. The operative management of the higher education institution is provided by the rector, assisted by the vice-rectors, with the support of the council of administration.

The Scientific Council is established within Universities, which intend to organize doctoral degree programmes and is made up of a minimum of 7 people and a maximum of 15 people⁷⁶.

The Faculty Council is the decision-making and deliberative body that assures the management, guidance and control of the educational and scientific research activity of the faculty and is elected for a term of 5 years.

The Council of Administration ensures the operative management and applies Senate decisions⁷⁷.

⁷⁵ The Education Code of the Republic of Moldova, no. 152 of July 17, 2014, art. 102

⁷⁶ Framework Regulation on the Organization and Functioning of the Governing Bodies of the Higher Education Institutions of the Republic of Moldova, approved by Order No 10 of the Minister of Education of January 14, 2015, art.32

⁷⁷ Charter of the Public Institution Academy of Economic Studies of Moldova, DS no. 7 May 29, 2015, art.55, available at http://ase.md/files/documente/regulamente/interne/1.1_carta_ase2015.pdf

The organizational structure includes: faculties, chairs, institutes, masters schools, doctoral schools, scientific research centers and laboratories, councils, committees, specialized centers, consultative structures, service providing units, IT center, personnel improvement units, library, publishing house, typography, garage, recreation facilities. AESM includes functional structures organized as specialized departments or services in the economic, legal and secretarial fields, human resources, accounting, administrative, etc.

Institutional management is carried out by the management and administrative structures of AESM.

The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education” is dedicated to this topic.

In the AESM’s STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose”⁷⁸. The MOODLE platform is used in the training process. Emphasis is placed on capitalizing on opportunities for partnerships with the social and business environment, including designing and developing new courses and new study programmes, and facilitating further employment for our graduates. The implementation of tools for monitoring the insertion in the labor market of the AESM graduates, their socio-professional path and the provision of services to facilitate employment are also under the continuous monitoring of AESM’s management. These tools also seek to be used to assess the extent to which the knowledge, skills and abilities gained are sufficient to enable graduates to get employed on the labor market, develop their own businesses, continue their studies in the next cycle, and learn, thus facilitating the process of matching the educational offer with the requirements of the labor market, defined at national and international level⁷⁹. The Career Guidance Center has been established at AESM for this purpose.

For the purpose of better knowledge of foreign languages, the AESM extended the teaching of the foreign language for an academic year, increasing the number of hours of direct contact with the teacher. The emphasis is not on the actual knowledge of the foreign language, but on the knowledge of the foreign business language. There are some specialties in cycle I, bachelor’s degree studies, (World Economy and International Economic Relations, Finance and Banking, Tourism) where teaching and learning is done in foreign languages. At the second cycle, Master’s degree studies – there is the study programme Financial-Banking Administration. The academic mobility of both students and teachers is encouraged.

The Department of Studies, Curricular Development and Quality Management (DSDCMC) is responsible for student-centered teaching and learning at the university. In each academic year, during the winter vacation, teachers are offered the opportunity to learn about new teaching methods, centered on the student. The Department has the role of developing policies in the field of teaching - learning - evaluation, elaboration of internal regulations that are relevant to this field. The

⁷⁸ Strategic Development Plan of the Academy of Economic Studies of Moldova for the period 2012-2017, pp. 8-9, available at http://ase.md/files/documente/regulamente/interne/1.2_plan_strategic.pdf

⁷⁹ Strategic Development Plan of the Academy of Economic Studies of Moldova for the period 2012-2017, p. 8

DSDCMC works in close contact with departments, guiding their work in curriculum development and improvement, development and improvement of educational plans.

In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is established, which has an advisory role in substantiating the decisions regarding AESM's quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes⁸⁰.

The responsibility for implementing policy and quality objectives in AESM lies with the Department of Studies, Curriculum Development and Quality Management, which has the following responsibilities in the field of quality management:

a). elaborating procedures and internal regulations related to each process / subprocess, setting process control parameters and requirements for recording and monitoring of these parameters (control and registration forms) and, finally, the elaboration of the Quality Management System Manual.

b). elaborating and submitting proposals for improving the quality management system documentation (quality manual, internal procedures and instructions, process diagrams, control forms and records) developed according to the requirements of ISO standards.

c). developing five year strategic plans and annual operational plans on quality improvement measures;

d). consistently applying the quality assurance methodology in education;

e). co-ordinating and logistically supporting the activities of the Quality Committees of the Faculties;

f). involving all members of the academic community in quality assurance activities;

g). drawing up annually, at the end of each academic year, a report on the state of the quality of the training, education, and research process on the basis of which the internal evaluation report is developed;

h). developing its own database and information on the quality of the educational services provided;

i). actively cooperating with institutions that have regulated competencies in quality assurance in education in the country and with agencies or other similar institutions from abroad.

j). drawing up annually, at the end of each academic year, an audit report on the compliance of the quality management system with the requirements of the standard ISO 9001: 2000.

In each faculty, the faculty council appoints a Committee of the Faculty for Quality Assurance, headed by the Dean. The committee consists of highly qualified teachers (one member from each subdivision is compulsory) and students with outstanding results.

The work of the Committees is assisted logistically by the DSDCMC.

⁸⁰ The concept of quality assurance system of studies in AESM, p. 8, available at http://ase.md/files/documente/regulamente/interne/1.3_conceptul_calitatii.pdf

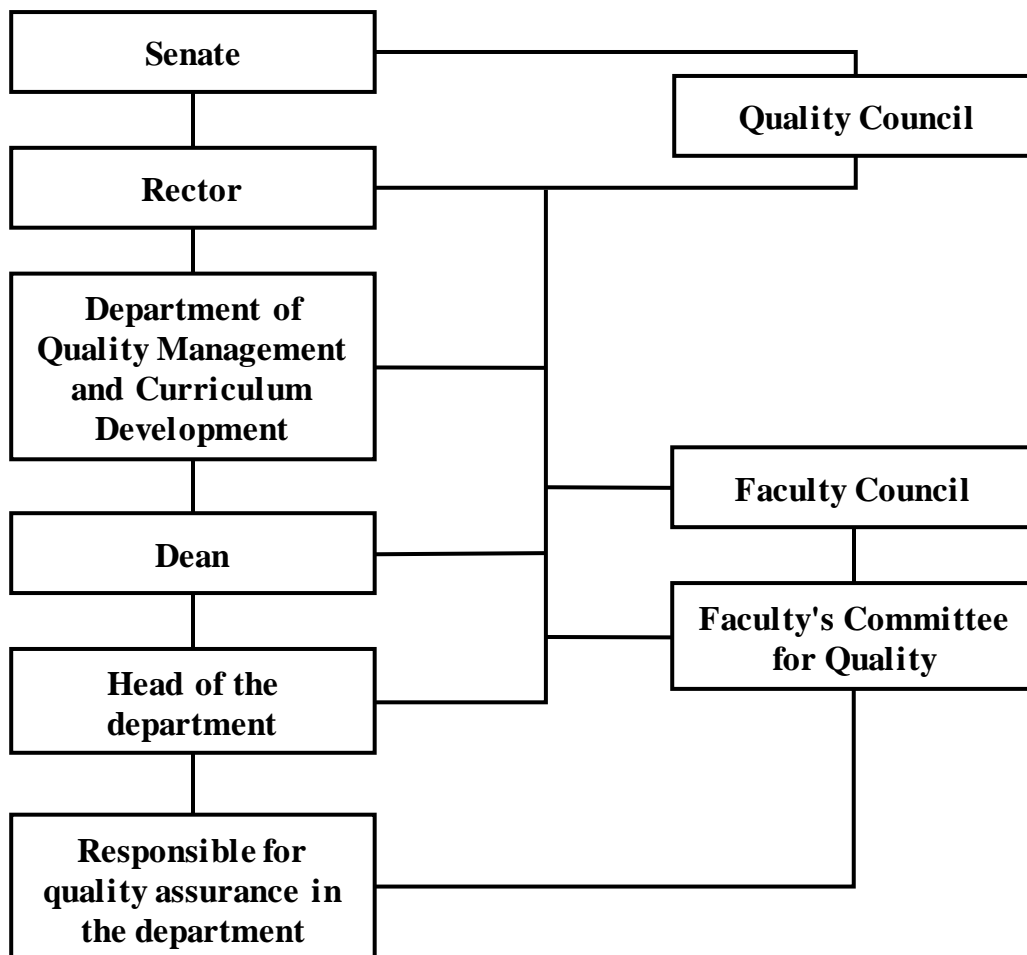


Figure 1. Structure of the Quality System in AESM

The process of developing the educational plan is carried out by the specialty chair / department, responsible for training the students in a certain field. The initiative to modify the plan can come both from faculty / chair / department and from the top management of the university or from the implementation of some modifications in the regulatory normative acts elaborated by the Ministry of Education. It is mandatory to take into account the provisions of the Framework Plan for higher education (cycle I – Bachelor’s degree studies, cycle II – Master’s degree studies, integrated studies, cycle III – Doctoral degree studies), implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015⁸¹. Although at AESM level we try to involve the business environment in the development or improvement of the educational plans as well, there is no strict regulatory provision in this respect. Professional associations, at least for economic specialties, even where they exist, are not necessarily involved in the development or approval of educational plans.

The educational plan is elaborated on the basis of the National Qualifications Framework⁸², which includes the objectives of the study process, expressed through learning outcomes, the standard period of study, the workload requested, the requirements for starting the studies, the list of

⁸¹ http://edu.gov.md/sites/default/files/ordinul_nr._1045_din_29.10.2015_plan-cadru_pentru_studii_superioare_ciclul_i_-_licenta_ciclul_ii_-_master_studii_integrate_ciclul_iii_-_doctorat.pdf

⁸² http://edu.gov.md/sites/default/files/cnc_36_812-stiinte_economice.pdf

course units / modules studied, curriculum (syllabi) of the course units / modules, course units descriptions, proposed options and the conditions for selecting course units / modules, the possibilities of choosing the educational paths, the requirements for completing the studies, the study documents, the qualifications / titles to be awarded at the end of the studies.

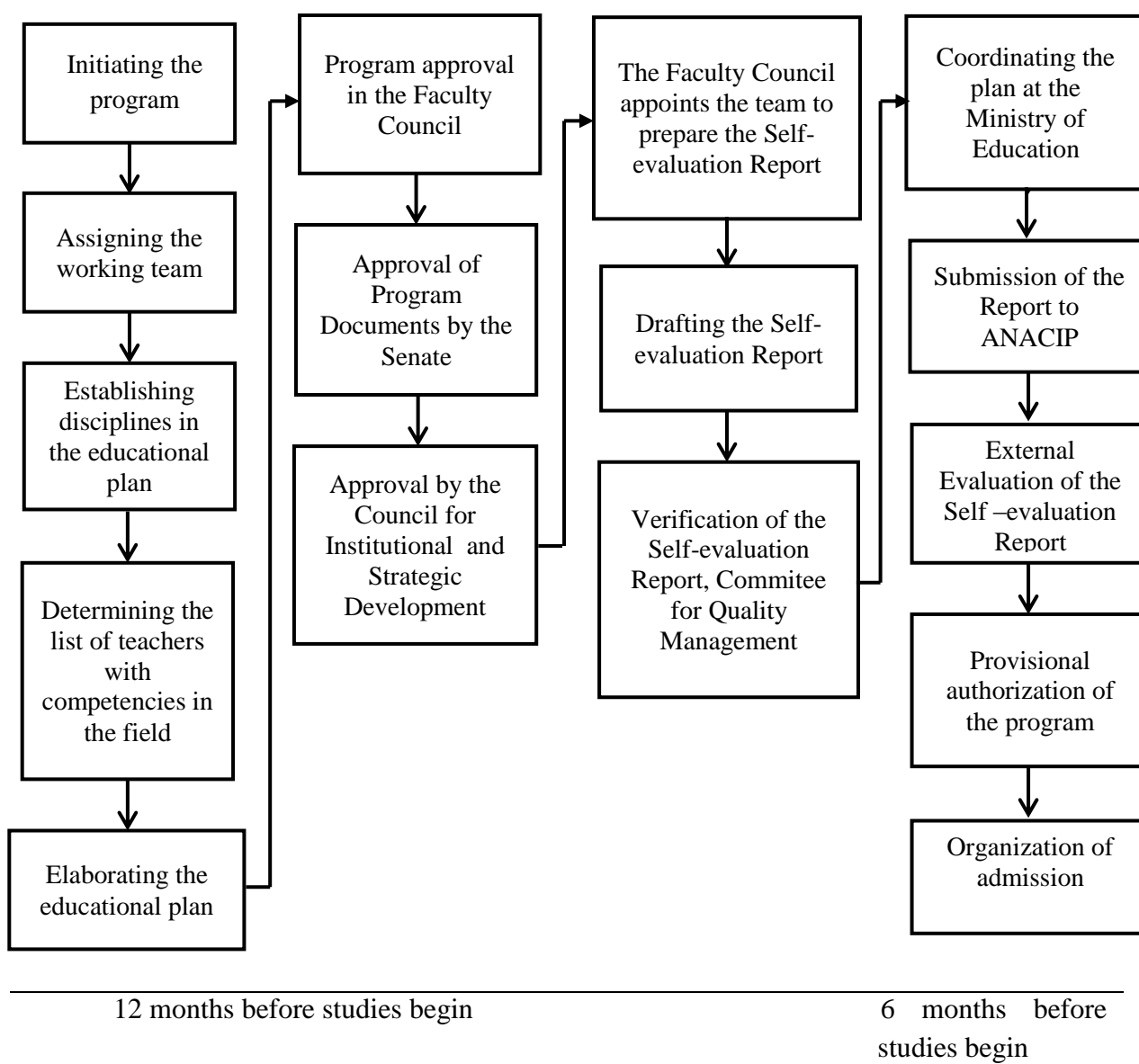


Figure 2. Process of elaboration and approval of the Study Programme

The requirements for developing the Curriculum of the course unit / module are established by the Regulation for the organization of studies in higher education based on the National System of Study Credit, approved by the Ministry of Education. In line with the development of the socio-economic sector, higher education institutions will review / update their educational plans once every 5 years. Modification of the educational plan is carried out at the chairs providing the respective study programme and is approved by the Faculty Council. The review / update of the educational plans is validated by the University Senate and is submitted to the Ministry of Education every 5 years for coordination.

Within AESM, studies in the first cycle, bachelor's degree, are conducted within the six faculties. Master's degree Excellence School in Economics and Business is in charge for the organization of studies in the second cycle. Studies in the third cycle are organized in Doctoral Schools.

The AESM Doctoral School has been established at AESM to conduct doctoral studies in economic research and also the Doctoral School in Law, Political and Administrative Sciences, established by a National Consortium Agreement between the Academy of Economic Studies of Moldova and the University of European Political and Economic Studies „Constantin Stere”. The Doctoral School offers the opportunity to study and obtain a higher university degree, completed by issuing a doctorate diploma and in the case of successfully defending the doctoral thesis by granting the title of doctor in the legal, political and administrative sciences. Elaboration of the educational plans is carried out by the management of the Doctoral School in collaboration with the heads of chairs / departments.

All internal regulations and other normative acts related to the educational process and curriculum development are available on the AESM's webpage <http://ase.md/regulamente/reglementari-asem.html>. the educational plans and curricula by disciplines can be viewed either on the website of the responsible department or on the MOODLE platform.

For each academic discipline the course holder develops the curriculum - the programme of the respective course containing information on: the name of the course holder, the number of study credits allocated, the total number of hours envisaged, including work in the classroom (divided: lectures and seminars or practical works, laboratory works) and the number of hours for individual work, the year, the semester when the course is offered, its code, the language of instruction, the form of assessment, the specialty in which the course is delivered, the faculty within which the specialty is given, the formative category of the course (*F - fundamental, G - general, S - specialty, U - socio-humanistic, M - orientation to other field*), the optional category of the course (*O - obligatory, A - optional, L - at free choice*), the maximum number of students who can enroll in the course, mandatory and recommended access conditions. It also contains information regarding the substantiation of the need to teach this course, there are mentioned the learning outcomes, the structure and content of the course (the title of the theme and main questions for each theme), the bibliography to be consulted, the teaching technologies used by the teacher, the final assessment method, the final grade structure, the total time (hours per semester) of the individual study activities requested from the student. The teacher is responsible for the achievement of curriculum. Monitoring is done by the head of the chair/department or the dean of the faculty.

The minimum qualification requirements for holding teaching positions (university assistant) and scientific-didactic (university lecturer, associate professor, university professor) are set in the Education Code. Thus, in order to hold a scientific-didactic position in higher education, it is necessary to have a qualification of the level 8 ISCED - doctoral studies. In order to hold the teaching positions, the graduates of non-pedagogical higher education study programmes have to attend the compulsory psycho-pedagogical module corresponding to 60 transferable study credits. To obtain these study credits, the teacher can enroll in various courses, which are organized in the University. Thus, AESM offers new teachers coming to university the opportunity to acquire the necessary knowledge in the psycho-pedagogical field and to accumulate the necessary number of study credits. For AESM employees, these courses are free of charge. Students enrolled in the second cycle, master's degree studies, or teachers from other educational institutions can also enroll in the courses. The DSDCMC is responsible for organizing the psycho-pedagogical module. At the

same time, the Department of Human Resources is involved in the continuous development and training of staff. Within this Department, the employees' records, the training courses they have attended, are kept. At least once every five years, all teachers are required to undergo a pedagogical training course (apart from the 60 study credits mentioned) and an internship in enterprises in the real sector of the national economy. Evidence is kept by the employees of the Department of Human Resources and is taken into account when people take part in the competition for didactic-scientific positions.

For the academic year 2016-2017, in order to develop the teachers' skill, the following courses of pedagogical improvement were proposed:

- ✓ „**Problem Based Learning – PBL**”, 20 hours. There were 31 people registered.
- ✓ „**Innovative methods of teaching - learning - evaluation in professional education**”, 20 hours. 38 people registered
- ✓ „**Psychology. Personal development of the teaching staff**”, 20 hours. 26 people were enrolled;
- ✓ „**Application of information technologies in communication. Moodle System**”, 20 hours. 20 people were enrolled;
- ✓ „**Deontology and Effectiveness of Didactic Communication**”, 20 hours. There were 33 people registered.

Students are represented in most of the AESM's governing bodies. Thus, in the AESM's Senate students from all three study cycles represent $\frac{1}{4}$ of the total number of members, stipulation provided for by the Framework Regulation on the organization and functioning of the governing bodies of the higher education institutions of the Republic of Moldova.⁸³ According to the same Regulation, in the Faculty Council students are represented in the proportion of 25% of the total number of members. The Administration Council includes 1 student representative, member of the AESM's Senate. Also, students participate in the governing of the university through the student self-government bodies, such as the Student Senate⁸⁴, the Student Council of the Faculty⁸⁵.

Key performance indicators at the university level are usually determined in the academic accreditation process and refer to different components of the educational process.⁸⁶

3.4 Faculty / department level

The Faculty of Business and Business Administration (FBBA) is a structural subdivision of the AESM responsible for organizing and conducting the instructive-educational process, conducting methodical, educational and scientific research activities for 7 specialties: Business and Administration, Acquisitions, Intellectual Property Management, Marketing and Logistics, Tourism, Merceology and Commerce, Management and Technology of Public Catering.

The Faculty benefits from academic freedom in the teaching and scientific fields. Within the faculty there are established 5 chairs that organize and perform didactic and scientific activity at one or more related disciplines.

According to the AESM Statute, the governing body of the faculty is the Faculty Council. The members of the Council are: ex officio members (dean, vice-dean and heads of chairs /

⁸³ <http://edu.gov.md/sites/default/files/conducere.pdf>

⁸⁴ http://ase.md/files/documente/regulamente/interne/4.3_senat_stud.pdf

⁸⁵ http://ase.md/files/documente/regulamente/interne/4.4_consil_stud.pdf

⁸⁶ <http://anacip.md/index.php/ro/legislatie/anacip/ghiduri/send/22-ghiduri/412-ghid-de-evaluare-externa-a-programelor-de-studii-de-licenta-invatamantul-superior>

departments within the faculty), teaching staff and students, representing 1/4 of the total number of members of the Council. The term of office of the members of the Council shall be five years, except for students whose term of office is one year, with the possibility of renewal. The faculty council is chaired by the dean.

The Dean is elected by the Senate at the proposal of the faculty Council and represents the faculty in the relations with the other structures of the AESM, coordinates the activity of the Office of the Council and is responsible for the quality of the whole process of education, research and culture at the faculty.

The faculty Council is responsible for examining and presenting the Senate for approving / endorsement new study programmes (educational plans) and approving curricula (analytical programmes / syllabi) for course units included in the programme.

After the approval of the study programme, the faculty management appoints the team to prepare the self-evaluation report of the new study programme for provisional authorization.

The Quality Assurance Committee is established for the quality assurance coordination within the faculty. Its members are the representatives of all faculties and students with good results in education. The Quality Assurance Committee of the faculty is headed by the Dean and is responsible for developing annual plans on how to improve the quality, implementation of quality assurance plans approved by the Faculty Council, assessing the quality of each academic staff etc.⁸⁷ Also, there is a person especially appointed who is responsible for the implementation and monitoring of quality assurance processes at each faculty.

Within the Faculty Council, there is an advisory body on didactic and methodological-scientific activities established - the Methodical Committee of the faculty⁸⁸. The Methodical Committee consists of representatives of the chairs / departments with prestigious results in research and didactic activity, proposed by the chairs / departments and validated by the Faculty Council.

The Committee proposes the Faculty Council methodological and didactic works (methodological guidelines, programmes, curricula, collections) for approval for their publication, and the monographs and textbooks are recommended for publication and promoted for further expertise in AESM's Methodological and Scientific Council.

In order to ensure the quality of the study process, the faculty's chairs / departments are actively involved in the elaboration / improvement of the educational plans, the improvement of the analytical programmes / syllabi, the elaboration of new course notes, textbooks, etc.

Examples of good practice within the chairs / departments are regularly shared in the meetings of the faculty council, chair / department sessions, etc.

3.5 Level of the Council of Studies

In the AESM, the Council of Studies is represented by the Department of Studies, Curricular Development and Quality Management (DSDCMC), which has a slightly different role from that existing in other countries studied in Work Package 2. The field of activity of this body is reduced to:

- ✓ Organization of the educational process.
- ✓ Developing and improving the AESM's curricula.

⁸⁷ Conceptul sistemului de asigurare a calității studiilor în ASEM, DS nr. 4, din 31 octombrie 2007, art. 5.3

⁸⁸ Regulament de funcționare a consiliului metodico-științific al ASEM și a comisiei metodice a facultății, DS nr.4 din 27 octombrie 2010

- ✓ Training and keeping track of students.
- ✓ Ensuring the operation of an institutional quality management system.
- ✓ Development of teachers' psycho-pedagogical skills.

The DSDCMC's relations with the chairs / departments are the most direct, with the chair / department coordinating the elaboration, development and improvement of the university curricula in AESM. Although the elaboration of the educational plans is the direct responsibility of the specialty chairs / departments, their coordination lies with the Department of Studies.

For the first cycle, Bachelor's degree studies, there is elaborated and approved by Law by the Parliament of the Republic of Moldova, the Nomenclature of professional education areas and specialties for the training of specialists in higher education, first cycle, Bachelor's degree studies⁸⁹, which implies that the University has no right to provide training for the specialists at this level under study programmes other than those proposed. Of course, it is possible to introduce some new study programmes, but the process is long enough and difficult. You need to come up with well-grounded arguments about the need to create this programme with a well-formed educational plan. The dossier is sent to the Ministry of Education, which, after consulting it with the Ministry of Labor, Social Protection and Family, possibly with the Ministry of Finance, and in the case of a positive opinion it is sent to the respective committees of the Parliament. In fact, this process is not clearly described in any normative act. For this reason, the study programmes in the first cycle, Bachelor's degree studies, are rigid enough and should provide future specialists with a more general, rather than specialized, training.

If the university wishes to start the training in a new study programme for it, but existing in the above mentioned Nomenclature, it is necessary to obtain provisional authorization from the National Agency for Quality Assurance in Professional Education (ANACIP). The study programme is developed at the level of the chair / department (or several departments), where a working team is established, which draws up all the necessary documents. Then it is discussed at the Chair/Department meeting, at the Faculty Council, and approved by the Senate.

The situation for the second cycle, Master's degree studies, is quite different. Here, the university has a greater degree of freedom in initiating new study programmes. It is necessary to prepare the dossier and to obtain provisional authorization. The dossier includes the argumentation of the necessity of training the specialists in the given field, the justification of the existence of the technical-material and research base, the teachers trained in the field. The dossier must be discussed at the meeting of the respective chair / department, then by the Council of the Master's degree Excellence School in Economics and Business, and approved in the Senate session. There is the possibility of initiating interdisciplinary master's degree study programmes. The introduction of a new module in the educational plan is usually made when the plans are updated. In this respect, the curriculum of the discipline is elaborated, it is argued its importance and necessity for the training of the specialist in the given field, the assurance with bibliographic sources. The curriculum is approved at the chair meeting.

If we refer to the evaluation practice, we will approach it from the point of view of the students' assessment at the disciplines taught. The evaluation is carried out throughout the semester. Thus, students from the first cycle, during the semester, have two tests, each having a share of 15% in the final grade obtained in the discipline. The current success (the way he / she presents himself / herself in practical lessons, seminars) is weighted at 20%. Another 10% of the final grade is the assessment of the student's individual work. The final exam grade is 40% of the student's final mark.

⁸⁹ <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=312972>

Different methods to evaluate students' knowledge are used at each stage: from traditional evaluation questions (oral or written) to the use of various innovative assessment methods, such as testing on the Moodle platform. The peer evaluations of the students, the self-evaluation and the filling of the reflexive journals are also used. Finding their own progress must become an imminent part of their specialist training strategy, which will enable them to outline their professional growth goals and develop a lifelong learning programme⁹⁰. It is also welcomed the use of various methods of student involvement in assessment (discussing and establishing assessment tasks, discussing and establishing evaluation criteria, testing of evaluation tasks and criteria). So, both formative and summative assessments are used. The formative assessment is carried out throughout the training process, in small and successive steps; ensures an effective periodicity of the training process, is designed to identify the strengths and weaknesses of the training process leading to a sufficiently objective analysis of the mechanisms and causes of failure or success in training. Formative assessment of students is performed continuously over the course unit / module / academic year, through tests of knowledge and skills, seminar essays, practical laboratory work, and realization of projects and applications into the specifics of the specialization.

The cumulative or final assessment is done at the end of a training period (semester, academic year, schooling cycle). The main purpose of the cumulative assessment is to highlight the effects, efficiency, and overall learning outcomes. This type of assessment highlights the level and quality of student training by reference to the learning outcomes set for the professional training. Final assessment methods are provided in the educational plan and can be: exam; verification; project; portfolio; defence of the Bachelor's degree / graduation project / thesis, depending on the study programme graduated. Assessment procedures are described in the curriculum of the discipline.

There are usually two people who take part at the final evaluation, the lecturer who held the lectures and the one who held the practical lessons. If the same teacher held both the theoretical and the practical courses, the head of the chair appoints another person from among the members of the chair who will examine the students. Evaluations are not performed by people outside the AESM.

The assessment criteria are very clearly described in the AESM's Regulation on the Organization of Studies based on the National System of Study Credits⁹¹.

In the curriculum planning and development, students play an indirect role, which means that they are not directly involved in this activity. However, for each discipline, a questionnaire is developed and applied, in which the students express their opinion on the course and come up with proposals for improvement. Periodically, we question programme graduates, so there is a permanent feedback from the students. Students also participate in various university governing bodies, where they can express their views and come up with some suggestions.

E-learning continues to penetrate university life at both teaching-learning and assessment levels. Teachers are encouraged to use the MOODLE platform for these activities. On the MOODLE AESM platform there are currently 284 courses, of which only half are active, 178 teachers are registered with editing rights, and 12727 students are registered in the system. From 2012 to 2016, 174 teachers were trained in the use of e-learning. The technical and material basis of AESM allows this pedagogical tool to be widely used. Also, in 2015, a video studio was opened in AESM, where lessons can be recorded.

⁹⁰ http://ase.md/files/documente/regulamente/interne/3.1_evaluare_stud.pdf

⁹¹ http://ase.md/files/documente/regulamente/interne/3.0_ase_m_sncs.pdf

There are no programme coordinators, semester coordinators. The schedule of the lessons is developed by the Dean Office of the faculty.

3.6 Integration of disadvantaged students

Although there is no subdivision dedicated to students with disabilities within AESM, the university takes important steps to physically endow and adapt to their needs and to create appropriate conditions for their full and equal participation in the learning process.

Annually, people with health problems or disabilities are enrolled at the 15 percent share of the total number of places provided in the budgetary matriculation plan. Also, students with severe and high disabilities (degree of disability I and II) retain their status as budgetary students throughout the study period.⁹²

At institutional and faculty level, it is kept track of the students with special educational needs in order to determine the individual support and assistance measures that can be offered. For example, when determining the lecture halls, in the case of academic groups where students with mobility disabilities are studying, it is taken into account that they do not have any difficulty in accessing the study block and / or the classroom.

The Dean also informs teachers about the difficulties associated with people with disabilities and discusses ways to support them such as: extending the time for examination, changing the assessment form written to oral examination or vice versa, providing breaks during lessons or exams and so on.

Blocks of study are equipped with access ramps for people with locomotor disabilities. In the study blocks there are lifts that allow people to move upstairs.

3.7 Physical environment

The Academy of Economic Studies of Moldova ensures a favorable physical environment for both students and the entire academic community. The university campus consists of 6 blocks of study with a total area of 40560 m², of which 61% are allocated to study spaces. The upgraded infrastructure, as well as the material and learning resources, make it possible to successfully organize the student-centered learning process.

The AESM's Scientific Library is the holder of the largest collection of publications with economic profile in the Republic of Moldova, benefiting from the right of legal deposit of the treasury of publications appearing on the territory of the country and abroad.

The collection of the AESM's Scientific Library currently constitutes 213182 storage units (52457 titles) of books, serials, video-materials, scientific articles, etc. The library has 5 reading halls, a lending center, a reference room, the Multimedia Center, the EU Information Center (EUI) and the World Bank Public Information Center. The reading halls have a total capacity of 385 seats and the AESM's Multimedia Center, with a surface of approximately 300 sqm, is equipped with 80 high-performance computers connected to the Internet, printers, scanners, CD readers and recorders. exclusively dedicated to the individual work of the students. The working hours of reading halls are 6 days a week, Monday-Friday between 8.00 and 19.00, and Saturday from 9.00 to 15.00.

⁹² Regulation on the conditions for filling places with budget financing in AESM, at Cycle I, Bachelor's degree studies, DS 10 of February 26, 2014, available at http://www.ase.md/files/documente/regulamente/interne/2.7_reg_locuri_bugetare.pdf

The Scientific Library provides access and information support to the study and research process by providing an electronic catalog, a component part of the e-library created in the Republic of Moldova. Each user can access the PRIMO electronic catalog <http://primo.libuniv.md>, where he / she can find the necessary information in the collections of the AESM's Scientific Library, as well as in the collections of the partner libraries.

Throughout the university campus access to the Internet is ensured. The study halls are equipped with technical means of training (computers, videoprojectors, etc.). AESM has 28 computer rooms for training, 6 computer rooms for student individual work, the Multipoint Video Conferencing Center. The modernization of classrooms, laboratories / computer rooms is carried out constantly at regular intervals.

In order to facilitate distance learning, in February 2004, Moodle was implemented at AESM. Various embedded packages and computer applications such as eViews, SPSS, Wiscount, 1C Accounting, Mathlab etc. are used in the training process.⁹³

3.8 Study programme level

The *Business and Administration* study programme offered by the Academy of Economic Studies of Moldova aims at training specialists for activities related to the successful management, initiation and administration of businesses within economic entities, regardless of their size and field of activity, in non-commercial associations and public institutions.

The duration of the studies in Business and Administration is 3 years, respectively 6 semesters. Each academic year has 60 transferable study credits in the European system (ECTS) for mandatory and optional disciplines, while the total number of transferable study credits for the whole first cycle, Bachelor's degree studies, is 180 (excluding optional subjects). 1 ECTS equals 30 hours of work per student. The annual workload of the student is 1800-1860 hours, and the total amount of 5160 hours, including 2454 hours (48%) of direct contact and 2706 hours (52%) of individual study.

Study disciplines / course units in the educational plan are provided in a logical sequence, aiming at the accumulation of fundamental and specialized knowledge, ensuring compatibility with the *National Qualifications Framework for the field of professional training 363. Business and administration*⁹⁴ and similar study programmes from the European Union.

In total, the study programme includes 38 course units, each of which has a number of study credits. The study programme contains fundamental courses (53 credits), disciplines that develop general skills and competences (15 credits), disciplines with a socio-humanistic orientation (14 credits), specialty orientation (70 credits), internships (18 credits), and the Bachelor's degree thesis (10 credits).

In the first and partly in the second year, the bachelor's degree study programme encompasses fundamental disciplines in economics, computer science, mathematics and statistics. In the second year, the study programme includes specialized disciplines, including a 4-week (production) internship (6 credits). At the end of the internship period, the student draws up a report

⁹³ AESM's Informatization Strategy for the period 2010-2015, DS 4/1 of 24 December 2009, available at http://ase.md/files/documente/regulamente/interne/1.6_strategia_iasem.pdf

⁹⁴ National Qualifications Framework: Higher education: cycle I, Bachelor's degree studies; cycle II, Master's degree studies; Doctorate: General Study Field 36. Economic Sciences: Professional Training Field 812 Tourism / Min. Education of Rep. Moldova. - Ch.:S. n., 2013 ("Bons Offices" Printing House). p. 67 - 91 http://edu.gov.md/sites/default/files/cnc_36_812-stiinte_economie.pdf

that is evaluated by the supervisor / responsible teacher. In the third year, the study programme includes only specialized courses, the bachelor's degree internship (12 credits), finalizing in the 6th semester with the elaboration and the defence of the bachelor's degree thesis, which can be elaborated individually or in a team consisting of 2 or 3 students.⁹⁵

The educational plan for the Business and Administration study programme was developed by the Chair / Department of Management at the Faculty of Business and Business Administration.

Successful completion of the studies offers graduates of the Business and Administration study programme the opportunity to become an economist, manager, entrepreneur, project coordinator, consultant / instructor, civil servant, etc. Graduates of the first cycle can continue their studies in the 2nd cycle, master's degree.

For each course unit included in the educational plan the curriculum (analytical programme / syllabus) is developed. It includes the following elements: Course title / Course holder / Course code / Year / Semester / Number of credits accumulated / Language of instruction / Final assessment form / Number of hours (direct contact: theoretical course / seminar / laboratory activities / practical training and individual study) / Course formative category / Course option / Maximum number of students who can enroll in the course / Access conditions / Fundamentals / Objectives / components developed within the course and learning outcomes / Course content / Minimum bibliography / Teaching technologies (Dominant forms of organization; Teaching methods; Didactic means) / Final assessment method / Establishing the final grade (expressed share) / Total time (hours per semester) of the individual study activities requested from the student.

The curriculum of the course (analytical programme / syllabus) is developed by the course holder according to the internal regulations of the AESM (Regulation for the organization of studies on the basis of the National System of Study Credits, AESM's Methodology regarding the elaboration and approval of the analytical programme, IM7.5 / 3 etc.). Their content is updated at the beginning of each academic year by introducing new knowledge resulting from scientific research, including own research, new bibliographic sources, etc. and approved at the meeting of the faculty council.

In order to enhance the quality of the teaching and meet the requirements formulated by the beneficiaries, the Business and Administration study programme is monitored and evaluated periodically through the following activities:

- Questioning students:
 - assessment of teaching quality
 - assessing students' satisfaction with the conditions and services offered by AESM;
- Questioning employers;
- Questioning AESM's graduates.

An important role in developing / improving the study programme and the analytical programmes is given to employers and graduates who are invited as consultants in their process of elaboration and improvement (form of expertise), in the organization of production and bachelor's degree internships (the form of the corresponding agreements), during the the bachelor's degree examination (formulation of the problem / topic of the bachelor's degree thesis) (participatory form) etc.

⁹⁵ Regulation on the development in team of the bachelor's / master's degree thesis, DS no. 3 of December 24, 2014, available at http://ase.md/files/documente/regulamente/interne/3.4_teza_echipa.pdf

The students are also involved in the elaboration of the educational plans, of the analytical programmes, who, as beneficiaries, participate in various surveys and evaluate the courses / teachingstaff, also through their representatives in the faculty council, and the Senate, students participate in the decision making process regarding the initiation / modification of the study programmes, approval of analytical programmes, etc.

The modification of the educational plans is carried out at the chairs providing the respective study programme and is approved by the Faculty Council. The review / update of the educational plans is validated by the AESM's Senate and submitted to the Ministry of Education every 5 years for coordination.

Enrollment in AESM's study programmes is done transparently on the principle of equality of opportunity for all candidates and in accordance with the ASEM's Regulation on the organization and conduct of admission, for the first cycle, Bachelor's degree studies⁹⁶, elaborated on the basis of the Framework Regulation on the organization of admission in the cycle I - Bachelor's degree studies, approved by order of the Ministry of Education. The institutional regulation is updated annually.

Candidates, holders of Baccalaureate, college or higher education diplomas / degrees have the right to apply to one, two or three specialties / fields of training in AESM's admissions, but shall be enrolled in one specialty only.

The enrollment, in accordance with the Admission Plan, is made in descending order of the average competition grade of the candidates within the limits of the number of places established for each specialty, the form of education, the category of candidates and the source of financing. The enrollment at the places by contract with the payment of the study tuition fee is made from among the candidates admitted under the last admitted candidate to the places financed by the state budget, in descending order of the average competition grade, at the written request of the candidates.

Year-to-year promotion is an annual procedure and is based on the *Regulation on the promotion of the year of studies*⁹⁷ that determines the organization and deployment of the promotion process by the student or master degree student of the study year in the AESM.

Student registration in the next year of study is conditional upon the accumulation of minimum of 40 (30 for part-time education) credit points at the compulsory course units / modules provided in the Annual Study Contract for the current academic year and the accumulation of the total number of credit points, provided by the educational plan for previous years of studies, and the year of completion of university studies.

The teaching-learning-evaluation process within EASM is carried out more and more by using ICT tools, especially the e-Learning platform - MOODLE. This is highly appreciated by students because they can learn taking into account their personal rhythm, anywhere, anytime; all course materials are located in one place; students can self-assess themselves, and the Forum allows students to interact with the teacher and get informed from the primary source, etc.

The workload of the teaching staff in AESM is 1470 hours per year, representing 35 astronomical hours per week.⁹⁸

The workload of the academic staff includes: classroom didactic activity, didactic activity outside the classroom, research activity, technological transfer and methodical activity and is

⁹⁶ http://www.ase.md/files/admitere/reg_licenta_2016_3.pdf

⁹⁷ Regulation on the promotion of the year of studies, DS no. 10 of 29 June 2012, available at http://www.ase.md/files/documente/regulamente/interne/3.6_promovare.pdf

⁹⁸ Regulation on establishing the workload regarding the scientific-didactic activity of A E SM staff, DS 7 of 29 June 2016, available at http://ase.md/files/documente/regulamente/interne/2.21_reg_normare1.pdf

recorded in the individual plan, drawn up for the whole year of study, in accordance with the chair's activity plan. The individual plans of the teaching staff are discussed at the chair meeting, endorsed by the management of the respective subdivision, by the Dean, as well as by the First Vice-Rector, and the individual plan of the Head of the Chair is approved by the Dean and approved by the First Vice-Rector.

Lectures taught in the first cycle, Bachelor's degree studies, for series of studies with a number of students over 75, as well as those taught in cycle II, master's degree studies, using interactive, innovative teaching and evaluation methods (.eg. E-learning, MOODLE, Problem-Based Learning etc.) are allocated with the additional workload coefficient of 1,5.

For the teacher's guidance of the students' individual activity, there is allocated: 1 hour / student in the first cycle, Bachelor's degree studies, and 2 hours / student in the second cycle, Master's degree studies, and for the coordination of the internships with the verification of the reports and the examination of the acquired knowledge - 3 hours / student.

5 hours / project is allocated for the supervision of the annual project, and for the supervision of the Bachelor's degree thesis - 23 hours / student, including 3 hours for bachelor's degree internship.

In the case of evaluations / assessments the following norms are applied:

- current assessment: 2 hours / academic group,
- promotion exam:
 - oral / computer-aided - 1 hour / 3 students
 - in writing - 1 hour / 2 students.
- Bachelor's degree exam: 1 hour / student.

The workload of students is measured in transferable credits. Thus, an ECTS credit equals 30 hours of work for students.

The student's learning activity as well as the learning outcomes and competences acquired by the student are verified and appreciated through assessments. Depending on the learning outcomes and competences to be acquired by the student, assessment during the deployment of the course can be done by: tests, reports, individual papers, portfolios, essays, case studies, annual project, etc.

All disciplines included in the Business and Administration study programme are completed with exams, except for Physical Education that completes with the test: verification.

According to the Regulation on the assessment of students' learning activity⁹⁹, two sessions of current assessment (tests) are organized during the semester. Students are proposed both dual and / or multiple choice tests as well as problem solving or case studies, including evaluation on the MOODLE platform. Also, the current assessment includes individual work and current success. The results of the current assessments are taken into account in the final semester assessments, with an average weight of 60 percent of the final course unit / module grade.

The student who has received grades under „5” in current assessments is not admitted to the final assessment. Assessments at the end of the course are conducted through exams that can be either oral, written or combined. About the form of exam students are announced by the teacher at the beginning of the semester.

The final grade is established by calculating the average grade for the results obtained in the current assessment, tests and exams.

⁹⁹ Regulation on the assessment of students' learning activity, DS 6 of 14 March 2012, available at http://ase.md/files/documente/regulamente/interne/3.1_evaluare_stud.pdf

The final assessment of the AESM's study programme includes a single test: public defence of the bachelor's degree thesis. The bachelor's examination assesses the level of achievement of the learning outcomes, the generic and specific competences acquired by the graduates during the studies and the competences of the graduates to carry out researches, to apply the theoretical knowledge in the elaboration of practical solutions specific to the field of professional training or realization of case studies.

Students who have not fully completed the educational plan and have not obtained credits for all compulsory and optional course units and internship are not admitted to the Bachelor's degree exam.

The results of the student's final assessments are recorded in the tally-sheets by the responsible teacher. The tally-sheets will include mandatory information on the results of interim evaluations, the grade /mark in the national grading system and the grade according to the ECTS grading scale, the number of credits accumulated.

Students' grades are included in the AESM's information system. The results obtained for exams by each student are placed on the AESM's website - Success (<http://ase.md/student-ase/reusita.html>).

In order to prevent cheating and plagiarism in AESM, the following provisions were formulated in the University's Code of Ethics:

- at the first minor violation, the teacher, the course or seminar holder, after revealing the case of plagiarism or cheating, penalizes the student by warning and lowering the grade, offering advice to the student on how to proceed in the future;
- in significant cases of repeated minor plagiarism, of extended or total plagiarism, the grade will be reduced proportionally until the examination is canceled;
- plagiarization of bachelor's or master's degree thesis is sanctioned by canceling the exam.¹⁰⁰

Starting with 2013, all AESM's graduates are required to submit the bachelor's degree thesis in printed and electronic format to be verified against plagiarism in the Anti-Plagiarism System of AESM. They also sign the *Declaration on their own responsibility*, stating that the thesis was developed independently and has never been presented to / defended at another faculty or higher education institution in the country or abroad, and the copy presented and registered at the chair / department corresponds entirely to the electronic variant placed in the anti-plagiarism system.

In case the plagiarism control subsystem automatically detects a plagiarism situation, the head of chair / department shall draw up a report / minute on finding plagiarism which is submitted to the Faculty Jury. If after the examination of the case by the Jury the fact of plagiarism has been proved, by the clear proof of the plagiarism with the indication of the text copied, including those on the Internet, the thesis is not admitted for the defence.

In case the plagiarism is detected by the Bachelor's / Master's degree Examination Committee, during the defence of the thesis, the thesis will be assessed with the grade 1 „one”.

The plagiarism act is recorded in the student's personal file. Repeated detection of the plagiarism case of the thesis will lead to the non-admission to the final exam of the student in the future.¹⁰¹

¹⁰⁰The Code of Ethics of the Academy of Economic Studies of Moldova, DS no. 7 of 21 February 2007, available at http://ase.md/files/documente/regulamente/interne/2.3_codul_etica.pdf

¹⁰¹ Regulation on the prevention of plagiarism among students / master's degree students, DS no. 5 February 27, 2013, available at http://ase.md/files/documente/regulamente/interne/3.3_reg_plagiat.pdf

In case the student disagrees with the results of the final evaluation, he / she can appeal to the Faculty Jury, within 24 hours from the announcement of the grade. If it turns out that the student has not been properly assessed, the Jury may cancel the grade and arrange for the establishment of a three-person examination committee to repeat the examination. The examination committee does not include the teacher who taught the course.¹⁰²

Likewise, students have the right to challenge the decision of the Bachelor's degree Committee. Applications for appeals shall be submitted within 24 hours of the announcement of the results of the Bachelor's degree examination and shall be registered by the Secretary of the Bachelor's degree Committee in the Register of Evidence of Appeals.

Appeals will be reviewed by the Bachelor's degree Committee the day after the expiration of the deadline for appeals. The Bachelor's degree Committee re-checks and allocates grades to the disputed theses. Changing the disputed grade with the grade granted after reviewing the contestation will be done by increasing or decreasing it, but remaining to be the final one. Examination of appeals shall be recorded in separate minutes, signed by the members of the Bachelor's degree Committee and the members of the Supervisory Committee who participated in the examination of the appeal. The Bachelor's degree Committee operates the changes following the appeals.¹⁰³

According to the Regulation on the organization of studies in higher education based on the National System of Study Credits¹⁰⁴ evaluation of learning outcomes in the Republic of Moldova is done with grades from „10” to „1”. Grades from „5” to „10” make it possible to obtain the credits allocated to them, according to the educational plan. In addition to the national grading system, the grading scale recommended in the European Credit Transfer System (A, B, C, D, E, FX, F) is also used to complement the diploma supplement and facilitate academic mobility.

Table 5. ECTS grading scale

Grade	Evaluation	Equivalent ECTS	The student has mastered the material included in the curriculum of the course
9,01 – 10,0	excellent	A	91 – 100%
8,01 – 9,00	very good	B	81 – 90%
7,01 – 8,00	good	C	71 – 80%
6,01 – 7,00	satisfactorily	D	61 – 70%
5,00 – 6,00	weak	E	51 – 60%
3,01 – 4,99	unsatisfactoril	FX	31-40% and respectively

¹⁰² Regulation on the organization of studies in AESM based on the National System of Study Credits, DS nr.3 of 23 December 2015, available at http://ase.md/files/documente/regulamente/interne/3.0_ase_m_sncs.pdf

¹⁰³ Regulation on the organization of the final examinations for Bachelor's degree studies in ASEM, DS no. 3 of December 24, 2014, available at http://ase.md/files/documente/regulamente/interne/3.2_examen_licenta.pdf

¹⁰⁴ Regulation on the organization of studies in higher education based on the National System of Study Credits, Order of the Ministry of Education no. 1046 of October 29, 2015

	y		41 – 50%
1,00 – 3,00	unsatisfactoril y	F	0 – 30%

Source: Regulation on the organization of studies in AESM based on the National System of Study Credits, available at http://ase.md/files/documente/regulamente/interne/3.0_asem_snscs.pdf

Assessment of learning outcomes and competencies is usually done by the course's holder lecturer. Individuals outside the AESM assess student competences within internships (internship supervisors from the company). Also, the existence of the external examiner is mandatory in the case of the higher education completion examinations as the Chairman of the Bachelor's degree Examination Committee. Based on the proposal of the institution, the Minister of Education appoints, by virtue of an order, a specialist in the field (university professor, associate professor, scientific researcher, holder of honorary degrees, highly qualified practitioner) who does not work within AESM. A person may not be appointed Chairman of a Bachelor's degree Examination Committee for more than two consecutive years.

Organizing studies on the basis of ECTS has enabled AESM students to participate in various academic mobility programmes.

Agreements between partner universities (faculties) guarantee the recognition of periods of study, their content and credit transfer for course units / modules carried out. The student involved in mobility programmes on the basis of partnership agreements signed between AESM and the host institution will submit the Transcript of grades / Extract from the ECTS tally-sheet upon return. The equivalence of course units and credits will be done at faculty level, by a commission constituted by the dean's order.¹⁰⁵

Credits obtained at similar course units as expected learning outcomes, content, eventually name and extension (number of hours in the educational plan) are automatically equated.

The student who chooses course units with a content overlap of at least 2/3 accumulates the credits allocated to only one of them.

The courses promoted under the mobility programme are included in the student's Diploma Supplement, with the indication that the respective period of study was conducted within an academic mobility programme. Registration of the courses promoted at the host institution will be done using the names of the courses in the AESM's study programme, they were equated with. Courses that have no equivalent in AESM's study programme are recognized in the packages of free choice courses and constitute additional credits.

In order to evaluate the quality of the teaching of the courses, the improvement of their content and the methods of teaching, the Department of Studies, Curricular Development and Quality Management periodically questions students. Questionnaires are not signed by students, and processed results are made available to the teaching staff under evaluation only after the examination session, so as not to subjectively influence students' knowledge grading.

The analysis of the results of the evaluation of the academic staff is done at the level of the chair / department and of the institution. Effective measures for continuous improvement are taken after the analysis.

AESM has institutional procedures for tracking the employment and professional development of graduates, which are carried out by the Career Guidance Center. Monitoring is

¹⁰⁵ Regulation on academic mobility in AESM, DS no. 4 of 2 March 2016, available at http://ase.md/files/documente/regulamente/interne/3.11_mobilitate.pdf

carried out in dynamics, the first - at the time the diploma is issued, then at 6 and 12 months after graduation.¹⁰⁶

As far as the monitoring of the professional path is concerned, this is this happens in the 5th year after the graduation of the study programme. It is also kept track of the continuation of graduates' studies at Master's degree studies and doctorate.

The Graduates' Association was founded at AESM in April 2016, graduate experiences can make a substantial contribution to improving study programmes.

AESM provides remote access to numerical information, including: the electronic catalog of OPAC bibliographic records; numerical publications on CDs; external numerical resources (EBSCO, INTAS PERI databases, the European Documentation Center and the World Bank, Legislation of the Republic of Moldova) based on subscription, contracts, licensing, etc.

3.9 Pedagogical training level

Pedagogical training of teaching staff is becoming more and more important. First of all, with the entry into force of the Education Code, it is mentioned the need for accumulation of 60 transferable study credits through the psycho-pedagogical module during the studies or in the first year of activity in higher education. This provision refers to graduates of non-pedagogical specialties. It does not specify where exactly these pedagogical skills can be accumulated. At the same time, within AESM, as mentioned above, the necessary conditions for the training and development of teachers' pedagogical skills are created. Thus, AESM offers new teachers coming to university the opportunity to acquire the necessary knowledge in the psycho-pedagogical field and to accumulate the necessary number of study credits. For AESM employees, these courses are free of charge. Students enrolled in the second cycle, master's degree studies, or teachers from other educational institutions can also enroll in the courses. The DSDCMC is responsible for organizing the psycho-pedagogical module. At the same time, the Department of Human Resources is involved in the continuous development and training of staff. Within this Department, the employees' records, the training courses they have attended, are kept. At least once every five years, all teachers are required to undergo a pedagogical training course (apart from the 60 study credits mentioned) and an internship in enterprises in the real sector of the national economy. Evidence is kept by the employees of the Department of Human Resources and is taken into account when people take part in the competition for didactic-scientific positions.

For the academic year 2016-2017, in order to develop the teachers' competences, the following pedagogical training courses were proposed: „*Problem-Based Learning – PBL*” (information on this course is presented in Annex 3), „*Innovative teaching-learning-evaluation methods in professional education*”, „*Psychology. Personal development of the teaching staff*”, „*Application of informational communication technologies in training. Moodle System*”, „*Deontology and effectiveness of didactic communication*”.

¹⁰⁶ The Regulation on the monitoring of the employability and professional path of graduates of AESM, DS no.3 of 2 November 2016, available at

http://ase.md/files/documente/regulamente/interne/2.22_Reg_traseu_profesional_absolventi_ASEM.pdf

4. Cross-case analysis

4.1 Introduction

In this chapter we will make a comparative study between the Moldovan higher education system and the education systems of the European states: Denmark and Great Britain, highlighting both the similarities and the main differences, thus trying to highlight the shortcomings and strengths of the local system, but also ways which can improve and make Moldovan education more efficient. We will not focus on the whole system or on the whole spectrum of issues. Obviously, the focus will be firstly on the use of student-centered teaching methods, and secondly, we will continue to guide on the proposed methodology.

4.2 Comparative analysis: criteria, properties and indicators

Here we present synthetically the comparative situation in 3 universities under the indicators and criteria at each level: AESM (Republic of Moldova), AAU (Denmark), UoG (Great Britain).

Table 6. Cross-case analysis

Criteria, properties, indicators	AESM	AAU	UoG
L1 System level <i>L1 System level</i>			
<i>1.1. Accreditation of study programmes</i>	For the purpose of accreditation, the Independent Agency ANACIP was founded. At the first stage, the study programmes of the 1st cycle, Bachelor's degree studies, then the study programmes of the 2nd cycle, Master's degree studies, then of the 3rd cycle, doctorate, are accredited. After that, the whole university may be subject to accreditation.	The university has already been subject to accreditation on study programmes, so it has passed at a higher level when the University was assessed in its entirety and obtained the university accreditation certificate. Indicators are developed, according to a determined methodology, which allows the evaluation of the university.	The accreditation of the study programmes is done with the involvement of three organizations: the Privy Committee, the Agency for Quality Assurance in Higher Education, the Council for Higher Education Financing in England.

	<p>According to the Education Code, the results of accreditation will be the basis of the ranking of universities, and then the financing of universities will depend on this. Indicators are developed in order to evaluate study programmes.</p>		
<p><i>1.2 National quality assurance system.</i></p>	<p>In the Republic of Moldova, the National Agency for Quality Assurance in Professional Education (ANACIP) is responsible for ensuring an integrated, credible, objective and transparent system of external evaluation and accreditation of institutions and study programmes.</p>	<p>In Denmark, the Accreditation Agency is also in charge with the quality assurance issues. The structure and functions of the continuous quality assurance system in the university are predetermined by the criteria defined in general in the University Act and in the Order of the Minister "Criteria for the Relevance and Quality of University Study Programmes and on Procedures for Approval of University Study Programmes".</p>	<p>In the UK, the national quality assurance body is the Quality Assurance Agency for Higher Education (QAA).</p>
<p><i>1.3. Professional bodies involved in accreditation.</i></p>	<p>The study programme Business and Administration does not require accreditation by professional bodies. It is welcomed the opinion of a professional association regarding the usefulness of the educational plan for</p>	<p>There are no professional bodies that contribute to the validation of Business and Administration study programmes or the way they are carried out, but within the university there are advisory bodies at the level of each Study Board, composed of</p>	<p>The Business Management study programme does not require the involvement of professional bodies in the accreditation process, although there are consultations with the business community.</p>

	the economic environment.	competent and notorious external persons.	
L2. University management level			
Criterion 1. <i>University governance, management and organization bodies</i>	There is no clear delimitation between the governing and management bodies. The system of governing bodies consists of the Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector.	The university Board and the Rector. It is a unitary management structure.	Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations. The existence of a university-level service "Help Zone", that has the competence to assist, help, guide students throughout their studies, facilitates the educational process.
Criterion 2. <i>Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning</i>	The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education” is dedicated to this topic. In the AESM’s STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by	In Aalborg University there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability.	The UoG’s Strategic Plan (2012-2017) provides for the development of student-centered education.

	capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose”		
Criterion 3. <i>Quality assurance bodies at university level</i>	In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is established, which has an advisory role in substantiating the decisions regarding AESM’s quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes ¹⁰⁷ . In order to implement the quality policy and	At Aalborg University there is a Group responsible for quality assurance and development. (University’s Steering Group for quality assurance and development). This Group is responsible for systematically supervising internal quality and improving the quality system, developing the quality domains within the university.	UoG is constantly concerned with ensuring a high quality of the entire study process, which would allow the training of highly qualified specialists. In order to achieve this goal, there is a quality assurance management structure, but the supervision of all quality assurance procedures within the University is within the competence of the Academic Council.

¹⁰⁷ The concept of quality assurance system of studies in AESM, p. 8, available at http://ase.md/files/documente/regulamente/interne/1.3_conceptul_calitatii.pdf

	objectives in AESM, there is the Department of Studies, Curricular Development and Quality Management of AESM headed by a director.		
Criterion 4. <i>Pedagogical training of teaching staff and their continuous training</i>	It is obligatory for teachers without pedagogical training to attend the psycho-pedagogical module in the amount of 60 study credits. It is provided in the AESM that in order to be able to participate in the competition in order to hold a scientific-didactic position, you must have a training in the pedagogical field and one in the real sector of the economy in the last 5 years.	A Learning Lab is created at the Aalborg University, which offers pedagogical qualifications obtained through the Adjunktpaedagogikum (national qualification) and the possibility of continuous learning. We also mention the PBL Academy, which favors this direction.	The UoG welcomes the participation of teachers, especially young ones, at various organized events. There is the Department of Continuous Teacher Training. Each teacher is obliged to attend certain courses.
L3. Faculty / department level			
Criterion 1. <i>The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning</i>	The faculty communicates more widely with students and teachers who have classes at that faculty. There is the right to refuse certain professors who do not meet certain requirements imposed or are unapproved by the students. Chairs have a greater involvement in student-centered teaching, imposing certain standards on its members.	Faculties and chairs / departments are part of the internal organization of the university, where meetings are organized to share examples of good practice and performance in student-centered teaching and learning.	Both the faculty and the department, through its members, are involved in student-centered teaching and learning.

L4. Level of the Council of Studies			
<p>Criterion 1. <i>Structure of the body responsible for studies</i></p>	<p>The body responsible for organizing the studies is AESM is the Department of Studies, Curriculum Development and Quality Management, which works with chairs / departments to develop educational plans, syllabi of the disciplines.</p>	<p>The Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty after consultation with the members of the departments responsible for these programmes. Each Study Board must include an equal number of teachers and students' representatives elected by academic staff and students respectively.</p>	<p>There is a body responsible for organizing studies at the faculty level.</p>
<p>Criterion 2. <i>Analysis of the evaluation practice</i></p>	<p>The assessment has a continuous character and includes the current assessment (during the practical classes), the evaluation through test (2 times per semester), the final evaluation (at the end of the course, during the session). Examination is done in writing, orally or computer-aided. There can be test with variants for the answer, case scenarios, tests etc.</p>	<p>The University uses various evaluation methods, peer evaluation, monitoring of the evaluation, inclusion of an external evaluator.</p>	<p>The evaluation methods, very diversified, depending on the course, teacher, are stipulated in the discipline curriculum. There are regulations that students know before starting the course and know exactly how the assessment will be done, what is the share of each type of evaluation. The evaluation has a continuous character.</p>
<p>Criterion 3. <i>The way to develop a new study programme</i></p>	<p>For Cycle I, Bachelor's degree studies, it is very complicated. At the chair / department level, a working team is formed, who develops the educational plan,</p>	<p>The initiative to initiate a new study programme in Cycles I and II comes, as a rule, from a teaching staff, group of teachers forming the programme team or from a research group. At the faculty</p>	<p>The initiator of a new Bachelor's degree study programme in the UoG is the Department, where a programme committee is formed, which argues, and then elaborates the curriculum of the study programme. The study</p>

	<p>arguing the need to initiate such a study programme.</p> <p>Internally, it must be approved at the meeting of the faculty, faculty council, and Senate. If this study programme exists in the nomenclature of specialties, than it is necessary to obtain provisional authorization from ANACIP. If this study programme is absolutely new, it is necessary to enter this programme into the Nomenclature of Specialties. This is done by Government Decision.</p>	<p>there is an experienced legal adviser in the field of education who helps the team to develop the document package. The Dean signs this package after rigorous legal scrutiny. The study programme is approved by the Dean, then subjected to evaluation at the academic board level.</p>	<p>programme is discussed within the Department, then by the Faculty's Academic Committee. A special role is assigned to professional associations. The requirements for design, development and monitoring of study programmes are described in the Quality Code.</p>
<p>Criterion 4. <i>Involvement of students in the development of study programmes</i></p>	<p>Students are not involved directly in developing the study programme. However, indirectly, they are involved by including representatives in the Faculty Council, in the AESM's Senate where these documents are discussed and voted, where they can express their views. Also, students are questioned with regard to the course or on the whole study process.</p>	<p>Students are 50% involved in study boards, but also in other bodies. The role of the students is double: they directly participate in and influence the evaluation of teachers and study programmes and also have the possibility to influence the evaluation by participating in the study board.</p>	<p>Students are involved in the evaluation of teachers, study programmes and courses.</p>
<p>Criterion 5. <i>Periodic monitoring and analysis of study programmes</i></p>	<p>From the regulatory point of view, the revision is carried out every 5 years. Annually, the</p>	<p>The review of the study programmes is done every semester, 8 annual meetings are organized for this</p>	<p>They are analyzed annually, including through feedback from students, employers.</p>

	feedback from students, graduates, employers is obtained, which allows for an analysis and, if necessary, to initiate the review procedure.	purpose.	
L5. Integration of disadvantaged groups of students			
Criterion 1. <i>The existence of a body dealing with students with disabilities</i>	AESM does not have a subdivision dedicated to students with disabilities, yet at the institutional level and at the faculty level their record is kept to determine the individual support and assistance measures that can be offered	We did not notice the existence of this body at Aalborg University.	At the UoG there is the Help Zone office in every campus.
Criterion 2. <i>Ways of working with disadvantaged students in relation to teaching</i>	Important steps are being taken to create minimum conditions so that they are not marginalized. Counseling is done by the group supervisor.	All conditions are created so that they are not marginalized.	They work very hard with them through the HelpZone office. The range of services they can benefit from is very broad, including issues related to teaching, learning, assessment.
L6. Infrastructure (physical environment)			
Criterion 1. <i>Ensuring facilities tailored to the needs of people with disabilities</i>	AESM makes efforts and takes measures to adapt the infrastructure so as to ensure the access to education for students with disabilities. Each block of study has access ramp for people with locomotory problems, there are lifts.	There is an infrastructure that provides access to studies and offers learning opportunities to students with disabilities, including the visually impaired ones.	The infrastructure provides access to studies and offers learning opportunities for students with disabilities
Criterion 2. <i>Existing facilities for students to support problem-based learning</i>	AESM has a modernized infrastructure, with well-equipped study halls, campuses, scientific library, WI-	The University has a very good infrastructure, with well-equipped study halls, campuses, libraries, WI-FI	There is a very good infrastructure at the university, with well-equipped study halls, campuses, libraries, WI-FI connection etc.

	FI connection, etc.	connection, and so on.	
L7. Study programme level (Business and Administration)			
Criterion 1. <i>Structure of the Business and Administration study programme</i>	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively
Criterion 2. <i>Student's workload</i>	The workload is calculated in transferable credits: for one academic semester - 30 ECTS; for one academic year - 60 ECTS. 1 ECTS equals 30 hours of work per student.	In Denmark, each year of study is equivalent to 60 ECTS, respectively each semester, 30 ECTS. 1 ECTS equals 27 hours of work per student.	In the United Kingdom, the workload for one year is 120 CAT. 1 ECTS equals 2 CAT, 1 CAT is equivalent to 10 hours of student work
Criterion 3. <i>Student assessment</i>	<ul style="list-style-type: none"> - There is a Regulation on assessment of the student learning activity, explaining the types of evaluations performed at AESM, the arrangements for organizing and conducting the exams, the evaluation scale - The assessment is based on certain competencies acquired by the student. <p>During the semester, two sessions of the current assessment (tests) are organized, proportionally distributed during the semester, in which the intermediate status of the student's progress is determined. The test's share is 15% of the final grade. Also in the final grade is included in the</p>	<ul style="list-style-type: none"> - Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation. - The assessment is based on certain skills that students must demonstrate. <p>În Universitatea din Aalborg utilizarea pe scară largă a proiectelor în echipă aduc un specific și evaluărilor.</p> <p>At Aalborg University, the use at a large-scale of team projects brings out the specifics to the assessments.</p>	<ul style="list-style-type: none"> - Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation. - The assessment is based on certain skills that students must demonstrate. <p>The UoG publishes separate principles and procedures for assessing students with disabilities.</p>

	individual study with 10%, current success - 20% and final test - 40%.		
Criterion 4. <i>Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme</i>	Typically, only teachers are directly involved in designing a study programme. However, before putting certain courses on paper, students, employers, graduates are consulted either through different questionnaires, or organizing different round tables, etc. So, more parties are indirectly involved in the development and improvement of the study programme.	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates, both directly (through participation in different committees) and indirectly (through responses to questionnaires, other feedback).	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates.
Criterion 5. <i>Avoiding and punishing cheating and plagiarism</i>	At the institutional level, there is the Code of Ethics of the University, the Regulation on plagiarism prevention among students / master degree students, which clarifies what the plagiarism is, what are its consequences. In AESM, each graduate is required to submit the thesis, in electronic format, in the AESM's Repository (anti-plagiarism system) for the verification of the degree of plagiarism.	At Aalborg University there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism.	Gloucestershire University has been using the Turnitin plagiarism detection software since autumn 2015

<p>Criterion 6. <i>Student appeals</i></p>	<p>The grade awarded by the examiner may be disputed on a regulatoru basis. Students can challenge the results of the final examination within 24 hours of the notice of the grade.</p> <p>If it turns out that the student has not been properly assessed (underassessed or overassessed), the Jury may cancel the grade and arrange for the establishment of a three-person examination committee to repeat the examination. The examination committee does not include the teacher who taught the course.</p>	<p>There are Institutional Regulations stipulating the conditions when appeals can be submitted, how to resolve them.</p>	<p>There are Regulations that stipulate in great detail the conditions when appeals can be submitted, how to resolve them.</p>
<p>Criterion 7. <i>The current grading system</i></p>	<p>Assessment of knowledge is appreciated with grades from 10 to 1. Grades from "5" to "10", obtained as a result of the evaluation, allow obtaining the credits allocated to them according to the educational plan. The final grade results from the average sum of the grades from the current valuations and the final examination and is accurately entered with a semicolon.</p>	<p>In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10, 12 and two negative grades 00 and -3, is used.</p>	<p>In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% - C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades.</p>

Criterion 8. <i>Role of the external examiner</i>	External examiners are required in the case of the completion exam of the higher education. They are appointed as Chairmen of the Bachelor's degree Examination Committees by order of the Minister of Education, on the basis of AESM's proposals. For current exams no external examiners are required.	The external examiner is required to be present in the student assessment activity for greater objectivity of their assessment.	In UoG, the "Externality" phenomenon is practiced - an external teacher (another university) is assigned to each course to evaluate the assessment method and the results provided by the student's internal teacher. Also in this process, the external teacher will give his colleague suggestions for improvement.
Criterion 9. <i>Employability of graduates</i>	In AESM, the Bachelor's degree theses is developed on the basis of the enterprises where the students have performed their internships.	At Aalborg University projects are developed based on real companies, with real problems.	In the UoG, the one-year internship is welcomed and stimulated, with the interruption of the study process. Several initiatives are developed, which aim to contribute to a better employment of graduates.

4.3 Emerging patterns

Table 7. Data reduction table

	Common patterns	Peculiarities
L1: System level		
Criterion 1. <i>Accreditation of study programmes</i>	Accreditation of study programmes is required. There are methodologies, procedures, well-defined evaluation indicators.	Different names of the bodies responsible. The methodologies used and the indicator system largely reflect the specificity of the country and the higher education system concerned.

<p>Criterion 2. <i>National quality assurance system</i></p>	<p>1. There are national bodies to monitor and, implicitly, ensure and improve the quality of university studies.</p> <p>2. Quality assurance is part of the accreditation process of teaching and research, in order to substantiate research resources.</p> <p>3. One of the criteria imposed by the Ministry is the continuous assurance of the internal quality of the study programme.</p>	<p>In Denmark and the Republic of Moldova accreditation agencies are also in charge of quality assurance issues.</p> <p>In the UK, the Independent Quality Assurance Body is the Quality Assurance Agency in Higher Education (QAA).</p>
<p>Criterion 3. <i>Professional bodies involved in accreditation</i></p>	<p>There is no obligation in any of the universities to involve professional bodies in the accreditation of study programmes.</p> <p>At the same time, employers are indirectly involved in quality evaluation.</p>	<p>In Denmark, within the university there are advisory bodies at the level of each Study Board, composed of competent and notorious external persons..</p>
<p>L2. University management level</p>		
<p>Criterion 1. <i>University governance, management and organization bodies</i></p>	<p>There is a Governance and Management system</p>	<p><i>Denmark:</i> The university Board and the Rector. It is a unitary management structure.</p> <p><i>United Kingdom:</i> Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations.</p> <p><i>Republic of Moldova:</i> Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector</p>

<p>Criterion 2. <i>Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning</i></p>	<p>In all universities there are institutional strategies. In all institutional strategies emphasis is placed on student-centered learning.</p>	<p>In <i>Aalborg University</i> there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability. The <i>UoG's Strategic Plan</i> (2012-2017) provides for the development of student-centered education. In the AESM Charter, Chapter VII "Promoting student-centered education" is dedicated to this topic. AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 mentions the need to promote student-centered teaching methods.</p>
<p>Criterion 3. <i>Quality assurance bodies at university level</i></p>	<p>In each university there are bodies established to ensure a high level of teaching and research activity.</p>	<p>At <i>Aalborg University</i> there is a Group responsible for quality assurance and development. <i>In the UoG</i>, supervision of all quality assurance procedures is within the competence of the Academic Council The Quality Council is established at <i>AESM's</i> Senate level</p>
<p>Criterion 4. <i>Pedagogical training of teaching staff and their continuous training</i></p>	<p>There are requirements at each university level to prove formal pedagogical training. There is a need, but also lifelong learning conditions.</p>	<p>At <i>Aalborg University</i> of a Learning Lab is created, the PBL Academy; At <i>UoG</i> there is the Continuous Training Department; At <i>AESM</i>, the DSDCMC is responsible for the teacher training and development of teachers' pedagogical competences..</p>
<p>L3. Faculty / department level</p>		
<p>Criterion 1. <i>The role of the faculty in the communication</i></p>	<p>Faculties and chairs / departments are part of the</p>	

<i>with stakeholders with regard to student-centered teaching and learning</i>	internal organization of the university, where meetings are organized to share examples of good practice and performance in student-centered teaching and learning.	
L4. Level of the Council of Studies		
<i>Criterion 1. Structure of the body responsible for studies</i>	There is a Council of Studies in each of the universities, but the role of this body is different. Different is also the level at which it is established.	<i>In Aalborg</i> , the Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty. <i>In the UoG</i> there is a body responsible for organizing studies at the faculty level. <i>In AESM</i> there is a body established at the institutional level responsible for organizing the study process.
<i>Criterion 2. Analysis of the evaluation practice</i>	Each university has a rich experience in using different ways of evaluating students.	
<i>Criterion 3. The way to develop a new study programme</i>	There are clear provisions for how to develop a new study programme.	The initiative to develop a new study programme at Aalborg University can come from a teacher, while in the UoG and AESM, the initiator can be the department (the chair). There are differences described above regarding the process of developing and approving a new study programme.
<i>Criterion 4. Involvement of students in the development of study programmes</i>	In all universities, students are directly or indirectly involved in developing the study programme.	There are clear provisions in Aalborg University regarding the participation of students in the Study Board, responsible for the development of the study programme. In AESM and UoG, students' involvement is indirect through their participation in the bodies that then analyze and approve these plans, but also through various questionnaires the students take part in.

Criterion 5. <i>Periodic monitoring and analysis of study programmes</i>	It is the focus of attention in all the universities studied.	At Aalborg University they are analyzed every semester, in AESM and UoG - annually.
L5. Integration of disadvantaged groups of students		
Criterion 1. <i>The existence of a body dealing with students with disabilities</i>		There is a specialized body – HelpZone - in the UoG. In EASM and Aalborg University at the institutional level and at the faculty level their record is kept to determine the individual support and assistance measures that can be offered.
Criterion 2. <i>Ways of working with disadvantaged students in relation to teaching</i>	All conditions are created so that they are not marginalized.	The HelpZone office in the UoG also provides assistance to disadvantaged people with regard to teaching-learning-evaluation. In AESM, counseling is provided by group supervisors.
L6. Infrastructure (physical environment)		
Criterion 1. <i>Ensuring facilities tailored to the needs of people with disabilities</i>	Universities have infrastructure that provides access to studies and offers learning opportunities for students with disabilities	
Criterion 2. <i>Existing facilities for students to support problem-based learning</i>	Universities are well equipped with study halls, computers, well-arranged campuses, libraries, WI-FI connection, and so on.	
L7. Study programme level (Business and Administration)		
Criterion 1. <i>Structure of the Business and Administration study programme</i>	All the study programmes analyzed assume a period of studies of 3 years, 6 semesters.	In UoG, it is possible (welcomed) to interrupt studies over a year in favor of the internship. The internship period as a compulsory component of the study programme exists only in AESM.
Criterion 2. <i>Student's workload</i>	The workload of the student is measured in transferable study credits and consists of work with the teacher in the	In Aalborg University and AESM, the workload is measured in ECTS (30 per semester and 60 per year

	auditorium (direct contact) and individual work of the student.	respectively), and in UoG in CAT (60 per semester and 120 per year). 1 ECTS in Denmark = 27 student working hours 1 ECTS in the Republic of Moldova = 30 hours 1 CAT = 10 hours
Criterion 3. <i>Student assessment</i>	Universities use a wide range of examinations. Continuous examination is practiced throughout the semester. Typically, the study programme indicates the evaluation methods.	In Aalborg University, a specificity of the examination is determined by the large share of team work. Different examinations for people with disabilities are conducted in the UoG. In AESM there is a calculation formula for determining the final grade for the discipline.
Criterion 4. <i>Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme</i>	In all universities, different actors, students, teachers, employers, graduates, participate in the elaboration and improvement of the study programmes.	In the AAU, teachers and students participate in an equal number in drafting the study programme. In the other universities, the actors involved, to a large extent participate indirectly in the design, management and improvement of the study programme.
Criterion 5. <i>Avoiding and punishing cheating and plagiarism</i>	In all universities, plagiarism and cheating are not tolerated. Different ways of preventing and fighting this scourge are used.	At <i>Aalborg University</i> there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism. <i>Gloucestershire University</i> has been using the Turnitin plagiarism detection software since autumn 2015. In <i>AESM</i> , each graduate is required to submit the thesis, in electronic format, in the AESM's Repository (anti-plagiarism system) for the verification of the degree of plagiarism.
Criterion 6. <i>Student appeals</i>	Students have the right to challenge evaluation grades. There are elaborated	

	Regulations, which in detail explain how, when, under what conditions, the grades can be challenged.	
Criterion 7. <i>The current grading system</i>	There is a transparent grading system in each university, which allows to know in advance what is the appreciation granted for and for which level of knowledge.	<p>In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10, 12 and two negative grades 00 and -3, is used.</p> <p>In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% - C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades.</p> <p>Assessment of knowledge in the Republic of Moldova is appreciated with grades from 10 to 1. Grades from "5" to "10", obtained as a result of the evaluation, allow obtaining the credits allocated to them according to the educational plan.</p>
Criterion 8. <i>Role of the external examiner</i>	The external examiner has the same role in assessing the students in the analyzed universities, only that it manifests itself differently.	<p>In the AAU and UoG for every current exam, people from outside are invited to allow more objective evaluation of student learning outcomes.</p> <p>In AESM, the external examiner is only present at the completion of the studies.</p>
Criterion 9. <i>Employability of graduates</i>	Study programmes are committed to employability.	

5. Business and Administration pilot study programme, 1st cycle, Bachelor's degree studies

5.1 Introduction

Historically speaking, most of the Moldovan universities have focused over a rather long period mainly on teaching and learning. We can say that universities, which have carried out visible research activities at national or international level, are currently missing.

In universities, the classical system of focusing on teacher activities prevails, which we consider surpassed, at least taking into account the fact that it was designed to integrate graduates into a stable and inflexible labor market to the changing society, especially in relation to international influences. However, considering the speed with which changes are being made today, the flexibility of the labor market, it is clear that a student-centered education offers more benefits to society, offers the possibility of training specialists who would have the skills that employers require. The change from teacher-centered to student-centered education involves a cultural transformation, and thus behavioral and attitude changes, both on the part of the students and the teachers, as well as the institution in general. Non-involvement of one of these factors makes it impossible to implement this method.

Following the study of student-centered teaching methods in several universities across the European Union, we aim to introduce these methods into the Business and Administration study programme at AESM. We will focus on the gradual implementation of problem-based education (PBL) within this pilot study programme.

5.2 Study programme outline

Studying the active teaching methods at Aalborg University, Denmark, and Gloucester University in the UK allowed us to conclude that each of these universities uses different methods, but all of them have a focus on the student. All methods involve the learner in his or her own learning activity, which allows him / her to be more prepared for potential employment, where problems occurring daily can not be introduced into a certain framework with ready-made solutions, but requires engagement, knowledge, creativity and logical thinking. These qualities are important for graduates to have.

We also noted that in every country there are certain peculiarities, which derive from the legislative and normative system existing in the country, from the customs, rooted in the past ten or even hundred years, of the mentality of the population. It is important that, by studying the experience and wishing to take it over, we do not forget to look at the environment in which this experience is to be implemented. *Unconditional experience import can not have positive results.*

Studying in this Report the current situation in the field in the Republic of Moldova in general and in the Academy of Economic Studies of Moldova in particular allows us to come up with this outline of the Business and Administration pilot study programme. We hope to implement this plan over the next 5 years.

The general objective of the study programme is to train multi-skilled professionals, potential managers and entrepreneurs to help create a new status for the businessman, in general, and the entrepreneur in particular, as the main actors of the competitive economic

system. The theoretical and applied skills offered by the study programme will facilitate the integration of future graduates into the labor market.

The objectives of the Bachelor's degree programme can be summarized as follows:

- ✓ Training of specialists in business management through Bachelor's degree studies;
- ✓ Creating competences in the field of business by organizing courses at specialized disciplines such as Finance, Accounting, Marketing, Management, etc.;
- ✓ Using student-centered teaching methods, including problem-based learning;
- ✓ Providing the opportunity to study business through a holistic approach in different contexts and from different perspectives;
- ✓ Preparing students for the challenges of the 21st century management;
- ✓ Promoting employment opportunities by involving students in finding and solving a variety of authentic business problems;
- ✓ Preparing students for further master's degree studies or others.

Learning objectives:

- ✓ Knowledge of business management functions and how business and management integrate with each other;
- ✓ Understanding the complexity, changing nature, ambiguity and other business challenges;
- ✓ Knowledge of contemporary issues in business management, including sustainability, globalization, corporate social responsibility, diversity and governance.
- ✓ Ability to work effectively both individually and in team with others;

The structure of the educational plan for the Business and Administration pilot study programme is presented in Figure 3.

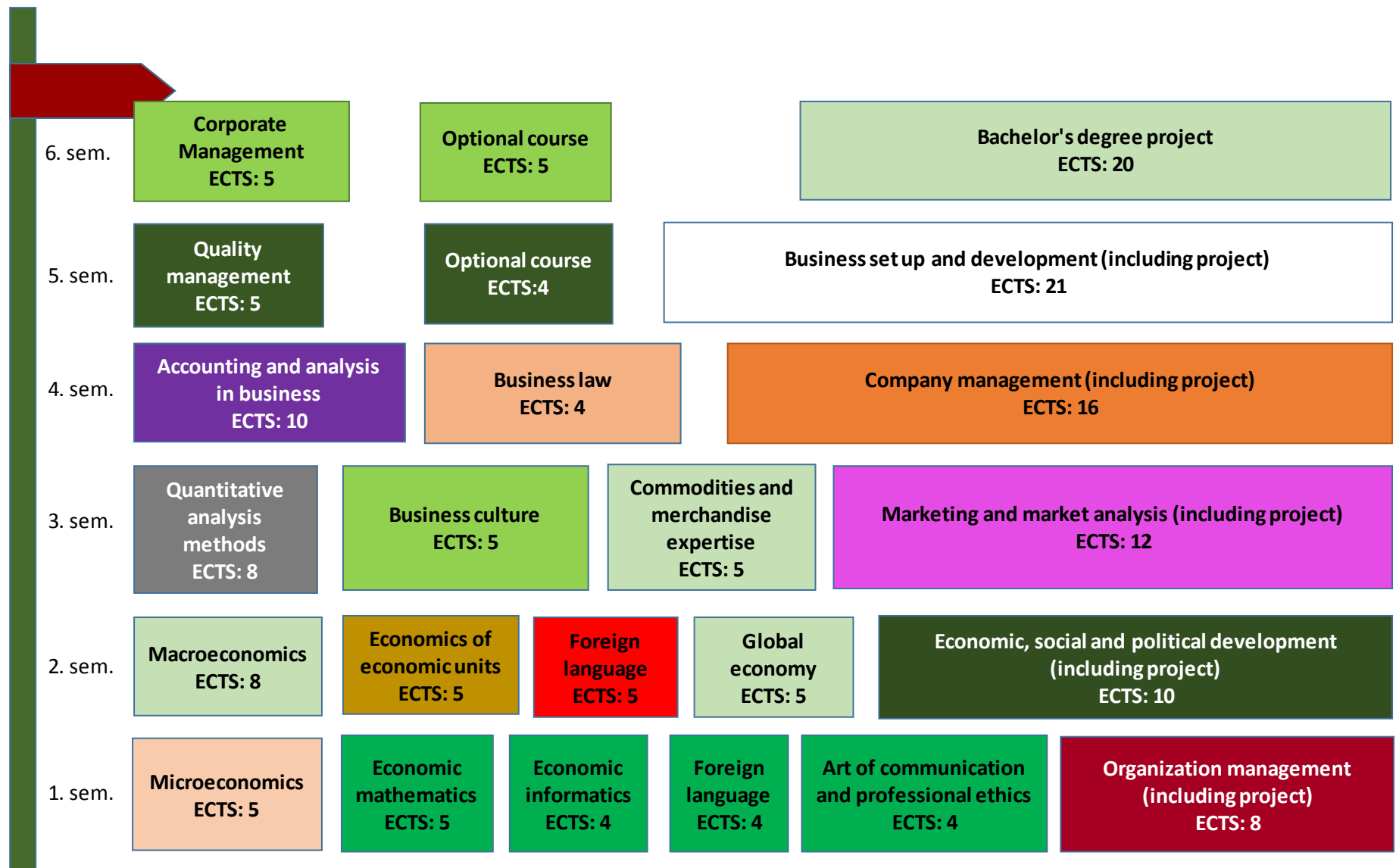


Figure 3. Outline of the educational plan of the Business and Administration pilot study programme

5.3 Description of the study programme

The Business and Administration pilot study programme lasts 6 semesters or 3 years of study. In each semester, students will be able to accumulate 30 study credits so at the end of the period they will get 180 ECTS. In each semester students will have both theoretical and practical courses where they will work in teams or individually in different projects.

We will analyze each semester individually:

Semester I

	Module	ECTS	Form of assessment
1.	Management of the organization	8	E+P
2.	Microeconomics	5	E
3.	Economic mathematics	5	E
4.	Economic informatics	4	E
5.	Foreign business language	4	E
6.	Art of communication and professional ethics	4	E
TOTAL		30	

In the first semester students will be able to accumulate the general and humanistic orientation component by attending economic mathematics, economics, business language, art of communication. We also think that these courses are important to students not only to comply with certain provisions of the Framework Plan (which we can not ignore), but also from the point of view of future specialized courses they will attend or to solve certain problems in the case of the development of certain projects.

Microeconomics is a fundamental course that allows students to get a good initiation into the economic science.

Management of the organization is a specialized course that will allow the initiation into the chosen specialty through the knowledge gained during the course, but also the development of the skills to work in a team, to highlight certain problems in the science of business management and to look, at an early stage, for certain solutions.

Semester II

	Module	ECTS	Form of assessment
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7.	Macroeconomics	5	E
8.	Economics of economic units	5	E
9.	Foreign business language	5	E
10.	World economy and European integration	5	E
11.	Economic, social and political development	10	E + P
	TOTAL	30	

Semester II contains modules of courses that enable students to advance in their knowledge of economic sciences (macroeconomics, economics of economic units), to gain experience in project development. The project in the second semester has a general character, does not refer directly to the specialty, but it contributes to the development of skills of critical thinking, analysis, synthesis, drawing conclusions based on the analyzed materials.

Semester III

	Module	ECTS	Form of assessment
12.	Quantitative analysis methods	8	E
13.	Marketing and market analysis	12	E + P
14.	Business culture	5	E
15.	Commodities and consumer goods expertise	5	E
	TOTAL	30	

In the third semester, the volume of work done by students in the project-based teams continues to grow. We considered that the knowledge that students would gain at this stage, along with the courses they attend in parallel, will allow them to conduct research on marketing and market analysis.

Semester IV

	Module	ECTS	Form of assessment
16.	Accounting and business analysis	10	E
17.	Company management	16	E + P

18.	Business law	4	E
	TOTAL	30	

In the fourth semester students will develop a complex business management project based on the knowledge and skills they have gained over the course. The project will allow analysis of all aspects of the company's activity, highlighting certain problems in its activity, looking for solutions. The company may be a real (preferentially) or a virtual one.

Semester V

	Module	ECTS	Form of assessment
19.	Business set up and development	21	E+P
20.	Quality management	5	E
21.	Optional course	4	E
	TOTAL	30	

In semester V students will have to develop a complex study that includes activities starting from the set up of the business (identifying the business idea, choosing the organizational form, developing the business, etc.). It is welcomed to undertake an internship at the company on which the research will be conducted. Also, several optional courses will be proposed from which the student will choose one.

Semester VI

	Module	ECTS	Form of assessment
22.	Corporate management	4	E
23.	Optional course	4	E
24.	Bachelor's degree project	22	E + P
	TOTAL	30	

Semester VI is the last semester of the Bachelor's degree study cycle. The Bachelor's degree project can be developed in a team of 2-3 persons or can be developed individually. The drafting of the Bachelor's degree project is obligatorily accompanied by an internship

within the organization. The theme of the project is very wide, which will allow the graduates to select the subject of the research, according to their wishes. The development of the Bachelor's degree project finishes with its public defence within a Committee. The Chairman of this Committee will necessarily be a person outside the AESM, preferably a person who is part of the top management of an organization.

Thus, undertaking the studies during the 6 semesters, according to the present plan, implies the accumulation of 91 study credits, following the attendance of theoretical courses, and the accumulation of 89 study credits, as a result of the realization and defence of the projects elaborated in the team. So the implementation of this pilot study programme will, in theory, allow us to reach the 50:50 ratio of lectures and teamwork. We are aware that even reaching this ratio this will not place us on the same level of the use and implementation of PBL, along with Aalborg University, where this model was initiated in 1972, and the experience currently used has been accumulated over the course of 45 years.

For each module included in the educational plan, a curriculum will be developed, specifying the number of hours, including direct contact and individual work, objectives, learning outcomes, module content, course structure, evaluation method, etc.

Students have all the necessary conditions to learn individually or to work in teams with their colleagues. There are enough study rooms endowed with the necessary equipment. Across the campus there is WI-FI connection. The AESM's scientific library is the richest in the Republic of Moldova in the economic books of the scholars from the country and abroad. The Library is also subscribed to a large number of databases to which students have access.

The most important but also vulnerable resource is the human resource, i.e. the teaching staff who will develop the content of the modules and who will work directly with the students. In this respect, we mention that AESM employs 375 full-time teaching staff and 53 part-time employees. 61% of full-time teaching staff in AESM hold the scientific title of doctor or doctor habilitate of science.

Under the project, 15 people, including 12 people up to now, have been trained or will benefit from academic mobility. Between 26 December and 30 December 2016, another 23 persons were trained in the **Problem-based learning - PBL** training, organized by the Ph.D. in Pedagogical Sciences, Sergiu Baci, Director of DSDCMC, a member of the project team.

People who will be work in the pilot study programme will be selected from among existing ones. Other trainings related to problem-based learning or other active learning methods for students will also be organized during the next period.

Having the plan mentioned as an implementation goal in the coming years, starting from the same objectives stated above, but also taking into account the impossibility of major derogations from the existing normative acts, for the students admitted to studies in 2017-2018 in the pilot groups, we propose the following educational plan, divided into semesters:

YEAR I OF STUDIES		SEMESTER I	
	Course / module	ECTS	Form of assessment
1.	Microeconomics	5	E
2.	Economic mathematics	5	E

3.	Economic informatics	5	E
4.	History of economic thought	5	E
5.	Art of communication and professional ethics (+ project)	5	E
6.	Foreign business language I (English)	5	E
7.	Physical education I	-	V
	TOTAL	30	

In the first semester, students' involvement in PBL will take place in the course of *Art of Communication and Professional Ethics*. The project will be evaluated with a grade, but it will not present a separate evaluation, it will form a part of the final grade in the chapter „Student's individual work”.

For the second semester, we plan the following:

YEAR I OF STUDIES		SEMESTER II	
	Course / module	ECTS	Form of assessment
8.	Macroeconomics	5	E
9.	Economy and management of the organization (+project)	10	2E
10.	Statistics	5	E
11.	World economy and European integration	5	E
12.	Foreign business language II (English)	5	E
13.	Physical education II	-	V
	TOTAL	30	

In the second semester we introduce the *Economy and management of the organization* module, in which a team project will be developed. It's an interdepartment module.

For the third semester we planned the following modules:

YEAR II OF STUDIES		SEMESTER III	
	Course / module	ECTS	Form of assessment
14.	Econometrics	5	E
15.	Business set up and development (+project)	8	2E
16.	General and business to business marketing	5	E

17.	Basis of accounting	4	E
18.	Commodities and consumer goods expertise	4	E
19.	Social and economic philosophy / Political science	4	E
	TOTAL	30	

In this semester, the *Business set up and development* module will be the one in which the PBL project will be developed.

YEAR II OF STUDIES		SEMESTER IV	
	Course / module	ECTS	Form of assessment
20.	Operations management / Annual project	16	4E
21.	Business law	4	E
22.	Business accounting	3	E
23.	Business financing	4	E
24.	Tourism economy / International tourism	3	E
	TOTAL	30	

In the fourth semester we created a complex *Operations management* module, which also includes an annual project, a team project that will be evaluated separately with a grade. Under this module, students will conduct an internship within companies, preferably production ones. The problems that will be debated in the projects will be determined by the students during the mentioned internship. The analysis, which will be carried out, based on concrete situations, identified by the students, will help in the elaboration of the bachelor's degree thesis.

YEAR III OF STUDIES		SEMESTER V	
	Course / module	ECTS	Form of assessment
25.	Company management (+project)	14	3E
26.	Human resources management	4	E
27.	Marketing researches	4	E
28.	Service management / Supply and sales management / Management information systems	4	E
29.	Logistics / Sales techniques	4	E
	TOTAL	30	

In semester V students will have to identify and solve some business problems within the *Company management* module, by developing a team project.

YEAR III OF STUDIES		SEMESTER VI	
	Course / module	ECTS	Form of assessment
30.	Corporate management	4	E

31.	Bachelor's degree internship and development of the Bachelor's degree thesis	22	E
32.	Comparative management / Innovative management	4	E
	<i>Bachelor's degree exam (elaboration and defence of the bachelor's degree thesis)</i>	10 <i>(included in p. 31)</i>	
	TOTAL semester	30	
	TOTAL per years	180	

In the last semester, students will develop the bachelor's degree thesis, having the option of working individually or in a team. We aim for students to identify problems in companies themselves when doing their Bachelor's degree internship.

Thus, in this variant, which is less revolutionary, we have taken into consideration and respected the provisions of the normative acts in the field: we have maintained the Physical Education course, not allocating it credits, we have left 2 internships: production internship (semester IV) and Bachelor's degree internship (semester VI), elaboration of a project with a separate grade, etc.

6. Roadmap

6.1 Introduction

The Roadmap is a consolidated list of measures, commitments and timelines for implementing actions to overcome the challenges identified in the pilot study programme for the implementation of Problem-Based Learning.

Its immediate purpose is to establish an institutional foundation to overcome certain barriers or certain threats to the implementation of the project in question.

As far as the implementation period is concerned, it must be taken into account that some new elements that will be implemented can be included in the existing regulatory framework, while others require some changes in the existing regulatory acts.

6.2 Fit-for-purpose

In order to implement the pilot study programme, mentioned in Chapter VI, a Roadmap was developed (Annex 4). This includes several necessary activities to be implemented at the institutional level in order to successfully implement the pilot study programme. The implementation of this Action Plan has already begun, with some activities being carried out, others having to be launched. We could formally divide these activities into several groups:

I. Activities related to the *elaboration* of the educational plan for the students who will study within the pilot study programme. When elaborating the plan, it was taken into account the experience seen and studied in the partner Universities of the European Union, the legislative and normative acts regulating the activity in higher education in the Republic of Moldova. Also, some proposals have been made to amend some of the provisions of the

normative acts in force, in order to be able to carry out the activity within the pilot study programme under the regulatory conditions.

II. Activities related to the *training of the teaching staff* with regard to the use of the PBL method. In this respect, some of the teachers who will have classes in the respective groups have participated in several trainings organized within the project at TUM or at AESM during 2016. Also, several teachers will benefit from academic mobility at partner Universities in the European Union, where they will be able to get acquainted with the method in question. Multiple trainings for teachers on problem-based learning, assessment of student activity, etc. will be organized within AESM.

III. Another group of activities refers to the *organization of the Admission 2017*. In this sense, information leaflets on the pilot study programme will be prepared, which will be sent to high school graduates during March-May, when AESM conducts an advertising company in high schools in the country. The information will also be made public on the AESM website. During the admission (July-August 2017), the people who will learn in the respective groups will be selected.

IV. *Elaboration of educational documents*: curricula on disciplines (analytical programmes / syllabi), guidelines, case studies, evaluation etc. (for the first year of study).

V. *Preparing the physical environment* for organizing studies. In this regard, we mentioned that the AESM is equipped with everything necessary, including study halls, literature, access to databases, free WI-FI for students and teachers, etc. Also, from the sources of the project with AESM co-financing, two student study rooms will be prepared for the team work of the students. The AESM library has been completed with books purchased under this project with reference to problem-based learning that everyone can read. Other purchases of books or subscriptions to certain databases will also be made.

VI. Activities related to *the dissemination of good practice*. In this regard, the AESM Economic Courier newspaper, in which we will publish regularly information on the implementation of this project (this is already done) will be used, the members of the project team will participate with communications at various conferences, workshops, will produce scientific articles to be published in scientific journals in the country.

VII. *Extending the project* to other specialties within AESM.

All of these activities will require some resources. The necessary financial resources will be covered by the project (mobility of teaching staff and students, procurement of equipment, etc.), with the support of AESM (organization of trainings with teachers, motivating them, refurbishment works, procurement of equipment, etc.).

6.3 Changing the content

The Roadmap presented in Annex 4 includes some activities required for implementation of problem-based learning within the Business and Administration pilot study programme. In fact, we can not include all the necessary changes in this action plan. As mentioned above, we started from the idea that we must maximally fall within the existing regulatory framework, which means that starting with September 1, 2017, we could start implementing this programme. At the same time, certain changes have been made, which can not be within the existing normative limits and which would require a favorable opinion from the Ministry of Education of the Republic of Moldova. In the table below, we highlight these moments:

Table 8. Regulatory provisions required to be amended

Article	Provision	Proposals
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Framework Plan for Higher Education, art. 9.	For one module, it is recommended to allocate 4-6 study credits.	To exclude the limitation
Framework Plan for Higher Education, art. 9.	In Cycles I and II , the course unit / discipline can be accomplished through class activity (direct contact): lectures, seminars, laboratory works, practical works, design works, didactic, clinical internships and other forms approved by the Senate; as well as non-classroom didactic activity : didactic-artistic or sports activities; <i>annual, bachelor, master's degree projects / theses</i> ; individual activities, social and community activities, other activities provided by institutional regulations.	To assign to the class didactic activity the supervision of the team activity of the students
Framework Plan for Higher Education, art. 28, e)	A Physical Education course for students of the first / second year, which is not quantified with credits, but whose assessment with the "admitted" grade is a prerequisite for admission to the graduation exam of the Bachelor's degree studies.	To exclude the Physical Education course.
Regulation on the organization of studies based on NSSC, art. 20	For the study programmes of 180 credits, an annual thesis shall be developed in the second year of study. For study programmes of 240 credits, an annual thesis shall be developed in the second and third year of studies.	To exclude the limitation to a single project

At the same time, the changes mentioned in the educational plan existing in the „Business and Administration” specialty also require the adaptation of the theoretical and practical courses to the new requirements. It is necessary to prepare case studies, to prepare some didactic materials, which would allow a better understanding of the essence of PBL use, the role of the teacher, the role of the student, which involves teamwork, the division of responsibilities, how the evaluation takes place, etc.

From the point of view of the necessary resources, we mention that the physical environment existing in EMSA is favorable to the implementation of this method. However, in the year 2017, 2 special rooms will be prepared for the teams to be able to work on the projects. Also, the number of halls, their endowment, the existence of WI-FI throughout the university campus, the rich library, the existence of a mediatheque with access to the database and others have been described in this Report. It is necessary to train the teachers and ensure their continuous improvement in the field of PBL use and to prepare methodological resources.

7. Concluding remarks

The competences of the 21st century require the implementation of training that allows students to apply the content of courses, actively participate in learning, use technology, and collaborate.

PBL is a student-centered training model based on research where the student engages with a genuine, poorly structured problem requiring more in-depth research¹⁰⁸. Students

¹⁰⁸ Jonassen, D. H., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2), 4.

identify the shortcomings in their knowledge, carry out research, and apply what they have learned to develop solutions and present their findings ¹⁰⁹. Through collaboration and research, students can cultivate problem solving ¹¹⁰, metacognitive skills, learning commitment, and intrinsic motivation.

The PBL model is based on *new perspectives in learning*:

1. Knowledge from research (analytical knowledge)
2. Knowledge based on experience (knowledge based on practice)

It is important to ensure the synergy between these two.

3. Creativity: Can be learned
4. The ability to learn increases with the level of knowledge (absorption capacity theory)

In the literature we consulted in the PBL field, we noticed an important risk for using PBL: despite the potential benefits of PBL, many teachers lack confidence or knowledge to use it ¹¹¹. So, the main emphasis we need to put on is to adequately train teachers and motivate them to use PBL.

¹⁰⁹ Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijsselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.

¹¹⁰ Norman, G. R., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine*, 67(9), 557-565.

¹¹¹ Ertmer, P. A., & Simons, K. D. (2006). Jumping the PBL implementation hurdle: Supporting the efforts of K–12 teachers. *Interdisciplinary Journal of Problem-based Learning*, 1(1), 5.

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Annexes

Annex 1. Template methodology

Each Task Force Team will store all collected data files in the project intranet <https://pblmd-moodle.samf.aau.dk/>. Task Force leaders are to make sure all data files and documents are stored in the project intranet.

1. Institutional fit-for-purpose

This part is concerned with exploring the relationship between internal university structures and study programmes, incl., how study programme development and support are integrated throughout the entire university. The cohesion of study programme development and support will be examined at university management, faculty/department, as well as the study board levels. Issues related to the integration of disadvantaged group of students as well as to available physical environment will be explored.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of how student-centred teaching and learning at EU partner universities is imbedded into and related to overall institutional structure and later to explore the same relationship, fit-for-purpose at own universities.

NOTE: the questions below are separated into 6 levels; there might be an overlap between the levels. It is important when asking a question to consider its relationship with other levels and impact it might have on other areas within and across the levels.

System level:

- Does the University have power/authority to accredit/validate its own degrees? If so go to section below.
- If not what is the external process?
- What is the legal status of the accrediting body? How is it composed? Does it publish a guide and criteria for accreditation? Is this publicly available? Ask for a copy and include an analysis of key elements in your report.
- Does accreditation happen periodically? Is there a fast track for new degrees/areas of study? How long does the normal process take? Is accreditation institutional or subject based?
- How is it regarded by stakeholders?
- Is there a national system of Quality Assurance? Is it independent of accreditation? What is the legal status of the QA body? How is it composed? Does it publish a code of practice? If so obtain a copy or access and include an analysis of key elements in your report.
- How does the national QA body influence curriculum development and internal quality assurance? How is it regarded by stakeholders?

- Are there national subject benchmarks or equivalent which programmes have to address?¹¹²
- Are there any relevant guidelines or benchmark statements provided by government agencies which constrain or otherwise affect the delivery of programmes? Explain whether these benchmarks refer to the content, delivery or assessment of the programme.
- Which professional bodies have some input into the validation or oversight of the programmes and how are these processes carried out?
- Which external validating agencies are involved in the design of the programmes and how is this achieved?
- What are the arrangements for dual awards or professional recognition?

University Management Level:

- What is the governance, management and organizational structure of the university?
- Is there a University institutional strategy which incorporates a curriculum strategy with a focus on student centred learning or is there a separate curriculum (learning and teaching) strategy? Is there an institutional commitment to innovative learning and teaching, greater use of ITC, a focus on employability, internationalisation of the curriculum? Language acquisition, inter-cultural skills? Obtain or access the documents and include an analysis in your report?
- What is the key university structure/committee responsible for student-centred teaching and learning? What are its terms of reference? What is its membership? How often does it meet? Are there provisions for fast tracking urgent curriculum development? What delegated powers does it have and to which body is it accountable? Does it produce regulations/good practice guides for curriculum proposals? What is the relationship of this body to Faculties/ Schools/ Departments / Colleges in the University?
- Is there a separate committee and/or office for internal quality assurance and enhancement? What are its responsibilities and how is it resourced (number and level of staff full/part-time, academic or administrative)?
- At what level in the University curriculum proposals can be initiated and possibly a definition of the various bodies to be sure that there is a consistent understanding of terms? If necessary, for each university create a Glossary of terms and respective provide definitions.
- What other bodies have an influence on curriculum development and approval e.g. Is there a requirement for a business case for all new programmes? Would the business case have to demonstrate how the proposal fits the University strategic plan? Which committee or senior manager needs to approve the business plan? Would service

¹¹² In the UK, and probably elsewhere, there are certain guidelines and constraints exercised from outside the HEI. These might be professional bodies (e.g. in the case of Law in England, where any qualifying Law degree has to be validated by the Law Society); government agencies (e.g. the subject benchmark statements provided by HEFCE); or other validating agencies (e.g. EDAMBA etc.). This can be significant because these agencies sometimes dictate the curriculum and the assessment style (e.g. insisting on exams).

departments such as e.g. Finance, Estates, Library, Careers, Legal, Ethical expect/require to be consulted?]

- What learning and teaching and assessment approaches are used at the university? What differences are there between and/or within different subject areas/faculties?
- Is there an institutional graduate school? Does it have responsibility for both second and third cycles? What are its terms of reference? How does it relate to other bodies responsible for curriculum approval? [You might want to develop this with more on Doctoral Schools/Programmes]
- What public/published information is available on all aspects of the University curriculum policy and content? Is this available on the web site with open access? The content should be reviewed as part of the benchmarking.
- Do descriptions of programmes and modules contain clear statements of intended learning outcomes? Learning methods, assessment and assessment criteria? Do programme descriptions indicate potential employment routes post-graduation? Who monitors/is responsible for ensuring this?
- Are academic staff required to have a formal 'teaching' qualification? If so what bodies offer/validate the qualification? What formal requirements are there for continuing staff development and training? How is this monitored and assessed? Which body in the University has responsibility for this? Is the University Human resource department engaged in academic staff training and development? What standards are followed in pedagogical training of academics? Are there national common guidelines, pedagogical standards/methodologies to be followed? What training courses are organized for staff teaching skills development?
- How are students represented at the university level? What role do students play in the governance, management, organisation of the University? Note: it is important to understand how the students are appointed/ nominated to the relevant bodies and how they report back to their constituency.
- What KPIs are typically used at university level in relation to resourcing teaching and learning (such as, SSRs (staff student ratio); spend per student on library resources; time allowances for teaching and assessment; average class size etc)?
- What is the role of the students' union in the student-centred teaching and learning?
- How is student-centred teaching and learning supported by the university's mission statement?
- How, if at all, is student-centred teaching and learning promoted throughout the university?
- What is the role of continuous professional development (CPD) in supporting student-centred teaching and learning?
- What financial or administrative support is provided at university level to support student-centred teaching and learning approaches? These might include funding for pedagogic research, curricular development projects etc. and might be provided through central funds or through specific research units with budgetary autonomy.
- What is the overall leadership structure at university level for academic programmes including teaching, learning and assessment?

Faculty/department level:

- What are the communication structures and relationships between the higher management level at the university and the level of faculty and/or department related to student-centred teaching and learning?
- What is the role of faculty and/or department in the new study programme development?
- How do faculty share and access examples of good practice within departments?

Study board level:

- What is the structure and relationship of a Board of Studies (or other level) with the department, faculty and research centres within department?
- Is there a procedure for inter-disciplinary or multi-disciplinary programmes? Does this require the establishment of unique committees/boards and how do these relate to the overall structure? Are there problems in establishing such degrees? What are the problems?
- In depth review of assessment practice: the use of innovative methods of assessment e.g. peer assessment, the role of formative and summative assessment, types of assessment, blind and double marking, monitoring of assessment to ensure that it is effective in relation to the achievement of learning outcomes, mark distribution analysis both within a subject and between other subjects (i.e. across the University) to ensure equity and comparability, use of external examiners, marking systems with a clear definition of criteria (Note: the integration of assessment into the process of student centred learning and its relationship with learning outcomes is critical).
- What is the process for (a) the approval of a new degree programme – is there any difference between first cycle, second cycle and third cycle? (b) the approval of a new module in an existing degree? What level of change, enhancement in a degree programme or a module requires full institutional approval? How long does the process take for each of these? Note: Understanding the approval cycle is important.
- What role do students play in curriculum planning and development? Is there a difference in their role between the cycles? Note: it is important to understand how the students are appointed/nominated to relevant bodies and how they report back to their constituency.
- What procedures (if different from above) exist for developing new study programmes?
- How is e-learning implemented and to what extent is it embedded within the programmes?
- How are staff members involved in managing and coordinating a particular study programme (programme coordinators, semester coordinators, supervisors)? How is this formalized?
- What is the process for annual monitoring and periodic review of programmes?
- Are there any performance indicators?
- What is the process for student feedback? How is this managed and what impact does it have? Does it result in feedback on outcomes to the students?

Integrating disadvantaged groups of students:

- Does the University have an office/staff dedicated for students with a disability? What are the responsibilities and resources of the office?
- What special arrangements are made for students with a disability (incl., according to UN Convention on the Rights of Persons with Disabilities)?
- What are the capacities of the university to work with students from disadvantaged backgrounds with regard to teaching approaches?
- What special approaches exist that are targeted at socially disadvantaged students?
- What approaches are followed for inclusion of students from non-academic backgrounds, if any?
- What academic support is available to students with learning disabilities?

Physical environment:

- Is the physical environment suitable/adapted for students with a physical disability? Is there a programme of adaptation for students with a physical disability?
- What student facilities exist that support student-centred teaching and learning: study group rooms, common rooms for students, extended university library opening hours, free wifi on campus, IT assistance for students

2. Study programme fit-for-purpose

This part is concerned with exploring a current study programme structure at each EU-partner University with the focus on operational, functional details, normative and technical details. The level of analysis is a particular study programme.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of structures, procedures and process related to the development and management of study programmes in EU partner universities as well as explore the same at their own university in respective pilot study programme.

Study programme level:

- To what extent does it reflect the institutional strategy? [See also above]
- To what extent does it reflect subject benchmark statements of the equivalent?
- Is it competence based?
- Does it focus on 'employability'?
- Is it subject to professional or regulatory accreditation (particularly important for Medicine but probably the case for other subjects)
- Does it emphasise innovation, research led learning, entrepreneurship, internationalisation?
- To what extent does it use IT and/or blended learning?
- What is the structure of the chosen programme? (workload, semesters, modules, student evaluations, staff evaluations, learning progression). It would be useful to determine whether this process applies to second cycle as well?

- How is the programme developed, enhanced and managed? What role do students play in the process? What role do employers play? Are other stakeholders consulted/engaged?
- Are former graduates/alumni consulted/engaged?
- What are the functions of the project coordinator, semester coordinator, teaching staff at the programme?
- What supporting documents exist in relation to the study programme? (course description, study regulations, guidelines, learning outcomes, evaluation guides). Are these publicly available?
- What are the existing programme regulations and who is responsible for ensuring that they are followed?
- How are the programme structure and content monitored, reviewed, enhanced and implemented?
- How is staff workload calculated and monitored? How is the norm for allocation of hours (academic staff related) for various types of activities (teaching, supervision, evaluation) calculated (ECTS, formula, or historical)?
- How is student workload calculated and monitored and how does this help to shape curriculum planning and development?
- What are the expected learning outcomes? How are the learning outcomes reflected in the assessments? How are the learning outcomes communicated to the students and how are they assessed?
- How is the student evaluation/assessment conducted? What forms of evaluation are practiced? (Written exams/open questions, multiple choice tests, oral exams, project presentations. Are there innovative forms of assessment e.g. peer assessment, IT based?)
- What are the progression requirements?
- What measures are taken to avoid and sanction 'cheating' and plagiarism? How are these recorded and evaluated?
- What are provisions for student appeals?
- What is the existing system of grading? What are the arrangements for credit transfer and accreditation of prior learning?
- What is the role of the external examiner?
- How is student-mobility embedded in the programme structure and how it is facilitated?
- How is the staff evaluation/feedback conducted by the students? How are the outcomes of feedback managed?
- What are the academic requirements for students to enter the programme?
- How do students contribute to the curriculum development?
- How are the programmes supported by administrators and what responsibilities do administrators have in directly supporting students? (e.g., answering enquiries; administration of assessments; managing academics' diaries etc.).
- Is the employment of graduates monitored? If so how and over what period?
- Which software, e-learning (e.g. Moodle, MOOC's, Knowledge Apps, moderated forums), how it is used, what checks there are for plagiarism.

	<p>2015</p> <p>Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning</p> <p>www.anacip.md - the website of the National Agency for Quality Assurance in Professional Education (ANACIP)</p> <p>www.edu.gov.md - Ministry of Education's website</p>		
<p>L2: University management level</p> <p><i>Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning</i></p> <p><i>Quality assurance bodies at university</i></p>	<p>Strategic Development Plan of the Academy of Economic Studies of Moldova for 2012-2017, PP.8-9, available at http://ase.md/files/documente/regulamente/intern_e/1.2_plan_strategic.pdf</p> <p>The concept of quality assurance system in AESM, available at http://ase.md/files/documente/regulamente/int</p>	<p>The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education” is dedicated to this topic.</p> <p>In the AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose”</p> <p>In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is</p>	

<p>level</p>	<p>erne/1.3_conceptul_calitatii.pdf</p>	<p>established, which has an advisory role in substantiating the decisions regarding AESM's quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes.</p> <p>In order to implement the quality policy and objectives in AESM, there is the Department of Studies, Curricular Development and Quality Management of AESM headed by a director.</p>	
<p>L3: Faculty / Department level</p> <p><i>The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning</i></p>	<p>Statute of the Public Institution Academy of Economic Studies of Moldova, DS no. 03 of 24 December 2012</p> <p>Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies), implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015</p> <p>The concept of quality assurance system in AESM, DS no. 4 of 31 October 2007, art. 5.3</p>	<p>Faculties and chairs / departments are important components of the AESM's internal structure. The initiative to create a new study programme, as a rule, comes from teacher or group of people who forms the programme team.</p> <p>The initiator of a new study programme (any academic or interested group within the faculty / department). The head of of the chair / department appoints a working group that established disciplines in the educational and the list of teachers competent in the field to be discussed in the faculty council. After programme endorsement at the faculty council, the programme documents are submitted for approval to the Senate and the Institutional and Strategic Development Council.</p>	

	Regulation on the operation of the methodical-scientific council of AESM and the methodological committee of the faculty, DS no.4 of 27 October 2010		
<p>L4: Level of the Council of Studies</p> <p><i>Structure of the body responsible for studies</i></p> <p><i>Analysis of the evaluation practice</i></p> <p><i>The way to develop a new study programme</i></p>	<p>Regulation on the operation of the Department of Studies, Curricular Development and Quality Management; DS of 29.06.2016</p> <p>Regulation on the assessment of students' learning activity, DS 6 of 14 March 2012</p> <p>The Education Code of the Republic of Moldova. Code no.152 of 17.07.2014, published in the Official Gazette no.319-324 of 24.10.2014</p>	<p>The body responsible for organizing the studies is AESM is the Department of Studies, Curriculum Development and Quality Management, which works with chairs / departments to develop educational plans, syllabi of the disciplines.</p> <p>The assessment has a continuous character and includes the current assessment (during the practical classes), the evaluation through test (2 times per semester), the final evaluation (at the end of the course, during the session). Examination is done in writing, orally or computer-aided. There can be test with variants for the answer, case scenarios, tests etc.</p> <p>For Cycle I, Bachelor's degree studies, it is very complicated. At the chair / department level, a working team is formed, who develops the educational plan, arguing the need to initiate such a study programme. Internally, it must be approved at the meeting of the faculty, faculty council, and Senate. If this study programme exists in the nomenclature of specialties, than it is necessary to obtain provisional authorization from ANACIP. If this study programme is absolutely new, it is necessary to enter this programme into the</p>	

		Nomenclature of Specialties. This is done by Government Decision.	
L5: Integration of disadvantaged students	Regulation on the conditions for filling places with budget financing in AESM, at Cycle I, Bachelor's degree studies, DS 10 of February 26, 2014	The AESM's strategy provides for the creation of a favorable learning environment for all students. The university does not have a dedicated office for students with disabilities.	
L6: Infrastructure (physical environment)	www.ase.md - webpage of the AESM http://lib.ase.md/ - webpage of the Scientific Library of AESM AESM's informatization strategy for 2010-2015, DS 4/1 of 24 December 2009	AESM's infrastructure corresponds to the tasks of the university and contributes to the good development of the teaching-learning process.	The study rooms are equipped with technical means for training, there are rooms for team work.
L7: Study programme level Structure of the study programme	The educational plan. Specialty: 363.1. Business and administration http://ase.md/admitere/ciclul-1-licenta.html#facultatea-business-%C5%9Fi-administrarea-afacerilor National Qualifications Framework: Higher Education ... Regulation on the development in team of the bachelor's / master's degree thesis, DS no. 3 of	<p>The study programme consists of 6 semesters, each semester equals 30 ECTS, one ECTS is equivalent to 30 hours of student work. The ratio between theoretical hours and projects is 48% to 52%.</p> <p>The study programme finishes with the elaboration and defence of the bachelor's degree thesis, which can be developed individually or in a team of 2 or 3 students.</p>	

<p>Student's workload</p>	<p>December 24, 2014</p> <p>Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies), implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015</p> <p>The educational plan. Specialty: 363.1. Business and administration</p>	<p>The workload is calculated in transferable credits. 1 ECTS equals 30 hours of work per student.</p>	
<p>Student assessment</p>	<p>Regulation on the assessment of students' learning activity, DS 6 of 14 March 2012</p> <p>Regulation on academic mobility in AESM, DS 4 of 2 March 2016</p>	<p>Depending on the learning outcomes and skills to be acquired by the student, assessment during the course can be done by: tests, reports, individual papers, portfolios, essays, case studies, annual project, etc. Innovative evaluation forms are also used (evaluation by MOODLE platform).</p> <p>All disciplines included in the Business and Administration study programme are completed with exams, except for Physical Education that completes with the test: verification.</p> <p>During the semester, two sessions of the current</p>	

<p><i>Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme</i></p>	<p>Framework Plan for higher education (cycle I – Bachelor’s degree studies, cycle II – Master’s degree studies, integrated studies, cycle III – Doctoral degree studies), implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015</p>	<p>assessment (tests) are organized, proportionally distributed during the semester, in which the intermediate status of the student’s progress is determined. The test’s share is 15% of the final grade. Also in the final grade is included in the individual study with 10%, current success - 20% and final test - 40%.</p> <p>Many actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates.</p>
<p><i>Avoiding and punishing cheating and plagiarism</i></p>	<p>The Code of Ethics of the Academy of Economic Studies of Moldova, DS no. 7 of 21 February 2007</p> <p>Regulation on the prevention of plagiarism among students / master’s degree students, DS no. 5 February 27, 2013</p>	<p>In AESM, each graduate is required to submit the thesis, in electronic format, in the AESM’s Repository (anti-plagiarism system) for the verification of the degree of plagiarism.</p> <p>If after the examination of the case by the Jury the fact of plagiarism has been proved, by the clear proof of the plagiarism with the indication of the text copied, including those on the Internet, the thesis is not admitted for the defence.</p>
<p><i>Student appeals</i></p>	<p>Regulation on the organization of studies in AESM based on the national study credit system, DS 3 of 23 December 2015</p>	<p>Students may challenge the examiner’s grade within 24 hours of its announcement.</p>

<p><i>The current grading system</i></p>	<p>Regulation on the organization of the Bachelor’s degree completion examination in AESM, DS 3 of December 24, 2014</p> <p>Regulation on the organization of studies in higher education based on the national study credit system, Order of the Ministry of Education no. 1046 of October 29, 2015</p> <p>The Education Code of the Republic of Moldova, no. 152 of July 17, 2014</p> <p>Regulation on the organization of studies in higher education based on the national study credit system, Order of the Ministry of Education no. 1046 of October 29, 2015</p> <p>Regulation on the organization of studies in AESM based on the national study credit system, DS 3 of 23 December 2015</p>	<p>The assessment of the learning outcomes is done with grades from „10” to „1”. In addition to the national grading system, the grading scale recommended in the European Credit Transfer System (A, B, C, D, E, FX, F) is also used to complement the diploma supplement and facilitate academic mobility. Equating with the national grading scale is done as follows:</p> <p>A: 9,01–10,0; B: 8,01–9,0; C: 7,01–8,0; D: 6,01–7,0; E: 5,0–6,0; FX: 3,01–4,99; F: 1,0–3,0.</p>	
<p>Role of the external examiner</p>	<p>Regulation on the organization of the Bachelor’s degree completion examination in AESM, DS 3 of December 24, 2014</p>	<p>External examiners are required in the case of the completion exam of the higher education. They are appointed as Chairmen of the Bachelor’s degree Examination Committees by order of the Minister of</p>	

Employability of graduates	<p>Regulation on the monitoring of the employability and professional path of AESM graduates, DS no.3 of 2 November 2016</p>	<p>Education, on the basis of AESM's proposals. The same person may be appointed Chairman of a Bachelor's degree Examination Committee no more than two consecutive years.</p> <p>Study programmes are committed to employability. Graduates, employers are consulted when developing study programmes, analytical programmes.</p> <p>In AESM, the Bachelor's degree theses is developed on the basis of the enterprises where the students have performed their internships.</p> <p>AESM has institutional procedures for tracking the employment and professional development of graduates, which are carried out by the Career Guidance Center.</p>	
L8: Pedagogical training level	<p>The Education Code of the Republic of Moldova. Code no.152 of 17.07.2014, published in the Official Gazette no.319-324 of 24.10.2014</p>	<p>The psycho-pedagogical module of 60 transferable credits is mandatory for graduates of non-pedagogical specialties.</p>	

Annex 3. The pedagogical training course: „Problem-based learning – PBL”

PROBLEM-BASED LEARNING - PBL (40 HOURS)

Trainer: **Baciu Sergiu**, PhD, associate professor, AESM + ...

The course focuses on the development of a proactive personality and has as a major objective the training of the beneficiaries, in a pleasant and productive educational environment, **the competence to apply PBL to provide a *student-centered, research-based education and is focused on training professional competences***.

1. The learning outcomes. In this training offer / course, emphasis is placed on training pedagogical competencies in the beneficiaries, by developing skills and attitudes based on relevant psycho-pedagogical knowledge, with the aim of establishing a *pedagogical performance oriented behaviour*.

Upon completion of the course, the beneficiary will be able to:

- 1) build PBL-based teaching sequences / scenarios;
- 2) apply relevant PBL educational technologies (case study, project);
- 3) develop a curriculum for professional training based on PBL.

The outcomes will be achieved by capitalizing on the content of the course units, but also through the appropriate use of the teaching-learning-evaluation activities.

2. Content. The contents are organized in a trans-disciplinary way, in order to focus in the educational process not on the scientific content, but on solving problems in the professional field. Teaching staff will attend the following modules:

- Module A. Problem-based learning. What is and how PBL can be *applied* in professional education?
- Module B. Designing the curricular offer for professional training. How can we design and organize the taught content to provide a *student-centered, research-based and work-based training*?
- Module C. PBL specific teaching - learning – evaluation methods. How can we use *active learning methods* to create an environment that encourages students to work together and to be self-motivated to solve a problem.

3. Teaching and learning methods. Activities will be focused on learning through discovery. They will be specifically combined for different situation methods and procedures such as: problem-solving, case study, role play, heuristic conversation, debates, brainstorming, investigation, project, multiple-angle exploration, panel discussion, argumentation and counter argumentation, independent academic learning, etc.

4. Evaluation methods. The *participatory evaluation* will be used in the training process.

The final evaluation will be done on the basis of teamwork and oral / written presentation of a method of application (case study, project) of PBL in didactic activity.

Period: 26-30 December 2016. Classes will start at 9.00, room 405 bl. A.

Annex 4. Roadmap for the implementation of the Business and Administration pilot study-programme

	Implementation actions	Responsible person	Implementation deadline	Resources
1.	Assessment of the necessity and opportunity of elaboration / modification of the study programme and initiation of the elaboration process.	Cotelnic A.	December 2015	RF: within the approved budget limits HR: dean, head of the Chair / Department of Management, academic staff
2.	Setting up the Working Group and designating the person responsible for drafting / modifying the study programme	Cotelnic A.	December 2016	HR: Academic staff
3.	Assessing the economic and social sector's expectations regarding the competences to be trained under the study programme	Cotelnic A.	January - March 2016	Real sector partners
4.	Analysis of similar national, European and international study programmes	Cotelnic A. Gaugaş T. Țîmbaliuc N.	January - June 2016	RF: within the approved budget limits HR: Academic staff
5.	Evaluating the necessary and existing resources	Cotelnic A. Solcan A.	<i>September 2016</i>	HR: Academic staff
6.	Developing the study programme. Discussion within the Working Group	Cotelnic A. Solcan A.	September - October 2016	HR: Academic staff

7.	Training of the teaching staff for working within the pilot study programme	Cotelnic A. Baciu S.	Mobility, February 2017	RF: within the approved budget limits HR: External Relations Service, Academic Staff, Partner universities
8.	Adjustment of the educational plan according to the Ministry of Education's response	Cotelnic A.	April 2017	
9.	Approval of the modified plan at the meeting of BAA faculty council and the AESM Senate	Cotelnic A. Solcan A.	April-May 2017	
10.	Adjustment of academic curricula to PBL requirements	The teachers involved Solcan A.	April - June 2017	
11.	Developing professional training approaches according to the PBL educational strategy (application of didactic methods: problem-solving, case study, project, group work, etc.)	The teachers involved	June - August 2017	RF: within the approved budget limits HR: Department of Studies, Curriculum Development and Quality Management; academic staff; AESM's Scientific Library
12.	Campaign to promote the study programme: <ul style="list-style-type: none"> - production of advertising leaflets; - visits to high schools, - sites: www.ase.md, www.studentie.md etc. 	The person responsible for the study programme	February - May 2017	RF: within the approved budget limits HR: Academic staff, the marketing and public relations service of

				EASM, Students Senate
13.	Experimental elaboration and validation of the pedagogical training programme: „ Problem-based learning – PBL ”	Baciu S.	November 2016 - January 2017	
14.	Preparation of two study rooms for team work	Melnic I., Vice-rector for administration and management issues	July - August 2017	RF: within the approved budget limits HR: Technical Service
15.	Organization of admission. Creation of 2 academic groups who will learn according to the pilot study programme	Cotelnic A.	July-August 2017	RF: within the approved budget limits HR: AESM’s Admissions Commission
16.	Initiating the pilot study programme	Cotelnic A.	September 1, 2017	
17.	Deployment of the study programme	The person responsible for the study programme; The teachers involved	September 2017 - June 2020	RF: within the approved budget limits HR: Academic staff
18.	Elaboration of educational documents: curricula on subjects (analytical programmes), guidelines, case studies, evaluation etc. (for the years II and III of studies)	The person responsible for the study programme; The teachers involved	September 2017 - June 2018	RF: within the approved budget limits RU: Department of Studies, Curriculum Development and Quality Management; academic staff; AESM’s Scientific Library
19.	Implementation of the educational plan for all Business and Administration groups	Cotelnic A. Solcan A.	September 2018	

20.	Developing the necessary documents for the selection of students for mobility	The person responsible for the study programme	October - November 2018	HR: External Relations Service
21.	Student selection for mobility	The person responsible for the study programme	February - March 2018	HR: External Relations Service, BAA Dean's Office
22.	Student mobility	Cotelnic A.	September - December 2018	RF: within the approved budget limits HR: External Relations Service, 30 students Partner universities
23.	Monitoring and improvement of the pilot study programme: undertaking corrective and preventive actions	Cotelnic A. Solcan A. Baciu S.	During the study year 2017-2018	
24.	Extending the pilot study programme to other study programmes	Cotelnic A.	September 2019	RF: within the approved budget limits RU: decani, HR: deans, heads of chairs / departments, academic staff

