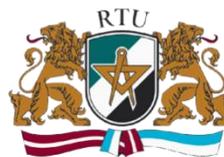


 Innovate Strategic Partnership  
for European Higher Education

# ISPEHE

## Integrated Pilot Model for Fostering an Innovation Driven Culture and Learning Efficiency at HEIs

### Participating organizations



Univerza v Ljubljani



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Date	<b>31/12/2015</b>
Authors	<b>Aneta Vasiljevic Sikaleska, IBI Zanina Kirovska, IBI Biljana Gjozinska, IBI Martin Stojanovik, IBI Martin Kiselicki, IBI Zane Vaidenberga, EKA Jelena Titko, EKA Jelena Bundiceva, EKA Jekaterina Bierne, EKA Edgars Cerkovic, EKA Massimo Bianchi, UNIPV Piero Mella, UNIPV</b>

	<b>Maria Chiara Demartini, UNIPV</b> <b>Deniss Sceulovs, RTU</b> <b>Mikus Dubickis, RTU</b> <b>Manica Danco, FAUL</b> <b>Primoz Pevcin, FAUL</b> <b>Sabina Bogilovic, FAUL</b>
Revised	<b>All partners</b>
Contributors	<b>All partners</b>
Approved by	<b>Project Coordinator</b>

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## **I. Innovative Strategic Partnership for European Higher Education (ISPEHE): Project Summary**

The overall objective of the project is to support the development of an innovative pathway by improving long-term strategic collaboration between Higher Education Institutions (hereinafter referred to as HEIs) and enterprises, and enhancing the development of sustainable learning advancements in HEIs.

The specific objectives of the project are:

- To support and implement models for effective and practical learning, through raising the awareness for an innovation driven culture: establishing educational best practices dedicated to the improvement of the current learning methods in the partnering institutions, fostering innovation, creativity, business and leadership skills;
- To establish a foundation for promoting innovation and various career paths among prospective students: developing a collaborative link among stakeholders dedicated at increasing mutual linkages on all operational levels, focusing on the enhancement of intrapreneurship;
- To develop a cutting-edge technology platform: designing an innovative solution dedicated to merging all stakeholders and creating various opportunities for sharing experiences, joint collaborative efforts and added value to all interested parties.

This document is prepared as part of the activity for establishing Strategic Integrated Learning Modules, aligned with the first specific objective, as the final (third) phase of its implementation. The realization of this activity was conducted in three phases: creating a Questionnaire and identifying appropriate target groups; collecting data and preparing the SILM Needs Assessment Analysis; preparing the Integrated Pilot Model for Fostering an Innovation Driven Culture and Learning Efficiency at HEIs (hereinafter Pilot Model). Additionally project team members involved in the preparation of this document attended a one-week Intensive Study Visit at the premises of the University of Pavia (UNIPV).

The project “Innovative strategic partnership for European higher education” (ISPEHE) is financed and supported by the European Commission, Erasmus + Programme, Key Action 2 – Strategic Partnership. It is implemented jointly by five partnering institutions, namely: Integrated Business Institute in Skopje as project coordinator, and University of Pavia, University of Ljubljana, Ekonomikasunkultūrasaugstskola, Riga and Technical University of Riga as partners. The implementation started on 1<sup>st</sup> January 2015, and it is expected to be realized by 31<sup>st</sup> December 2016.

## **II. Integrated Pilot Model for Fostering an Innovation Driven Culture and Learning Efficiency at HEIs: Rationale and Methodology**

The main aim of the Pilot Model is to support the efforts at the European level, to promote standardized curricula and courses, as well as to develop an array of learning, teaching and assessment methods, in order to strengthen and optimize the efficiency of attaining the predetermined course outcomes. The Pilot Model presents the cumulative effort of the project team, over a six-month period, for identifying, analyzing and presenting the most effective methods, aligned with the main directives and strategic documents related to the field at the European level, and the national priorities in the strategies in each of the institutions of the partnering countries. The Pilot Model is established in an environment of dynamic economic and political conditions at the European level, and it should serve as a foundation and an instigator for similar actions. The results and recommendations of the Pilot Model will be evaluated, and the version will be modified after the testing period has been completed.

The Integrated Pilot Model is created as part of the activity for Strategic Integration of Learning Modules, a joint endeavor undertaken and equally supported through its implementation by all partnering institutions. The main aim of this activity is to provide an initial attempt in strengthening and integrating the learning modules in each of the partnering institutions, particularly in the fields of business and management and entrepreneurship. Once the most efficient methods are selected and implemented, an evaluation phase will provide specific clues as to which learning, teaching and assessment methods yielded the greatest benefits to the learning process. These will be further on supported as a final addition for completing this document. The creation of this document had several preceding activities that occurred in order to establish the foundation and background for the content presented. In the initial phase of the activity, the members of each partnering institution were gathering data and information that was useful to the implementation of this activity. This information consisted of both theoretical and practical research on the learning, teaching and assessment methods used in their institutions, the EU and worldwide, papers and researches on proposed optimal methods, national and EU legislation and strategic documents, as well as collecting student opinions and access to previous evaluations conducted in each institution. In the initial stage of constructing the Integrated Pilot Model, a Needs Assessment Analysis was required, in order to have a theoretical foundation as the basis for collecting reliable data, analyzing results and obtaining conclusions as well as providing recommendations. A questionnaire was prepared and valid significant student samples from each institution and particular courses were selected. An event in EKA (Riga) in the midst of the realization of the Needs Assessment Analysis served as a means for addressing issues, and synchronizing the opinions among the partnering institutions. Once all details were arranged, the questionnaires were successfully collected, and the Needs Assessment Analysis (hereinafter Analysis) was prepared. Its main points, which are of crucial importance to this document, are presented in the next section. As soon as relevant information was extracted, concerning the improvement areas in the curricula and education process of each institution, an Intensive Capacity Building Event at the premises of the University of Pavia was organized, where team members from each institution addressed the key areas of the Analysis. This document serves as the pinnacle of this 9 month effort to identify gaps, improve existing, and propose new teaching, learning and assessment methods that would optimize the education process. The proposed methods will be evaluated in a selected course in each institution, for the following semester. The evaluations will be conducted in a descriptive form, as we account for two factors: freedom of each professor to select and implement some of the methods accordingly, and the correlation between the

details and specificities and the effect from the implementation of each method. Once results from this evaluation process are obtained, and the testing period has passed, final recommendation will be provided as to which methods had the best effects, and in what way were they implemented.

The Integrated Pilot Model has the aim of presenting a wide array of learning, teaching and assessment methods, which were identified in the SILM Needs Assessment Analysis, and widely used at HEIs in the EU, and other distinguished institutions across the world. The methods presented in the document, are defined in broad terms, due to the limitations in their implementation in each partnering institution, and the various specificities of the courses on which these methods will be implemented. Defining the specific framework in which each method is to be implemented, might create further issues in the implementation of the Pilot Model. Since creating a standardized curriculum is beyond the scope of the project and the means and capacities of the consortium members, the document narrowly addresses courses in each partnering institution in the fields of Business and Management. These methods are further to be selected, and implemented in each institution for one semester, on a particular course from the aforementioned fields. The course was carefully handpicked from an array of various courses from each partnering institution and presented further on in the last section of this document. In selecting the courses, several factors were important, elaborated more extensively further on in the document: course and professor availability, semester of active teaching of the course, course material, learning and teaching outcomes, student participation and year of teaching. The specific characteristics of implementing the particular method are left to be presented in details by each professor. The implementation of each method will be recorded and presented in the descriptive evaluations and questionnaires that professors and students will fulfill throughout the regular course classes and exercises. The relevant data concerning the progress of the course and the effectiveness of the combination of the methods will be collected and analyzed. Once valid results are obtained from the implementation of the learning, teaching and assessment methods for each course, they will be presented, together with concluding remarks as to which methods, implemented in a particular manner proved most effective.

The complexity and sensitivity in the preparation and creation of this document, demands addressing of several issues that rendered the research process challenging at times. These issues are presented with the accompanying measures undertaken by the team members responsible for preparing this document. This paragraph is presented in order to serve as a means for strengthening and improving future researching endeavors in this field. One issue that the team had to address was the diversity of the programs and courses offered in each institution, and the varying schedules as to the realization of the courses in each institution. In order to minimize the effect of this issue, the research team members identified the importance of the relation between the course objectives and the learning, teaching and assessment methods and proposed courses which have similar objectives. Additional issue is the varying nature of national strategic documents and legislations concerning the educational process, as well as the dynamic nature of the process. The main issue was the researching process, preparing the appropriate content of the questionnaire and addressing the appropriate target group, while taking into consideration cultural and educational diversities. In order to address these issues, the sampling process was founded on theoretical statistical sampling procedures and the questionnaire was prepared based on theoretical foundations and similar researches conducted prior to the actual one.

The document is structured as follows: Section I presents the project summary, Section II provides an insight to the creating and prior efforts leading to this document, Section III presents the key points and recommendations from the Needs Assessment Analysis. Section IV provides the EU framework of the Strategic Integration of Learning Modules (SILM), while Section V presents the learning, teaching and assessment methods. Section VI identifies the course selected for implementing the identified methods.

### III. SILM Needs Assessment Analysis: Key Points and a List of Recommendations

#### SILM Needs Assessment Analysis: Key Points

The SILM Needs Assessment Analysis (hereinafter Analysis) is the major backbone for preparing the Integrated Pilot Model for Fostering an Innovation Driven Culture and Learning Efficiency at HEIs (hereinafter Pilot Model). The objectives of the Analysis are aligned with the specific objectives of SILM, and support their accomplishment:

- Identify the factual situation in each of the partnering HEIs
- Provide assistance for making needed decisions related to establishing optimal learning models and best practices
- Obtaining a participatory approach in constructing SILM from relevant stakeholders

In order to establish a joint contemporary educational practices and produce a long-term strategic learning model based on the existing curricula in the project partnering institutions: Integrated Business Institute (IBI), University of Economics and Culture (EKA), University of Pavia (UNIPV), Riga Technical University (RTU) and University of Ljubljana, Faculty of Administration (FAUL), two types of questionnaires (for students and teachers) were mutually prepared by the teams of all partners. The Questionnaire for students/teachers consisted of 12/11 questions, most of which were with multiple-choice answers. The purpose of the survey was to collect information about a) the learning practices applied in partnering institutions; b) which common teaching and assessment methods are used and which one are specific, unique and more creative in all 5 partnering institutions; and c) what are the opinions of both, students and teaching staff, about such methods.

The questionnaire for the Analysis was conducted on first, second and third year undergraduate students studying in the field of business and business administration (in particular: entrepreneurship, management and business administration), and on teaching staff involved in preparing and teaching courses in these fields.

For determining the sample size, the method for finite populations, using the Finite Population Correction (FPC) factor for systematic random samples when the standard deviation is not known will be used for both populations. A total of 376 students and 59 teachers were surveyed.

The following section presents the key points and recommendations extracted from the document<sup>1</sup>.

- Respective students and professors have similar opinions concerning the utilization and ratings of the presented teaching methods in each individual institution: exercise classes and seminars were most abundant and best rated, while problem based learning and distance learning were virtually nonexistent and deemed not important. The explanation of the homogeneity of the answers can be related either to the effectiveness and importance of the presented teaching methods, or to the limited number of alternatives offered in the questionnaire.

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<sup>1</sup>This section provides a list of the key points obtained from the SILM Needs Assessment Analysis. A detailed elaboration of these segments is presented in the aforementioned document.

- Concerning the teaching techniques used in and outside of the lecture format, valuable information can be extracting from the Analysis. According to the data obtained, the results between both groups (teachers and students) coincide: student presentations were the most widely used technique in class, while role-play and quizzes very rarely. A similar correlation in the opinions of both groups can be found when presenting the types of teaching techniques used outside of the class: teamwork, group discussions and individual projects are most widely used, while field trips, peer mentoring and writing media articles are considered least utilized. The variety in teaching techniques used offers a build-up of different skills which aid the development of students' capacities.
- A large number of the students (90%) have positively aligned their expectations from the learning process with the actual outcomes. Additional recommendations to improve the learning process further, in students' opinions are mainly in the area of students' involvement (in particular case studies, study visits and analysis of practical cases). Concerning the issue of the occurrence of various activities during the lectures, the students and professors answers were aligned: group work and project work were identified as happening often throughout the lectures, while company visits were identified as rarely occurring. This might be due to the difficulty of obtaining permission and the process of selecting a suitable company for visiting. This response should in no way signify that this activity is insufficiently present during the lectures, since 1-2 company visits per semester are deemed as sufficient.
- Respective students and professors from each institution identified the main areas in which students should be altered to improve in order to obtain the optimal effectiveness from the teaching methods previously identified. The obtained results point to identical opinions, mainly teamwork, generating and applying new ideas, time planning and management are considered crucial areas for improvement, while communication with non-experts is deemed unimportant. Suggestions for bridging the gap range from greater student activity in the creation of the lectures, internships, to teamwork and greater utilization of business simulation. Suggestions for optimizing the effectiveness of learning methods used, span from tutoring and course demonstrators, to project work and a greater number of case studies and practical examples.
- Concerning the assessment methods used, surprising differences arose. Mainly, students identified essay and multiple choice questions as most widely used, while professors identified oral examination as the most widely used assessment method. The disparity in the response is ambiguous. Both groups identified open book examinations as being least used. Suggestions, concerning broadening the assessment methods, are mainly focused on introducing peer evaluation and grading lecture participation and activity of students as well.

## **SILM Needs Assessment Analysis: List of Recommendations**

The data obtained from the Analysis provides valuable information concerning gaps identified in the utilization of teaching, learning and assessment methods used, and their effectiveness. Despite the limited format of the questionnaire, and the complexity and magnitude of the researching process, valid conclusions were extracted. These conclusions provide a foundation on which valuable recommendations are proposed<sup>2</sup>:

Recommendation: Greater utilization of problem based learning, case studies and business simulations.

Recommendation: Greater involvement of students during the lectures, particularly by making presentations concerning topics related to the respective course, or participating in the design of the lectures.

Recommendation: Peer mentoring, tutoring, and student demonstrators can help students' present ideas in a more comprehensible manner and they can be a helpful alternative to the traditional lecturing format.

Recommendation: Offer planning and time management guidance to students in order to extract the most out of the curriculum and the teaching, learning and assessment methods used in each course

Recommendation: Evaluate students activity in the classroom, peer evaluation among students should be encouraged as well.

## **IV. The Evolvement of Higher Education in the European Context: A Brief Overview of Recent Developments**

The European Union is placing a strong emphasis on improving and strengthening the higher education system and the role of HEIs in all Member States. Despite various efforts in the field, the educational system in the EU as general is still attempting to achieve its potential in providing the right skills for employability, and is struggling to create an efficient bond with the private sector in order to bring the

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<sup>2</sup> This section provides a list of the recommendations obtained from the SILM Needs Assessment Analysis. A detailed elaboration of these recommendations is presented in the aforementioned document.

learning experience closer to the reality of the working environment. Apart from the innate difficulty of integrating the educational processes at the European level, countries that are in the process of becoming Member States, as Macedonia, face even greater challenges. Being the major instigator of growth, development and employment in the EU, matching the needs of the companies and constantly improving the qualities of the current employees is of crucial importance to the EU. The aforementioned issues aren't consistent with the realization of the main target in this area, presented in the EU2020 Strategy<sup>3</sup>:

*By 2020, 20% more jobs will require higher level skills. Education needed to drive up both standards and levels of achievement to match this demand, as well as encourage the transversal skills needed to ensure young people are able to be entrepreneurial and adapt to the increasingly inevitable changes in the labor market during their career.*

Despite the evident progress over the last several years, the education and training system still has a room for improvement, particularly in strengthening its connection to the private sector, and offering educational programs that comply with the dynamic nature and ever-changing needs and qualifications of the private sector. The increase in the importance of higher education is presented by various research papers and forecasts analyzing and predicting the present and future labor market trends. CEDEFOP forecasts predict that the proportion of jobs in the EU requiring tertiary level qualifications will increase from 29% in 2010 to 34% in 2020, while the proportion of low skilled jobs will fall in the same period from 23% to 18%<sup>4</sup>. Additionally the educational and training process should focus on developing a set of skills in labor market participants which include: ability to think critically, taking initiatives, problem solving and teamwork.

A particular concern to the EU is the development of entrepreneurial skills, and despite increasing efforts, at the national level only six Member States have a particular strategy for entrepreneurial education.<sup>5</sup> SMEs are a major segment of the private sector, comprising around 90% of its structure in the EU. Educating a qualified and skillful class of prospective entrepreneurs and strengthening the skills of current entrepreneurs is one of the main priorities of the main strategic documents. In 2013, the Commission published policy guidance to support improvements in the quality and prevalence of entrepreneurial education across the EU. A standardized constant process in building up entrepreneurial education from primary to secondary and to higher education should be established. Curricula focusing on developing practical skills, and optimizing the effects of teaching, learning and assessment methods should be created. This document attempts to partially bridge this gap, and make initial efforts in this segment.

On 12 May 2009, the Council put forward several conclusions that lead to the establishment of a strategic framework for European cooperation in education and training for the period up to the year 2020 (ET 2020). The EU has particularly concentrated its focus on strengthening the educational and training process, and there is a prevalent opinion that establishing a strong foundation and constant investing in education and skills build-up can spur the post-recession European economy. An important aspect of higher education reforms is the facilitation of the transiting process from education to work, and striking an appropriate balance between theory and practice, and where relevant, strengthening the links between education and training and the labor market. The ET 2020 set four common EU objectives

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<sup>3</sup>Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions – Rethinking Education: Investing in skills for better socio-economic outcomes (2012)

<sup>4</sup> Briefing note - Europe's uneven return to job growth – CEDEFOP official webpage: [www.cedefop.europa.eu](http://www.cedefop.europa.eu)

<sup>5</sup>Entrepreneurship Education at School in Europe – National Strategies, Curricula and Learning Outcomes (Eurydice 2012)

and seven benchmarks to address modern challenges in the education and training systems. This document presents objectives two and four, which are addressed by the SILM<sup>6</sup>:

- Improving the quality and efficiency of education and training
- Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training

And three benchmarks, which coincide greatly with the expected results and outcomes of the ISPEHE project, and in particular the activity concerning the preparation of the SILM<sup>7</sup>:

- At least 40% of people aged 30-34 should have completed some form of higher education
- The share of employed graduates (aged 20-34 with at least upper secondary education attainment and having left education 1-3 years ago) should be at least 82%.

The following Section presents an overview of the main learning, teaching and assessment methods identified by the authors, which are either used in each institution, or theoretically extracted as the most used in leading HEI's in Europe and worldwide.

## **V. Learning, Teaching and Assessment Methods: An Overview**

### **V.I. Additional Complementary Learning Methods for the SILM to the Already Outlined**

There are various learning models, that include different learning methods, based on the notion of whether the student is the center of the learning process and the process is student driven, or the student is the subject encouraged to engage in the learning process, without taking the initiative to dictate its tempo and implementation. The following is a list of a number of learning methods:

Listening –to give attention with the ear; attend closely for the purpose of hearing; to concentrate on hearing something; pay attention<sup>8</sup>

Inquiry-based learning – a learning process that is based on inquiries or asking questions. Through asking challenging questions learners get intrinsically motivated to start delving deeper to find answers for these questions and in doing so they are exploring new avenues of knowledge and insight. Inquiry-based learning is a cyclical learning process composed of many different stages starting with asking questions and results in asking more questions. Inquiry based learning is not just asking questions, but it is a way of converting data and information into useful knowledge. A useful application of inquiry based learning involves many different factors, which are, a different level of questions, a focus for questions, a framework for questions, and a context for questions.<sup>9</sup>

Reading – to look at carefully, so as to understand the meaning of (something written, printed, etc.)<sup>10</sup>

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<sup>6</sup>Education and Training in Europe 2020, Eurodyce Report, November (2013a)

<sup>7</sup>Education and Training in Europe 2020, Eurodyce Report, November (2013b)

<sup>8</sup> Retrieved from: <http://dictionary.reference.com/browse/listening?&o=100074&s=t>

<sup>9</sup> Retrieved from: <http://www.educatorstechnology.com/2013/03/6-learning-methods-every-21st-century.html>

<sup>10</sup> Retrieved from: <http://dictionary.reference.com/browse/read?s=t>

Literature search - systematic and thorough search of all types of published literature in order to identify a breadth of good quality references relevant to a specific topic.<sup>11</sup> Literature search is systematic and explicit approach to the identification, retrieval, and bibliographic management of independent studies (usually drawn from published sources) for the purpose of locating information on a topic, synthesizing conclusions, identifying areas for future study.<sup>12</sup>

Evaluation of a literature - the process of examining a system or system components to determine the extent to which specified properties are present; to find the value of the literature.<sup>13</sup>

Collaborative learning is learning *with* each other.<sup>14</sup>

Peer-to-peer learning is learning *from* each other.<sup>15</sup>

Table 1 on the following page presents the learning techniques that could be implemented by students without assistance (e.g. without requiring advanced technologies or extensive materials that would have to be prepared by a teacher).<sup>16</sup>

**Table 1. Learning techniques implementable by students, without any assistance required**

<b>Technique</b>	<b>Description</b>
1. <u>Elaborative interrogation</u>	Generating an explanation for why an explicitly stated fact or concept is true
2. <u>Self-explanation</u>	Explaining how new information is related to known information, or explaining steps taken during problem solving
3. <u>Summarization</u>	Writing summaries (of various lengths) of to-be-learned texts
4. <u>Highlighting/underlining</u>	Marking potentially important portions of to-be-learned materials while reading
5. <u>Keyword mnemonic</u>	Using keywords and mental imagery to associate verbal materials
6. <u>Imagery for text</u>	Attempting to form mental images of text materials while reading or listening

<sup>11</sup> Retrieved from:

<https://www.hope.ac.uk/media/liverpoolhope/contentassets/documents/library/help/media,1256,en.pdf>

<sup>12</sup> Retrieved from: <https://www.nlm.nih.gov/nichsr/litsrch.html>

<sup>13</sup> Retrieved from: <http://dictionary.reference.com/browse/evaluation?&o=100074&s=t>

<sup>14</sup> Retrieved from: <http://www.itworx.education/collaborative-learning-vs-peer-to-peer-learning/>

<sup>15</sup>Ibid. Please find more on peer learning models here:

<https://web.stanford.edu/dept/CTL/Tomprof/postings/418.html>

<sup>16</sup>John Dunlosky, Katherine A. Rawson, Elizabeth J. Marsh, Mitchell J. Nathan, and Daniel T. Willingham.

(2013).Improving Students' Learning With Effective Learning Techniques: Promising Directions From Cognitive and Educational Psychology

Retrieved from:

<http://psi.sagepub.com/content/14/1/4.full.pdf+html?ijkey=Z10jaVH/60XQM&keytype=ref&siteid=sppsi>

7. <u>Rereading</u>	Restudying text material again after an initial reading
8. <u>Practice testing</u>	Self-testing or taking practice tests over to-be-learned material
9. <u>Distributed practice</u>	Implementing a schedule of practice that spreads out study activities over time
10. <u>Interleaved practice</u>	Implementing a schedule of practice that mixes different kinds of problems, or a schedule of study that mixes different kinds of material, within a single study session

*Note. Please see a full text of an article for a detailed description of each learning technique and relevant examples of their use.*

## V.II. Presentation of Teaching Methods and Some Examples of Creative Usage

In accordance to the classification of methods used during study processes, we agree that learning methods characterize how students can perceive information and develop skills, while teaching methods refer to the art and instruments, which are used by teachers to transfer this information.

So, a teaching method refers to the general principles, pedagogy and management strategies used for classroom instructions and depend on the specifics of a teacher and class<sup>17</sup>. There are different versions, which methods are ranked as teaching methods, and there isn't a definitive line of distinction between teaching and learning methods. For example, we can speak about teaching methods in the form of a: lecture; group discussion; individual presentation; assignments; seminars; workshops; conferences; brainstorming; role play; case studies; discussion.<sup>18</sup> The goal of using these methods is to make the material more interesting and to enlarge students' competences.

In any case, all these methods can be divided in two categories or "approaches" — teacher-centered and student-centered. Via the teacher-centered approach, students passively receive information (via lectures and direct instruction) with an end goal of testing and assessment. One of the SILM goals is to foster innovative methods, which were quite highly evaluated by students in the SILM survey – all those methods belong to the student-centered approach which means that the teacher's primary role is to coach, support and facilitate student learning and the overall comprehension of the material to be acquired. The focus of activities is shifted from the teacher to the learners<sup>19</sup>.

Most of those student-centered methods imply quite small groups of students, not more than 20 persons that allow working individually and gives the possibility to discuss and listen to each participant of the group. Teaching methods also are compared with special technologies, or at least scenarios, that should be prepared by the teacher to have a successful class.

**Table 2.** Teaching methods according to the SILM survey

<u>Technique</u>	<u>Description</u>
1. <u>Seminar</u>	The teacher and a small group of students meet to study and discuss something
2. <u>Tutorial</u>	A small group of students in which students discuss about their work with the teacher
3. <u>Exercise classes</u>	Practical exercises relevant to the course
4. <u>Workshop</u>	A class or series of classes in which a small group of people learn/ practice the methods and skills used for doing something

<sup>17</sup> <http://teach.com/what/teachers-teach/teaching-methods>

<sup>18</sup> <http://class.web.nthu.edu.tw/ezfiles/669/1669/img/1381/1.Effectiveteachingmethodsathighereducationlevel.pdf>

<sup>19</sup> <http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Student-Centered.html>

5. <u>Case study</u>	A documented study of a specific real-life situation or imagined scenario. Students have to analyse the prescribed cases and present their interpretations or solutions, supported by the line of reasoning employed and assumptions made
6. <u>Problem based learning (PBL)</u>	Students gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge
7. <u>Online/Distance learning</u>	Learning process, which includes learning with the assistance of the Internet and a personal computer

As we see in the table above, some of these methods are short-term oriented (1-4), but some (5-6) can be used during the whole course, analysing the object from different perspectives within the topic. Some of these methods can be used in all courses; some are very specific and could be used only in some special courses. The methods listed in Table 2, are presented in greater detail further on.

#### Seminars, tutorials

Some authors underline that it is quite difficult to define the differences between seminars, tutorials and workshops.

These terms are used both with different meanings and interchangeably. Some writers abandon their use in favour of the term 'group discussion'. The use of group discussion is congruent with a major objective of the activity, which is to teach students to think and to engage with their own and others' learning through the articulation of views and understanding.<sup>20</sup>

Under seminars we mostly refer to a group discussion of a paper presented by a student or students and under tutorials – a meeting with a very small group, often based on feedback to an essay or assignment<sup>21</sup>.

To be successful in organizing seminars and tutorials, a teacher has to be clear about what s/he tries to achieve; what s/he wants students to have learned from this meeting. Students' confidence during the discussion will vary according to their experience. The teacher has to provide a brief agenda with a question or two they might think about and/or allocate specific reading to ensure the topic is kept in focus. Finishing off a seminar or tutorial in a positive way is important. Summarizing the main points raised can help, and leading into the next topic reinforces direction and provides momentum. Variety is important here, as it sustains interest and allows a group of students to get to know each other - buzz groups, brainstorming and pyramiding are classic means of encouraging participation. Giving students thinking time before discussing difficult issues is also useful. Important things that should be considered when organizing a seminar or a tutorial are flexibility and focus. It is important to keep to the focus of

<sup>20</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition P 72.

<sup>21</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition. P 79.

the topic, but if the group wants to discuss something relevant for which the teacher has not prepared, s/he should try to fit it in and take something else out.<sup>22</sup>

### Workshops

According to various definitions of the term, a workshop means a seminar, discussion group, or the like, that emphasizes exchange of ideas and the demonstration and application of techniques, skills etc.<sup>23</sup>

A workshop has to be focused on students' work and there are two types of workshops: a writing workshop means students write things and project workshop means students create a project. A workshop has the spotlight on each of the students<sup>24</sup>.

We recommend the following triad for workshops:

1. **Walkthrough:** Show how to do something.
2. **Exercise:** Have everyone actually try to do that thing (while the teacher wanders around and help people one on one).
3. **Debrief:** lead a discussion of where people got stuck, what parts were fun/hard/frustrating, and what things people learned, or realized they want to learn. Show people's individual work, rather than your own, to the class to help explain your insights and observations, and as way to invite them to share theirs.
4. **Repeat,** with a more challenging thing<sup>25</sup>.

These triads can be of different lengths 45 minutes (15/15/15 or 10/20/15) or longer. It is mostly recommended to start with small things and build the way to larger projects as the workshop progresses. By organizing the workshop, the focus should not be on the teacher and the feedback has to come from the peers not from the teacher. As mentioned above a workshop means to do a work – so the room should look like a place where a real group of workers had been working on projects all day. Students should leave feeling like they've done *work*, and have some work they can take home with them if they choose.

### Exercise classes

One of the most highly evaluated teaching methods in Analysis was case studies. This method is used to develop critical thinking and problem-solving skills, as well as to present students with *real-life* situations. The students are presented with a record set of circumstances based on an actual event or an imaginary situation and they are asked to diagnose particular problems only, or to diagnose problems and provide adequate solutions. It is a time-consuming method for the teacher and the most important aspect is to have actual and sufficient information about the case. Cases should be brief, well written, reflect real issues, and open to a number of conflicting responses. At the end, it is expected that the students will demand the right answer by the teacher.

The role of the teacher in conducting the case study should be to:

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<sup>22</sup> <http://www.wl.uj.edu.pl/documents/41663/72454546/Ten%20Tips%20for%20Effective%20Seminar%20Teaching.doc>.

<sup>23</sup> <http://dictionary.reference.com/browse/workshop?s=t>

<sup>24</sup> <http://scottberkun.com/2013/run-a-good-workshop/>

<sup>25</sup> <http://scottberkun.com/2013/run-a-good-workshop/>

- read the case and determine the key problems faced by the decision maker,
- determine the data required to analyse the problems and form a synthesis into solutions,
- develop, analyse, compare alternative solutions, and recommend a course of action<sup>26</sup>.

Some authors underlined that the method, which students mostly remember from study time, is PBL – problem based learning. We can divide it in 3 types:

1. Problem Stimulated PBL (PS PBL) uses role relevant problems in order to introduce and learn new knowledge.
2. Student Centered PBL (SC PBL). Students themselves identify the learning issues they wish to explore; students determine the content to be mastered; students determine and locate the resources to be used.
3. Case-based PBL- students compare and contrast their ideas, identify what they need to learn to move forward in addressing the design challenge, choose a learning issue to focus on, and design and/or run a laboratory activity to examine that issue<sup>27</sup>.

Good praxis is to begin with a focus on real, local problems in the neighbourhood. In this way, students will understand the fruits of their labour and develop a sense of accomplishment. Once a problem is selected, students should discuss project goals, deadlines and materials, and brainstorm some action steps for the project. The role of the teacher is gently leading without giving the right answer. Then it has to be considered how students will present their solution to the problem<sup>28</sup>.

E-learning - in all partnering institutions of the Analysis this was a teaching method, which both groups – students and teachers – evaluated at the lowest level. One of the reasons might be that e-learning is quite a new form, which even does not have a clear definition. As the handbook of teaching suggests, e-learning is something that *happens* when students learn using information and communication technologies (ICT) and it is not something the teacher ‘delivers’, it is something he enables his students to do.<sup>29</sup>

To enhance the positive effect from e-learning we would like to introduce different perspectives of e-learning usage. As we will see from this table, e-learning can help the teacher in different situations without completely eliminating face-to-face teaching<sup>30</sup>.

**Table 3.** Different perspective on e-learning

Issue	E-learning activity
1. There is time pressure on lectures, where students sometimes arrive without sufficient background knowledge; more ground needs to be covered than time allows	The lecturer records themselves speaking each week, for 20 minutes, on his or her mobile, covering background points. These are then uploaded as course podcasts into either the VLE or podcast-enabling software. The students are invited to submit

<sup>26</sup><http://class.web.nthu.edu.tw/ezfiles/669/1669/img/1381/1.Effectiveteachingmethodsathighereducationlevel.pdf>

<sup>27</sup> [http://edutechwiki.unige.ch/en/Problem-based\\_learning](http://edutechwiki.unige.ch/en/Problem-based_learning)

<sup>28</sup> [http://www.educationworld.com/a\\_curr/problem-based-learning-tips-ideas.shtml](http://www.educationworld.com/a_curr/problem-based-learning-tips-ideas.shtml)

<sup>29</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition. P 86.

<sup>30</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition. P 89-90

	<p>questions they have about the podcast content via the VLE discussion board, and the lecturer will address the most pertinent of these before the live lecture commences.</p>
<p>2. Students are taking incomplete notes, and are relying on the PowerPoint handouts as their main record of the lectures</p>	<p>The lecturer stops distributing the PowerPoint slides, and instead asks the students to take thorough notes and post these within the VLE discussion board for their peers to see, and to comment on inaccuracies. If the lecturer has control over the assessment structure, a small part of the assessment may be given to this posting and critiquing activity.</p>
<p>3. Student numbers are so high that the traditional format of seminars is strained to a breaking point</p>	<p>The lecturer asks students to post observations and comments in the VLE's discussion forum after the lecture, and to respond to each other's posts (the lecturer may kick-start this by introducing threads with particular questions or topics). The live seminar is used to conclude these discussions and to answer any outstanding questions that have arisen from them.</p>
<p>4. On a language course, students are not getting enough scheduled time to practice conversation, and are at different levels of comfort</p>	<p>The lecturer posts a sound file of themselves, starting a debate or conversation about a relevant topic. Students are then required to reply, first to the lecturer and then to each other, and to post these files in either a discussion board or in a 'voice board' using either free recording software and microphones or with voice-recording software now found in many universities such as WIMBA Voice Tools (a sort of online language lab)</p>
<p>5. During a year abroad/on placements/ in industry, it is clear that some students drift away from their peers and the university; data suggest that the dropout rate climbs during this time</p>	<p>The course teams sets up a discussion board within the VLE, or mailing list, or a social network, in order to encourage a continuing sense of cohesion among the cohort. This may end up being student-led and largely social, but with departmental news made available and any questions answered by staff.</p>
<p>6. In a first-year course it becomes clear that there are two major problems: some students lack a basic knowledge of the period, and some students use sources indiscriminately and without reference</p>	<p>The lecturer sets a task where students in small groups research a particular area of historical background, using the online library search tools to locate relevant electronic sources. The group then presents this as a written narrative on a wiki or within a VLE, and clearly references the sources. Other students are asked to comment and to critique the strength of these sources, and to suggest others where appropriate. This is assessed.</p>
<p>7. On a course that is assessed at the end of the semester by examination, it becomes clear only at the end that a percentage of students have not engaged with the</p>	<p>Set require reading within the VLE and track which students are not accessing the material. Set short online tests at key intervals to see which students may be falling behind, and to make it difficult for</p>

reading or understood the topics	them not to keep up with the reading
8. On an engineering course, it is clear at the assessment stage that some students are having difficulty with sustained writing; writing is not focused on during the regular curriculum	Devise problem-based learning scenarios. Students must present their solutions and reasoning in written form on their course blogs. Other students then give feedback to the author, explaining how passages might be made clearer (this process of writing and rewriting in public collaboration can be very effective online)
9. Lectures have become impractical with numbers of 300	The lecturer uses a tablet PC, a microphone and some screen recording software to pre-record the lecture. This is posted as video online, and the lecture slot is used for questions and answers. If the video is posted in the VLE, the lecturer can tell which students have and have not viewed it; thus it can become an attendance requirement, just as attending the live session may be.
10. On a distance-learning course, the students tend to contribute well, but miss the sense of collegiality and presence that a campus location would give them	The lecturer decides to hold some tutorials, and even social networking events, within an online 3D virtual world, such as <i>Second Life</i> , <i>There or Active Worlds</i> .
11. It becomes clear that some students are finding it difficult to organize their own learning, and are not confident that their progress has a structure to it. They find it difficult to express what they have learned so far, and how it relates to what they are assessed on	The department decides that each student will have a reflective journal (or e-portfolio) where they are given the learning outcomes and updated information about their progress, and where they are required to reflect on their progress
12. In assessed group projects, students are producing much good work, which may be useful to their current and future peers, but which languishes in a filing cabinet	Require that the group work is published online, as a website, wiki or multimedia presentation (ensuring that any production skills involved are relevant and built into the course's stated transferable skills and learning outcomes.)

Authors underline, that mostly negative experiences with e-learning are based on 3 aspects:

1. There is insufficient purpose to the e-intervention; it is solving a problem that does not exist.
2. It is not built into the regular face-to-face teaching of the course or its assessment structures.
3. Insufficient time is available to set up and then diligently maintain the activities<sup>31</sup>.

One interesting method is to convert the traditional paper-based course booklet into a series of interactive multimedia activities. The introduction of new concepts (for example, the presentation of a financial statement) is followed by interactive activities in which students are given the opportunity to

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<sup>31</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition. P 91.

test and apply these concepts in a series of real-world tasks. This ability to interact and play with the material leads to a deeper and more meaningful grasp of the content introduced on the course<sup>32</sup>.

One of the methods we want to describe is Role play, which was discussed during the Intensive Study Week in Pavia. Role play as method means that participants take on differentiated roles in a simulation; roles may be highly prescribed, including biographical details, and even personality, attitudes and beliefs or loosely indicated by an outline of the function or task<sup>33</sup>. To gain maximum benefits from this method, the incidents selected for enactment should be as realistic as the situation allows. Before the role play, the teacher should brief the participants about the roles they will play, give them time for preparation, confirm confidentiality of the role playing, and ask participants to behave naturally. During the role play, the teacher must keep quiet, listen & take notes, avoid cutting the role playing ahead of time, but give time warning if previously agreed. The teacher should be prepared for some action if participants dry up and can intervene as a last resort. The teacher should use role names not those of participants, summarize, drawing out learning points, leaving the participants with positive comments and feelings<sup>34</sup>.

Another teaching method that is relatively novel, but successfully used in interactive class work is gamification<sup>35</sup>, which is defined as the application of typical elements of game playing (rules of play, point scoring, and competition with others) to other areas of activity, specifically to engage users in problem solving. Gamification of education can help students to be more motivated and engaged, and can make it easier to remember what they've learned. In education, game design principles can be used for the purpose of motivating and changing learner behaviors. The studies consistently found that game based learning can impact positively on problem solving skills, broadening knowledge acquisition motivation and engagement.

**Table 4.** Summary of the tasks and purposes of the Teaching Methods

<b>Method</b>	<b>Task</b>	<b>Purpose</b>
<u>Seminar</u>	Analyze a single topic from different points of view. Each workshop participant makes an analysis of the topics which have been given by the teacher. Each participant has his/her own different perspective and s/he is trying to argue and justify the views of the other person.	To understand that each topic can be viewed from different points of view and to promote skills to support one's opinions and develop argumentation skills.
<u>Tutorial</u>	To create a project - an interview with the teacher on a current topic. Independently explore the topic, develop analyses and concise questions to the teacher.	To encourage independent work skills, gain knowledge reasoned formulating the question, if the answer is not

<sup>32</sup> A Handbook for teaching and learning in Higher Education: Enhancing academic practice. Routledge, 2008. Third edition. P 92.

<sup>33</sup> Singh U.K, Sudarshan K.N. Media Education, 2005. 238-239 pp. ISBN-8171413668

<sup>34</sup> <http://class.web.nthu.edu.tw/ezfiles/669/1669/img/1381/1.Effectiveteachingmethodsathighereducationlevel.pdf>

<sup>35</sup> Perrotta, C., Featherstone, G., Aston, H. and Houghton, E. (2013). Game - based Learning: Latest Evidence and Future Directions (NFER Research Programme: Innovation in Education). Slough: NFER.

		clear whether it is evasive, to be able to transform creative issues.
<u>Exercise classes</u>	To analyze the topic and devise tasks to be addressed in order to gain knowledge on the topic quickly and accurately. The teacher evaluates these tasks and enables a path for solving them.	To learn the topic and gain knowledge, to promote creativity while creating tasks and answers.
<u>Workshop</u>	To implement a project. Each participant of task/ project simulates the role of the project results.	To create products-projects and strengthen the theoretical knowledge (about project management) being applied in practice and acquire skills to work in a team.
<u>Case study</u>	To explore the specific real-life situations or imaginary script and to submit a reasoned written case analysis and write their own version of the situation solving using creative, non-stereotyped approach.	To activate and promote critical thinking skills, to argue.
<u>Problem based learning (PBL)</u>	A problem that should be analysed from a historical point of view (as such problems are dealt within the past), from the creative aspect and from other spheres of business/management.	To find the most successful, most adequate solution that will contribute to the ability to seek solutions to various aspects, to assess the skills and create the application.

### V.III Presentation of Assessment Methods Extracted from the Analysis

The purpose of the Analysis was to collect information about the learning practices applied in partnering institutions, their common teaching and assessment methods used in all five partnering institutions as well as the specific, unique and more creative ones, considering the opinions about such methods of both, students and teaching staff.

The Analysis proved that students and teachers agree that the most used methods of examination are essays and multiple choice questions. Concerning the teachers' opinion, oral questioning is also extensively used and important, and this method helps to evaluate the knowledge of the students more accurately. The least used method is open-book examination, as agreed upon by students and teachers.

In the student section of the Analysis the most commonly practiced assessment methods are essays (written examination), followed by multiple choice questions and demonstration of practical skills. The least used method observed by students is open-book examination. Teachers' agree in general that the most common practiced assessment is oral examination, followed by the use of multiple choice questions and essays while the least used method is open-book examination.

#### Types of assessment

There are various assessment methods used in higher education to assess students' achievements. Primarily, by the assessment method chosen, the teacher needs to be able to effectively assess the objectives and learning outcomes of the course, module or the overall aims of the study programme. Therefore, when choosing assessment items, the teacher should on one hand consider the immediate task of assessing student learning in a particular unit of study, and on the other hand has to bear in mind the broader aims of the programme and the competences and the graduate profile.

Out of what teachers do, nothing affects students more than assessment. Poor assessment methods can distort the picture of students' knowledge and their achievements in learning process. Good assessment practice includes feedback activities that accompany the process of teaching and learning. Assessment comprises of designing assignments and exams, grading and giving feedback on students' performance.

Assessment can be summative or formative. Summative is usually measured at the end of a course or module or a period of learning. The outcome of summative assessment is normally a final grade or mark of the overall performance in the course with almost no feedback.

Formative assessment is normally done during a course or any other form of learning/teaching. Even though students are graded at the end of the course, they receive timely feedback on segments of the subject matter taught, which helps them detect their strengths or weaknesses during the course in order to either repair or strengthen them. In large groups such assessment is extremely time-consuming.

#### Learning outcomes and Assessment criteria

It is important for the teacher to ensure that there is alignment between teaching methods, learning outcomes and assessment criteria. Clear expectations on the part of students of what is required of them are a vitally important part of students' effective learning (Ramsden, 2005). This correlation between teaching, learning outcomes and assessment helps to make the overall learning experience more transparent and meaningful for students.

Learning outcomes (LOs) are statements of what a learner is expected to know, understand and/or be able to demonstrate at the end of a period of learning. They are explicit statements about the outcomes of learning – the results of learning.

They are usually defined in terms of a mixture of knowledge, skills, abilities, attitudes and understanding that an individual will attain as a result of his or her successful engagement in a particular set of higher education experiences. LOs should focus on achievements and not teachers’ ‘aims’ or hopes. When writing LOs for a module or programme of learning teachers employ active verbs (see Bloom’s taxonomy) which improves the teaching-learning-assessment relationship. LOs are often expressed like this: *“On the successful completion of this... module/qualification/lecture students will be able to...”*

Assessment criteria are then the description of what the learner is expected to do to demonstrate that the learning outcome has been achieved. These are normally written at threshold level and distinguish the pass and fail threshold. Assessment criteria refer to the precise quality of the achievement of the outcome. They distinguish the relative performance of each student. Grading criteria are also written as learning outcomes.

Various authors suggest the use of a grading tool describing the criteria which are used in grading the performance of students. Rubric provides a clear guide as to how students’ work will be assessed. It consists of a set of criteria and marks or grade associated with these criteria.

**Table 5.** Examples of criteria and grades associated with these criteria

Learning outcome	Assessment criteria				
	Grade 1	Grade 2: 1	Grade 2:2	Pass	Fail
Upon successful completion of this module, students should be able to: - Summarise evidence from the xxx literature to support development of a line of argument	Outstanding use of literature showing excellent ability to synthesise evidence in analytical way to formulate clear conclusions.	Very good use of literature showing high ability to synthesise evidence in analytical way to formulate clear conclusions.	Good use of literature showing good ability to synthesise evidence in analytical way to formulate clear conclusions	Limited use of literature showing fair ability to synthesise evidence to formulate conclusions.	Poor use of literature showing lack of ability to synthesise evidence to formulate conclusions

Principles of Assessment

When considering a type of assessment teacher has to consider the characteristics of assessment which empower the decision they make in order to value students’ performance. Norton (2009) suggests that in assessing students’ knowledge, competences, abilities and their performance in learning; teachers should consider basic principles of marking and grading. In her opinion fundamental to these principles is the concept of objectivity which assumes that marking is a science.

1. Consistency means ensuring that marking and grading across the institution (or departments...) is appropriate and comparable by institutional guidance.
2. Reliability means that any two markers would assign the same grade or numerical mark to the same piece of work. Even in areas which are recognised as being very difficult to mark objectively, such as laboratory work

and fieldwork, considerable efforts have been made to produce marking schemes which are reliable (Ellington and Earl, 1997).

3. Validity essentially means establishing that the marking measures what it is supposed to measure. This is a difficult principle, especially when assessing higher order skills such as critical thinking, formulating, modelling and solving problems in written work, which is why markers sometimes focus on lower order skills such as referencing, grammar and spelling. In science and practitioner disciplines where competencies are essential, validity may be established through competency models but there are also competencies which are hard to quantify (Knight, 2007). The best advice is to make sure that the method chosen is relevant to the learning outcome it is supposed to test.
4. Levelness means assessing learning outcomes that are appropriate for each level of study.
5. Transparency is perhaps the principle that is most closely aligned with students' perceptions of the fairness of the assessment system, and is also the principle that is the easiest to ensure in practice. It makes sure that the assessment criteria and marking schemes for each assessment task are published and open to all. It also ensures that assessment tasks are published in good time. Fair and equitable appeals and complaints process is established and is accessible to all.
6. Inclusivity means making reasonable adjustments in assessing students who have disabilities. Disabled students are not to be substantially disadvantaged in comparison with students who are not disabled. In terms of assessment reasonable adjustments are to be made.

#### Giving feedback of Assessment results

Dr. Declan Kennedy urges higher education teachers to make quick, clear and focussed feedback to students on their performance. It has to be related to the assessment criteria and learning outcomes. They should use rubrics or formal marking schemes to show how well the requirements are met. He suggests that what is done well should be affirmed, suggestions for improvement have to be included and the guidance about what the student needs to do next is to be given by all means.

#### Assessment methods used by Partnering Institutions

In the following part the definition, description, characteristics, utilization, type of assessment and possible comments on assessment criteria on the five assessment methods used by partnering institutions are described and all the above elements of assessment are to be included when utilizing an individual assessment method.

##### 1. Oral Examination

This is usually done individually. It focuses on important skills that would not be addressed or assessed through written assessment formats.

The method could also be employed as *viva voce* an important mode of assessment, providing an opportunity for candidates to demonstrate their knowledge in some cases to reassure examiners that the candidate is the author of their written work submitted. It not only tests the knowledge but also the ability to speak fluently and use the standardized language. The assessor can also observe the ability of the student to establish good rapport with the audience.

Summative assessment is preferred when assessing a wide range of topics and the ability of students to analyse, compare and synthesize the knowledge acquired.

The candidate needs to be acquainted by the assessment criteria pertaining to content, length of answers, time for preparation, etc.

## 2. Essay

Students are required to write an essay on specified or agreed topics within given parameters e.g. word count, use of different literature sources etc. An essay can demonstrate knowledge and understanding of the subject matter by recalling, describing, reporting, recounting, recognising, identifying, relating and interrelating content based on the prompts/title of the essay based on the LOs of the course/module.

Constructed/written response is used when questions require a written response. Usually they include a one-part question, and students respond by writing a paragraph or short essay. In most cases, the prompt consists of printed materials (a brief question, a collection of related documents, graphic or tabular material, or a combination of these). Student responses are usually produced “on demand” at a specified time and within a fixed amount of time. These constraints contribute to standardization of testing conditions, which increases the comparability of results across students or groups. Essays demand that students include more complex situations, more difficult reasoning, and higher levels of understanding.

Shorter essay responses (covering smaller chunks of knowledge) could be used as formative assessment, especially as preparation for seminar paper writing or diploma writing (including citing rules, etc.)

Summative format essays comprise standardized assessment criteria rubrics with the prescribed length/word count and other standards , e.g. achievement of learning outcomes, essay organisation and structure, rationale and analysis use of literature used, application of principles to practice,...)which students are acquainted with prior to the essay writing.

## 3. Multiple choice questions

Multiple-choice tests are quite efficient. They provide an efficient means of gathering information about a wide range of knowledge and skills in a small amount of time. It is a form of assessment in which students are asked to select the best possible answer (or answers) out of the choices from a list. The possible answers generally include one correct answer and three to four distracters, designed to imitate the common misconceptions students have about the topic being tested.

If guessing an answer, there's usually a 25 percent chance of getting it correct on a four or five answer choice question. The multiple choice format can be effectively used in e-learning education environment. When designing the questions, the author has to be skilled in writing items as only a well written multiple-choice question avoids obviously wrong or silly distracters. Multiple choice tests often require less time to administer for a given amount of material than would tests requiring written responses. Multiple choice tests are not restricted to factual knowledge; they can also be used to measure many kinds of higher-order thinking and problem-solving skills. Well-designed questions can assess more than factual recall of information, but do take time to design.

Summative or formative assessment can be useful for diagnostic purposes; formative assessment can be utilized in addition to summative assessment. They can be part of the on-going evaluation of the current topics as they enable an insight into the students’ performance and can provide a good feedback if questions are properly designed, mostly in e-learning settings/blended learning.

As summative form of assessment they can be employed in one segment of assessment, the rest has to be either essay type assessment or oral examination. Assessment criteria are made based on the LOs tested and the amount of knowledge the multiple questions are expected to cover.

## 4. Demonstration of Practical skills

This method requires students to demonstrate their ability to perform certain actions based on the learning outcomes of the teaching/learning process.

The method scores complex student performances, including both holistic and analytic approaches. In some cases, students are assessed directly on their performance; or the assessment is based on a final product or oral presentation as such.

This method of assessment could cover a wide range of behaviours, including designing products or experiments, gathering information, tabulating and analysing data, interpreting results, and preparing reports or presentations. Therefore, it is more than suitable for summative assessment.

Teachers who assess practical skills must meticulously design the assessment criteria so that all other assessors should come to the same evaluation given the same evidence. Learning outcomes should lend themselves easily to practical assessment so that both students and assessor understand what is required. Assessment rubrics could include which individual elements of practical skills are to be measured.

#### 5. Open-book examination

In this type of assessment students don't have to rely on memory, and have with them the texts or notes of their choice. A selection of texts and hand-outs can also be known/restricted in advance. Here the exam questions test what they can do with the information available in the materials used in the exam.

The teacher who sets the exam questions has to bear in mind that this type can successfully test higher order skills such as analysing, synthesizing, critical thinking, formulating, modelling and solving problems and not lower thinking skills such as knowledge.

The method can be used for summative assessment only.

Assessment criteria rubrics should be based on evaluating complex high thinking skills defined in the course LOs. The exam format should also be well defined.

## **VI. Selection of a Most Suitable Pilot Course for the Implementation of Learning, Teaching and Assessment Methods**

This section presents the issues concerning the entire process of selection of the most viable courses for implementing some of the teaching, learning, and assessment methods presented in Section V, subjected to further evaluation by both students and teachers of the respected course. The evaluations will be completed by both teachers and students, but the focus of each will be different: the teachers' evaluations will be descriptive, focusing on the manner of implementing each method, while the students' evaluation will be less descriptive, focusing on the degree of satisfaction from each method and the format it was proposed in.

In order to obtain a mutual platform for comparing the results from the evaluations of the implementation of the learning, teaching and assessment methods, the aim of the activity and of the efforts of the partnering institutions was to focus on a range of subjects in the field of Business and Management in each institution. The narrower nature of the field of interest, facilitated the entire process, and was necessary in order to provide the most valid results possible. The main task of the activity was to examine the need and gaps in the implementation of various learning, teaching and assessment methods in each institution, and propose a set of these methods for implementing during the courses, that were found desirable and needed by both students and teachers. One of

the main aspects of this task was to select a course, already existing in the curricula of each partnering institution, in the aforementioned field of study, which would provide a foundation for analysis, comparisons and a valid source for making valid conclusions and recommendations.

Selecting the most viable course in each partnering institution, presents a daunting challenge, and the responsible team members for this task, faced a multitude of issues, varying in difficulty, but adding to the complexity of the matter at hand:

- The selected course had to be in the study field of Business and Management – the narrower nature of the course portfolio, facilitated the task of the team members, since despite some degree of variations among each Business and Management curriculum in each partnering institution, some courses were deemed similar and comparable. For similar future endeavours, it is recommended that the course selection process narrows the selection choices from the beginning as much as possible.
- Availability of course professor – an important aspect of the course selection process was taking into account the ability, flexibility, and willingness of the professor responsible for each course for cooperation and delivery of the expected results. This issue had to be tackled before any courses were taken into account, in order to prevent unnecessary difficulties during the final phase of the implementation of this activity. The proposed courses were provided accompanied by guarantees from the team members that the expected results will be accomplished. The best scenario involves a course in which a project team member involved in the implementation of this activity is actually the course teacher.
- The semester in which the course lectures take place – since this activity is part of a project, with its implementation period, the 2<sup>nd</sup> semester of the academic 2015/2016 year, was the only possible time period for implementing this activity. This fact, in addition limited the availability of courses.
- Satisfactory student participation rate – since the students are the second segment of the evaluation process, a satisfactory turn out rate of students needs to be recorded during the lectures. Since it is a complicated task to determine and there exists no exact number as to the optimal number of students in order for a course lecture to be conducted most efficiently, a sufficient number of students based on the subjective opinion of the teacher is relevant for the implementation of this activity.
- Similarity between students' level and difficulty of the course material in each institution – since the institutions, the course lecturers and the students have varying educational and cultural backgrounds, we had to take into account these differences and make sure that they are accounted for in the most suitable manner.
- The group of students attending the lectures should coincide with the target group of the Analysis

Taking into account these major issues, and a number of other, from a list of proposed courses from each partnering institution, several courses were selected that shared similar characteristics among them, all in the field of Business and Management: Integrated Business Curriculum (IBI); Management (EKA); Marketing Management (RTU); Simulimpresa (Univ of Pavia); Managerial Economics in Public and Non-profit Organizations. Although these courses have differences in their learning outcomes and outlined course material, they are the most suitable given the set of choices, and the criteria determining the chosen course.

We propose the following learning, teaching and assessment methods to be implemented during the course lectures: case studies, student presentations, oral examination, and student mentoring. However, taking into account the dynamic nature, and the subjectivity of the task at hand, professors are given the right to choose other methods included in the SILM, that they might find more suitable. The exact number of teaching, learning and assessment methods is left for each individual teacher to decide, however at least one of the methods should be implemented and evaluated accordingly. Each teacher might include as many methods as deemed appropriate to optimize the effect of each course. As the final stage of the implementation of each method, evaluations will be filled, by hand in English, by both teachers and students, presenting the manner of implementing the appropriate method, and its effect on the students. Furthermore, final grades and evaluations will serve as an additional indicator of the success rate of the novel methods introduced in each course.

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