

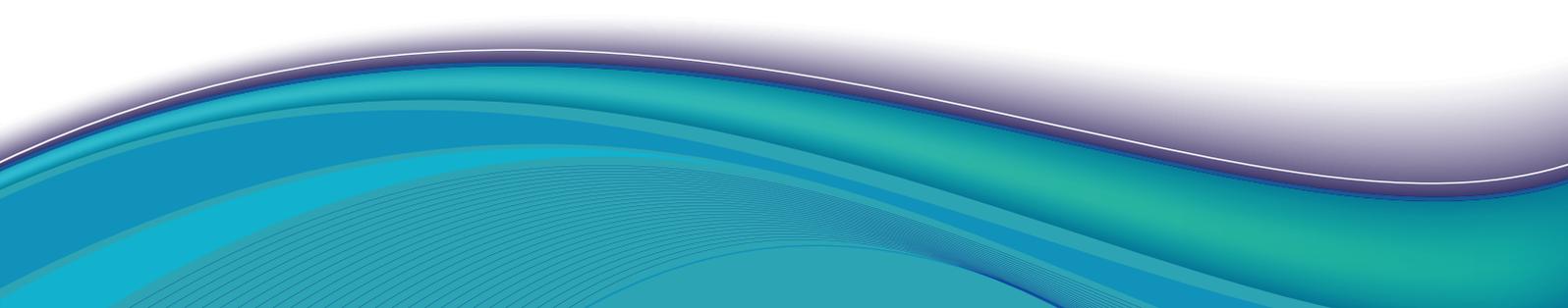


CUP – COMPETENCE AT THE UNIVERSITY OF PRISHTINA



Tempus

“CUP – COMPETENCE AT THE UNIVERSITY OF PRISHTINA” CASE STUDIES COLLECTION



Summary

With this booklet, which is a collection of case studies in competence based teaching we aim to provide a first glance on this very complex topic. Competences are the backbone of modern teaching in higher education institutions. They provide the basis for curricula and syllabi design, are used to define learning activities and respectively need to be assessed. In many diploma supplements additional information about graduates is provided in the form of competence assessment. This booklet collects case-studies about the use of competences in teaching and research in higher education institutions. It will show different settings, problems, solutions and strategies with the aim to allow approaching the topic from different angles. As is often the case with upcoming topics, the approaches and the aims covered in these articles may differ and in some cases even contradict each other. This booklet does not try to rate or to rank the experiences collected according to quality or effect, but rather offers an overview of how competence based teaching and research has been experienced and handled in higher education institutions in Europe.

This publication is part of the results of the project Competence @ University of Prishtina (CUP), which is co-funded by the TEMPUS programme of the European Union.

Table of Contents

Description of the Project “CUP – Competence at the University of Prishtina”	4
1.Introduction	4
2.Partner Information	6
3.Contact Details	7
An Introduction to Competence-Based Education	8
1.European Higher Education Area and its Focus on Learning Outcomes.....	8
2.Defining Competences.....	8
3.The Relationship between Aims, Competences, Course Content and Learning Activities	9
4.Competence Assessment	9
5.Importance of Competence Assessment for the Labour Market and University Stakeholders.....	10
6.Competence Assessment	10
7.The Competence Catalogue – What is it?	12
8.The Competence Catalogue – Why is it important?	14
9.The Competence Catalogue – What does it contain?	14
10.From Competences to Learning Activities	14
Strategy for Competence-Based Learning on a University and Faculty Basis.....	18
1.Introduction	18
2.Defining the Competences.....	18
3.Implementing CBL at the University of Alicante	23
4.Conclusions	25
Competence Catalogues and their Practical Use.....	27
1.The concept of competence - how it is defined and its value for establishing links with society	27
2.The Relationship between Competence and Learning Outcomes and, ultimately, the Qualifications Framework	28
3.Competence-Based Learning versus Content-Based Learning.....	29
4.Generic and Specific Competences.....	30
5.How to Compile the Competence Catalogue.....	31
6.From the List of Competences to the Classroom.....	32
7.Obtaining and Expressing Learning Outcomes	34

Developing Competences on Non-routine Tasks: Matching Skills to Labour Market Needs in light of Opportunities from New Technologies	36
1. Abstract	36
2. Introduction	36
3. The In Touch Project	37
4. Competence-Based Learning	38
5. Promoting the Adoption of a Competence-Based Learning Paradigm: the Opportunities of New Technologies	39
6. Conclusions	40
ECTS-Based Competence System	41
1. Introduction	41
2. Plan-Do-Check-Act	41
Good Practice of Curriculum Development at the University of Prishtina (UP), Kosovo ...	48
1. Introduction	48
2. Background Information	48
3. Processes of Study Program Development	48
4. Conclusion	51
5. Recommendations	51

Description of the Project “CUP - Competence @ University of Prishtina”

Rupert Beinhauer, FH JOANNEUM University of Applied Sciences, Graz, Austria

1. Introduction

CUP addresses the missing link between higher education (HE) and economy in the area of Kosovo.

The project aims at developing and/or advancing procedures and tools for the assessment and improvement of the match of competences developed by institutions of HE to those required by the labour market based on “European Qualifications Framework” quality assurance procedures. The methodology created within this project will be based on the knowledge transfer from EU partner universities and will be further adapted to local needs.

In order to transfer the necessary competences in HE, a “Competence and Observation Centre” (COC) needs to be developed; it will serve as a knowledge pool for the domestic knowledge transfer and for trainings for HE institutions and relevant stakeholders, and it will act as a service provider for the University of Prishtina. The COC will also observe and monitor national and European developments in respective fields.

From the European perspective, CUP is aimed at bringing the HE systems of Kosovo one step closer to the European Qualifications Framework (EQF), and thus to the European Higher Education Area (EHEA), by providing instruments for “external” quality assurance (QA) that connect the worlds of education and work.

CUP consists of 9 modules which are briefly described as follows:

1. Development and advancement of applied methodology for assessing and matching the competences developed at universities and those required by the labour market.
2. Foundation of the Competence and Observation Centre (COC) – The centres will be established in the first project year and will participate in all phases of this project, which is also seen as a practical capacity-building measure for its staff. They will develop and maintain the COMPETENCES web platform on the creation of the competence catalogues and serve as a service centre for all relevant stakeholders.
3. Carrying out of two pilot studies concerning qualifications acquired at the university and those needed by the labour market by applying the methodology developed in the first project phase – This step will enable the testing of the developed methodology and instruments. The testing will be conducted with support of the COC staff and of EU experts. This way, the COC staff will gain practical experience and will be able to consult and monitor further processes of similar relevance. The study results will serve as a concrete example for using the developed methodology and tools.
4. Development of a “Competence Catalogue” – This competence catalogue is based on previous project activities and on good practice examples from Gerona, Ghent and

Graz (EU partners). It will be developed and published on the CUP web platform in order to properly disseminate the project's results.

5. Development of an Information System – The information system is based on experiences from EU partners and on the design of the competence catalogue mentioned above. Such an information system, which consists of an information server and at least 32 terminals (average two per faculty), will be positioned strategically across the campus of the University of Prishtina. These terminals will enable students and staff alike to access the schedules, curricula and syllabi of their courses. Users will be able to access the competence catalogue and see how competences are linked with their courses. This system will be introduced in the whole university and will be used as an additional incentive for using the competence-based approach.
6. Dissemination of knowledge and experience to academic, business and political stakeholders. The main instrument of sustainable dissemination of the project results will be the CUP information terminals and the CUP web page, manuals, questionnaires, strategy development recommendations, etc. Further dissemination is planned through multiplication trainings, information events, workshops, consulting, etc.
7. Assurance of sustainability of the project outcomes – The project has been designed to meet the sustainability criteria, and the respective design strategy can be summarised as follows: The established “Competence and Observatory Centres” (COC) will serve as service and knowledge centres for the University of Prishtina. They will be strategically located very close to the quality assurance office, in premises provided by the University of Prishtina. The COC staff will be trained; the staff costs will be taken over locally after the end of the project. Project “products” such as the manual, guidelines on curriculum and strategy development, competence catalogues, study results, etc. will be distributed and posted on the CUP web platform and information terminals to be available for all relevant stakeholders.
8. Implementation of quality control and monitoring procedures – Quality is one of the main objectives of the project. The project implementation will be accompanied by appropriate monitoring and controlling (both content and financial).
9. Carrying out of project management using up-to-date project management tools and procedures – Through the extensive experience of project partners, especially of the coordinator, a detailed and proper project management can be conducted.

All these modules contribute to the realization of the project and therefore to its success.

2. Partner Information

FH JOANNEUM is one of Austria's leading universities of applied sciences. The degree programmes are offered at university level and strive for professional training on a scientific basis. The centres for Research & Development serve as important links between the different departments of FH JOANNEUM and the business world, ensuring that students receive practice-oriented training at the cutting edge of methodology. FH JOANNEUM has successfully carried out numerous research and development projects for institutions and companies.

WUS Austria is a politically independent, non-governmental organisation committed to the promotion of academic freedom and the right to education. WUS Austria has implemented numerous projects aimed at direct support to the reform and development of higher education in SEE in line with European and international standards. Besides strong institutional partnerships with SEE universities, WUS Austria has also established large thematic networks with EU partners. Facilitating cooperation and knowledge transfer between SEE and EU universities, WUS Austria has positioned itself as one of the most important operative partners for SEE knowledge society in providing support (technical, financial) and consulting for a faster, more efficient implementation of EU reforms.

Fondacioni i përgjithshëm i Universitetit të Alicante (UAFG) was created in 2000 by the University of Alicante (UA) with the objective of effectively promoting the key role of the university as a cornerstone of economic and social development in knowledge-based societies. The objective of UAFG is to support UA in the areas of knowledge transfer, research and professional training. UAFG can be considered to be UA's primary interface with business.

KaHoSin-Liven (Catholic University College Ghent) is a university college offering bachelor and master study programmes in Flanders (Ghent, Aalst and Sint-Niklaas), with over 6300 students and more than 600 staff members. Study programmes concentrate on biotechnology, health care, business studies, teacher training and industrial sciences and technology. KaHo Sint-Lieven has gained a great deal of experience in competence-based learning. All curricula have clear learning outcomes that have been defined in a flexible way.

The University of Girona is a public institution devoted both to excellence in teaching and research and to participating in the progress and development of society through the creation, transmission, diffusion and criticism of knowledge related to sciences, technology, humanities, social sciences and arts. The University of Girona, deeply rooted in Catalonia and Catalan culture, is one of the primary economic and cultural motors of the region.

C.A.T.T.I.D. (Centre of Applications for Television and Digital Technology Innovation) of "La Sapienza" University of Rome, has been active since 1988. It operates on an inter-departmental and inter-university level and in collaboration with some of the most important enterprises of the sectors most involved in the processes of research and digital convergence.

The University of Prishtina is relatively young when compared to other world universities. It is one of the first institutions of higher education in the region that has undertaken a process of thorough reforms in accordance with the Bologna Process.

The Ministry of Education, Science and Technology (MEST) is responsible for the planning and observation of the development of the higher education system in Kosovo. For this reason, MEST develops, plans and documents the policy, standards and procedures which bring systemised solutions to the challenges facing higher education in Kosovo.

The Kosovo Accreditation Agency (KAA) was founded by MEST in accordance with the law on higher education in Kosovo, as an agency that practices independent professional non-benefit activities which guarantee the quality of educational and scientific research work. KAA is a public agency for the evaluation of quality at the public and private institutions of HE and, through the accreditation process, supports quality development in these institutions. KAA has the legal basis for accreditation of all higher education institutions that are offering or want to offer higher education programmes that award academic degrees.

3. Contact Details

AUSTRIA

Mag. Rupert Beinhauer
Fachhochschule Joanneum Graz
Faculty of International Management
Eggenberger Allee 11
8020 Graz
Austria
Tel: +43 316 5453 6822
E-mail: rupert.beinhauer@fh-joanneum.at

KOSOVO

Competence Observation Centre:
Milote Musliu - Sadiku
milote.sadiku@uni-pr.edu

Vlora Prenaj
vloraprenaj@live.com

University of Prishtina
Faculty of Economics
Rr. Agim Ramadani
10000 Prishtinë
Kosovo
Tel: +381 38 244183
Tel: +381 38 244186
Fax: +381 38 244187
www.link-competences.org/kosovo/

An Introduction to Competence-Based Education

Rupert Beinhauer, FH JOANNEUM University of Applied Sciences, Graz, Austria

The following texts have been developed and written by various authors in the scope of the Tempus project “COMPETENCE - Matching competences in higher education and economy: From competence catalogue to strategy and curriculum development” and have been published in four “Competence Manuals”. They have been collected and reprinted here for your convenience. The original manuals can be downloaded from the “COMPETENCE” website (www.link-competences.org).

1. European Higher Education Area and its Focus on Learning Outcomes

Rupert Beinhauer, FH JOANNEUM University of Applied Sciences, Graz, Austria

The current hot topic within the educational institutions across Europe – learning outcomes – are analysed, designed, implemented and evaluated all over Europe. Based on important ideas and inspired by European developments in the educational sector – the European Qualifications Framework (EQF) on the one hand and the Qualifications Framework for the European Higher Education Area (QF-EHEA) on the other hand – learning outcomes form the backbone of educational initiatives. Traditional models and methods of expressing learning success and qualification levels are replaced by systems based on learning outcomes and qualification descriptors. These systems ultimately provide the necessary transparency to facilitate the comparison of knowledge, skills and abilities between educational institutions in different European countries. “Without these common approaches, full recognition, real transparency and thus the creation of an effective European Higher Education Area will be more difficult to achieve.” (Bologna Working Group on Qualifications Frameworks, December 2004).

2. Defining Competences

Bernadette Frech, FH JOANNEUM University of Applied Sciences, Graz, Austria

In the last decade, the interest in competence-based education has been growing (Gillies & Howard, 2003; Gordon & Issenberg, 2003; James, 2002). Tuning Educational Structures in Europe – a university-driven project aimed at offering a concrete approach to the implementation of the Bologna Process at the level of higher education institutions and subject areas – defines competences as a dynamic combination of knowledge, understanding, skills and abilities. Competences are obtained or developed during the process of learning by the student (Tuning, 2007). A distinction can be made between generic competences (i.e. transferable competences across study areas) and subject-specific competences (i.e. competences specific to a subject area).

The International Board of Standards for Training and Performance Instruction (IBSTPI) defines a competency as “a knowledge, skill, or attitude that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment” (IBSTPI, 2005).

Combining the definitions by Tuning and IBSTPI, a competency includes both means and an end. The means are a combination of knowledge, skills, or abilities and the end is to perform effectively the activities of a given occupation or function to the standards expected in employment. The core of competency-based curriculum design is to ensure that learners will be able to demonstrate their learned competences after they have acquired a necessary combination of knowledge, skills, and abilities (Chyung 2006).

3. The Relationship between Aims, Competences, Course Content and Learning Activities

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

The educational standards established in the European Higher Education Area suggest that the objective of universities is that students acquire the competences which fit the studies they will complete during their time there. Students acquire these competences through learning activities.

These activities must be related to the contents of the studies undertaken. In short, the learning references are the competences that must be attained, the instruments are the learning activities carried out during the period of study, and those activities operate on the contents, which are the raw material of learning. Thus, the key to the entire system is a clear and applied definition of competences and their effective link with learning activities.

4. Competence Assessment

Bernadette Frech, FH JOANNEUM University of Applied Sciences, Graz, Austria

The crucial element in competency based models is the use of criterion-referenced, measurable assessment methods (Chyung et al., 2006). In other words, if you cannot measure it, it probably is not a competency (Voorhees, 2001). Competences will be formed in various course units, though different learning activities and assessed at different stages.

A distinction can be made between direct and indirect competence assessment approaches (Prince & Randall 2008). Indirect approaches gather opinions of the quality and quantity of competences acquired, e.g. through focus groups or surveys. Obviously, the assessment of competences relies upon a certain amount of reflection and reflexivity by respondents (Andrews & Higson 2007). In contrast, direct approaches require that students demonstrate mastery of competences by evaluating actual work completed by the students. This evaluation should ideally be a combination of a performance, formative and summative function (Tuning 2007). Performance assessments consider the work by students through specific methods, such as tests, oral presentations, laboratory reports, analyses of texts or portfolios. A central part of direct assessments are formative assessments in terms of feed-back provision. Thereby, lecturers comment on how well students have achieved a specific work so far and identify steps for improvement. A follow-up seminar or tutorial after an examination is another example of formative assessment. Besides, each course should contain a summative assessment in which all assessment parts are summarized and reflected in a grade.

5. Importance of Competence Assessment for the Labour Market and University Stakeholders

Bernadette Frech; Biviana Deisy Castro Buitrago; Rupert Beinbauer,
FH JOANNEUM University of Applied Sciences, Graz, Austria

Several years ago the assessment of competences did not play an important role in any education system in the world. However, the picture has changed in response to a labour market which is now competence centric and demands a shift towards competence-driven learning in the educational sector (Vervenne & Xheneumont, 2005). The new graduates need not only basic theoretical knowledge but also a set of competences which allows them to be more versatile when facing new and unknown challenges. In this context the concern of the university stakeholders (e.g. higher education institutions, employees and students) on the effectiveness of the programmes taught has increased dramatically. Ewell and Boyer (1988) and Davis (1989) highlight that assessment in higher education is important since it can provide institutions with crucial feedback which will allow them to improve and develop a student, a program, or a department. For this reason, universities assess competence gaps between the competences they teach and the labour market requirements to determine how far they are from closing these gaps and how curricula need to be changed to increase the quality, performance and accountability of the education offered. Furthermore, through the assessment of competences, students will receive a more transparent education and at the same time learn the necessary skills to become more employable in the future. University employees will be influenced by such assessment as well, since any curriculum change will have an impact on the way activities – administrative procedures, teaching techniques and materials, or personnel selection — are performed within the university.

6. Competence Assessment

Bernadette Frech; Biviana Deisy Castro Buitrago; Rupert Beinbauer; Rene Wenzel,
FH JOANNEUM University of Applied Sciences, Graz, Austria

Hager, Gonczi and Athanasou (1994) explain that competence-based assessment is the process which determines whether a candidate meets the necessary skills required by employers: in other words, whether they demonstrate competence or not. Thrash (1990) argues that assessment “should be seen as a means of documenting that institutions are doing what they say they do and that students who complete their programmes receive what is promised. The emphasis should be on institutional quality and individual competence.” In this line of arguments, Alderson and Wall (1993) describe the importance of the relationship between learning and assessment as the “wash-back effect”, implying that what is assessed strongly influences what is learned. In other words, if the ultimate goal to achieve with any assessment is only to measure the factual knowledge acquired in the educational institution, students will respond accordingly and just learn facts. However, if universities use assessment tools to improve the employability of their students, these students will exhibit increased adaptability to the requirements of the labour market in the future. The Tempus project COMPETENCE underpins the importance of adequate and accurate competence assessment, and “it is aimed at developing and/or advancing procedures and tools for assessing and improving the match between competences developed by institutions of higher education and those required by the labour market in the four partner Western Balkan countries”.

The competence methodology on which the project COMPETENCE is based was developed by the FH JOANNEUM University of Applied Sciences in the framework of the LLP project (Leonardo da Vinci) MISLEM. This methodology comprises eight steps:

1. **Preparing the focus group:** Focus interviews are held in order to detect specific and generic competences (Five to six group members with one moderator is the ideal number, and the moderator must keep the discussion aligned with the issues to be addressed at all times.)
2. **Analysis of the focus groups:** Specific competences are used to compile the questionnaires, while generic competences are matched with the results of the questionnaires.
3. **Compiling questionnaires:** Two questionnaires are required – one for employers and one for alumni. The main objectives to cover with the questionnaire are to:
 - Explore graduate perceptions of the quality of their educational experiences
 - Explore employer satisfaction of relevant undergraduate study programmes
 - Identify graduate perspectives of graduates' core discipline-specific knowledge and skills
 - Identify graduate perspectives of the degree to which employability competences are taught at the undergraduate level
 - Test the extent to which the employability competences acquired in relevant study programmes were used by graduates in the course of their employment.
4. **Execution and analysis of the quantitative survey:** The survey should be conducted with all the participating countries and/or universities. For each of the surveys (i.e. graduates and employers), a minimum of 100 questionnaires should be collected. The questionnaire for graduates asks for the rate of satisfaction of the graduates with the competences they were trained in and how relevant these are for their current jobs. On the other hand, the employers' survey evaluates the satisfaction rate with generic and specific competences of graduates and their applicability for future employment.
5. **Development of a competence matrix:** Based on the results of the survey a matrix for curricula is developed. This matrix is a tool to ensure that relevant competences are taught in the best-fitting courses of the program. All subjects taught in a program are matched with the competences graduates should have when they have finished their studies. In the rows all subjects of the degree program are listed, while in the columns the corresponding competences are shown.
6. **Competence matrix software:** The software developed by the University of Girona can be used. At this stage the task of the head of the department is to assign competences to subjects with the help of the matrix developed before.
7. **Planning activities and methods for assessment:** The matrix is filled by translating (specific and generic) competences into learning outcomes and activities.
8. **Evaluation:** Evaluating the impact of the new learning outcomes developed is vital in order to determine the impact the assessment has had.



7. The Competence Catalogue – What is it?

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

Within the framework of the management model of teaching – the aim of which is to help the university respond to society’s needs – the main reference points are competences, as stated in the previous manuals of this project.

As pointed out in Manual 1, competences express the higher educational needs of the relevant society, and the needs in terms of know-how can be expressed by using competences.

From this viewpoint, know-how is based on knowledge. In putting this knowledge into practice an understanding of the current educational situation can be gained and further activities can be carried out in accordance with this knowledge. In essence, when university graduates act within their field of knowledge and apply a competence, they are applying and using their acquired knowledge. And through their performance, it can also be seen to what extent they know the context as well as how to behave in that context.

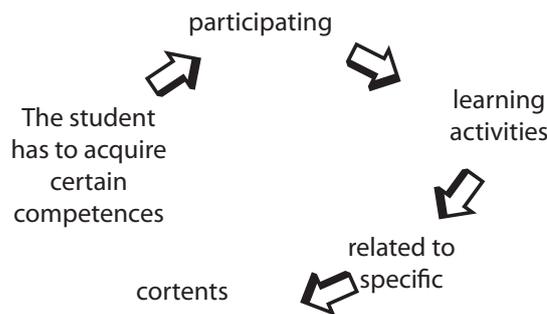
This approach, among various interpretations of knowledge, understanding, skills, and knowing where to be or how to be, is the easiest to visualise know-how, which in itself represents a person’s knowledge base and the qualities that person has. For this reason, the team of the University of Girona has decided on the following interpretation of the concept of “competence”: know-how which can be visualised and assessed.

The pedagogical approach suggested leads to the acquisition of competences, which are understood to be complex and contextualised skills that a society requires university graduates to have and apply.

In short, two fundamental issues should be emphasised:

1. Competences do not consist of a group of “stuff” that students must learn that is different from the traditional body of knowledge that students learn. The competences are based on and contain this knowledge (see also Manual 1, page 10).
2. In general, competences should be directly measurable and performed in an observable way.

The following graph attempts to illustrate the role of competences in the curriculum:



Two main groups of competences can be identified: the generic competences that are applicable to any field of knowledge and the specific competences that are particular to each field of knowledge. For example:

Generic competences might include:

- The ability to evaluate the sustainability of one’s own proposals and actions
- The ability to gather and select information effectively

Specific competences might include:

- The ability to design control systems and industrial automation (engineering)
- The ability to evaluate the environmental and landscape quality of an area, while putting the interaction of natural factors and cultural factors into context (geography).

From this concept of teaching, a list of competences that the university believes every student should have acquired by the end of their studies needs to be developed. Hence, master’s degree programmes have their own lists of competences for their students, consisting of a set of generic competences and a set of specific ones. The generic competences are the same for different graduate degree courses at a particular university. The specific competences are greater in number than the generic ones, since they define the actual content and knowledge specific to each graduate of a certain master’s degree programme.

8. The Competence Catalogue – Why is it important?

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

A list of generic and specific competences tailored to a certain university programme shall represent the learning goals. The list can be read in different ways:

- It is the profile of the degree programme and of the future graduate.
- It reflects the commitment that the university makes to the society and what it proposes as the result of its teaching.
- It is the guide for all teaching activities within the programme.
- It is the starting and ending point of the teaching/learning process. Academic courses, subjects and learning activities will be planned with a focus on the competences and learning outcomes which will be assessed in terms of competences, i.e., the extent to which each student has acquired the proposed competences.

9. The Competence Catalogue – What does it contain?

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

The list of competences must include the generic competences students need to acquire, as well as the specific ones. Together they will comprise the competence profile of the future graduates.

Explicitly, the set of competences should contain all knowledge specific to the programme. Furthermore, graduates need to be able to put the acquired competences into action. Thus, approaching teaching based on competences means going beyond knowledge; it means acquiring both the necessary knowledge and the ability to use that knowledge in a specific context.

That is why each university needs to invest some initial time in drawing up the list of competences. When the competences are being formulated and identified, the knowledge which comes with the acquisition of the competences needs to respond to the needs of the society.

Implicitly, the list of competences contains the assessment criteria. Every competence needs to be formulated in assessable terms. University professors who plan to work on competences in the classroom have a tool which makes the assessment of competences easier.

10. From Competences to Learning Activities

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

Transforming competences into learning goals starts by obtaining a list of competences. Attaining these learning goals is a challenge for students. Consequently, the professors need to transport these competences through their lectures. The main objective is to enable students to acquire the competences that the university intends to deliver through the curriculum.

Translating competences into learning activities is complex on the one hand because there are many steps involved. On the other hand, it should be simple as long as the process is

conducted in a proper way. Transporting competences into classrooms is carried out on two levels: overall programme design and individual subject design, each of which in turn comprise several steps.

The overall programme design consists of formulating the competences and then analysing each competence with the aim of breaking it down into different levels of complexity or into components. On the next page there is one example of a generic and one example of a specific competence being broken down into components:

Example 1: Breakdown of the generic competence “teamwork” into levels of complexity:

Complexity Level 1: Working in teams and assessing the processes that are established and the roles which evolve with the help of an external guide.

Complexity Level 2: Working in teams (including multidisciplinary teams) and assessing the processes that are established and the roles that evolve, independently, and exercising those roles (including leadership), while incorporating modifications resulting from shared reflection.

Complexity Level 3: Teamwork leadership (including teams that are multidisciplinary and/ or in international environments) and assessing the processes that are established and the roles that evolve, while incorporating modifications resulting from shared reflection.

Example 2: Breakdown of the specific competence “designing and regulating areas of learning in contexts of diversity which addresses gender equality, equity and respect for human rights that conform with the values of citizenship education” into levels of complexity.

Component 1: Analysing the basic principles of healthy development and behaviour.

Component 2: Identifying disorders, deficiencies and difficulties that hinder the welfare of children and their satisfactory physical and psychological development.

Component 3: Using resources to promote the educational integration of students with special educational needs.

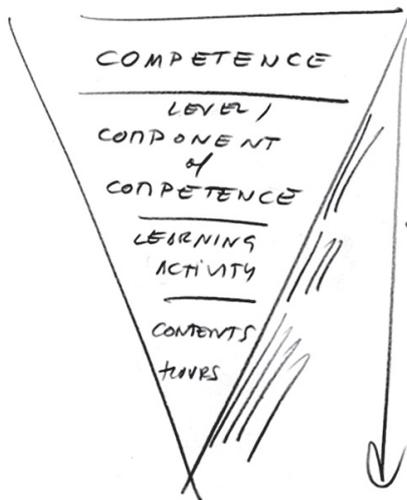
Component 4: Recognising and analysing specific educational needs and personal, social and cultural diversity.

Component 5: Using games as a teaching resource for learning general knowledge and citizenship values, and as a strategy for addressing diversity.

Subsequently, a decision must be taken regarding which specific subject areas of a curriculum will deal with each component of each competence. An interesting option at this time – which makes a curriculum more integrated and transversal – is to link each competence to more than one subject area and to different times during the curriculum. A grid such as the one in the following illustration can be used for this purpose:

Degree: _____

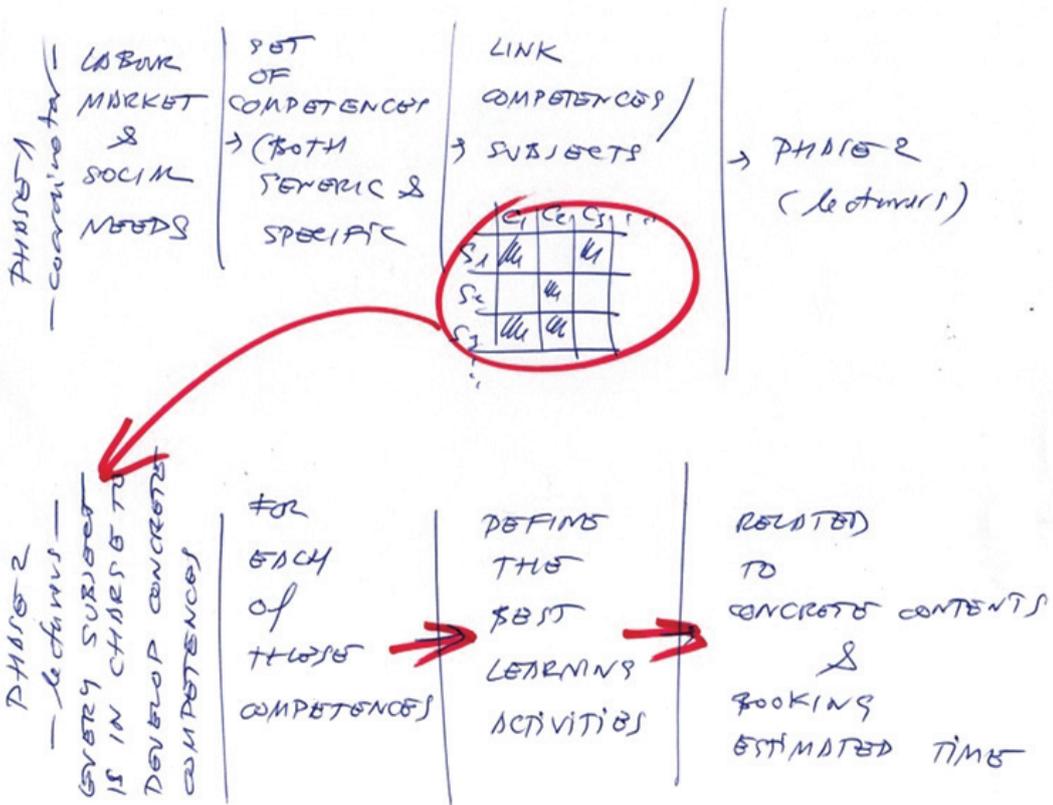
Competences related to the degree →	C1	C2	C3	C4	C5		CN
Subjects of the degree ↓							
A1	X		X			X	
A2		X	X		X		
A3		X		X			
	X		X		X		X
AN		X		X		X	



The planning process for each subject can be initiated. First, each subject has assigned to it the work required to achieve a certain competence. Second, it is the job of each university professor to devise learning activities which are based on the specific contents of the course. The teaching strategies and didactics need to be applied in such a way that every activity which is done with the students – whether it is an expositional class, a practical exercise, a reading assignment or any other type of exercise – is geared towards one of the competences that has to be developed. Further, collaboration among professors of a degree programme is essential to guarantee the acquisition of the competences and to improve the coherence of the overall programme.

A teaching management computer programme can help to organise and visualise the processes and outcomes that can eventually be expressed in terms of subjects and competences. The following diagram illustrates the process of transporting the competences into the classroom, ending specifically with the content and the time spent on it.

FROM COMPETENCIES TO LEARNING ACTIVITIES



Strategy for Competence-Based Learning on a University and Faculty Basis

Alexandra Mayr, University of Alicante, Alicante, Spain

1. Introduction

This article illustrates how the concept of competence-based learning (CBL) was integrated in the study programmes and teaching methodologies of the University of Alicante (UA) in Spain. To set the scene, the article gives a short overview of the national and regional policy frameworks relevant to the integration of CBL in Spain. The main objective of this article is to exemplify the strategies, mechanisms, and roles of different actors that were involved in the process of implementing the concept of CBL at the institutional and faculty levels. Doing so, this article shall provide ideas and guidance to other universities that seek to implement CBL.

2. Defining the Competences

Macro-level framework:

The Bologna Process and the creation of the European Higher Education Area (EHEA) present important challenges for universities in Europe, particularly regarding the adaptation of the study programmes to the needs of the labour market and integration of competence based learning in each and every course offered.

In pursuit of the requirements of the Bologna Process and EHEA, the Spanish government introduced a number of important reforms of the university system (e.g. Ley organic 4/2007, 1393/2007), requiring universities to overhaul their study programmes and establishing the official quality and accreditation requirements for the new study programmes.

With the aim of providing practical guidance to universities in this process, the Spanish National Agency for Quality Assessment and Accreditation (ANECA – Agencia Nacional de la Evaluación de la Calidad y la Accreditación) elaborated a series of guidebooks with practical recommendations on the redesign of the study programmes in pursuit of the Bologna requirements, the so-called “White Papers” (“Libros Blancos”). The White Papers are the result of the collaborative work undertaken by networks of Spanish universities and other stakeholders, supported by ANECA, with the specific objective to conduct research and propose practical guidelines for the standard graduate study programmes, such as competences, objectives, methodologies, evaluation criteria, etc.

The White Papers were elaborated and firmly based on the following aspects: comparative analysis of the respective study programmes offered by universities in other EU countries, main characteristics and requirements of the specific European degrees, results of the surveys on labour market incorporation of university graduates, analysis of professional competences and profiles, and other relevant aspects. The model degree programmes set

out in the White Papers were developed in a cooperative effort among various stakeholders (e.g. the academy, businesses and students). The White Papers have proven to be a very important tool for Spanish universities, which use the information contained therein as reference models for the development of the new study programmes.

The case of the Bachelor's degree in Social Work – the University of Alicante's active participation in the development of the White Paper in 2003-2004:

National call for projects: Grant funding provided by ANECA for the design of the Social Work Bachelor's Degree and Curriculum.

- Establishment of a mixed committee: 7 representatives from the National Board of Directors of Schools of Social Work, 4 members of the National Board of Associations of Professional Social Workers, 3 representatives of the students
- Design and coordination for the Committee/Work in universities
- Consensus in General Assembly (Research Network with 32 universities)

<http://www.aneca.es/Documentos-y-publicaciones/Otros-documentos-de-interes/Libros-Blancos>

Main conclusions of the project:

- In Spain, the political process for the EHEA convergence is very slow (finishing 2010-2011).
- In the case of degrees in social work: the design process for the Bachelor of Social Work is a good practice model by consensus and has been developed by representatives of academy and the professional sector.
- As a result, the Libro Blanco proposes a new educational profile based on the detailed professional profile (competences).

In order to achieve the new learning objectives and competences established, it has become clear that there is a need for:

- Including more practical training through projects and internships
- Promoting applied research in social work
- Better linking theory and practice.

Implications: relations among academy and professional social workers need to be strengthened, there is a need for new teaching methods and didactic tools; tutors in the practical field of social work are needed.

Institution level framework and actors involved:

In order to define and validate the competences to be acquired within each degree program, the faculty committees in charge of this activity at the University of Alicante were encouraged to actively involve the following stakeholders and entities:

University-external entities collaborating with the University of Alicante (UA):

- Local chambers of commerce
- Human resources departments of regional enterprises
- Public administrations

University-internal departments and entities:

- Professors, researchers and department heads (coordinators, networks and working groups)
- The University Technical Unit for Quality Assessment
- The General Foundation of the University of Alicante (UAFG)
- The UA Career Centre and Employment Counselling Service for Students (GIPE)
- The University Observatory for Job Placement
- The University-Enterprise Foundation (FUNDEUN)
- Transfer Office (OTRI)
- Students (alumni) of UA

Table 1: Characteristics of the university entities that play a role in defining competences based on labour market needs

<p>General Foundation of UA</p>	<ul style="list-style-type: none"> • Interface between the UA and many firms • Training tailored to private sector needs (based on market demands) and targeted to professionals • Employment service and labour market studies <p>www.uafg.es</p>
<p>Technical Unit for Quality Assessment</p>	<ul style="list-style-type: none"> • Management of the teaching activity assessment process • Planning and execution of surveys on labour integration, satisfaction of students, graduates and employers, etc. <p>http://utc.ua.es</p>
<p>The UA Career Centre and Employment Counselling Service for Students (GIPE)</p>	<ul style="list-style-type: none"> • Facilitation placement of students and graduates from the UA • Vocational counselling for students • Studies on supply and demand matching of university degrees <p>www.gipe.ua.es</p>

University Observatory for Job Placement	<ul style="list-style-type: none">• Agreements with enterprises and public administrations with regard to employment and internships• University-enterprise networking events• Training in job search skills and strategies <p>www.insercionlaboral.ua.es</p>
---	---

Competence catalogue of UA:

At an institutional level it was agreed that each degree offered at UA shall equip students with a set of competences, according to the following classification:

- General competences related to the respective degree
- General transversal competences (common competences to be acquired within all degrees offered at UA):
 - o CGUA1: Foreign language skills
 - o CGUA2: Computer and information technology skills
 - o CGUA3: Strong oral and written communication skills
 - o Specific competences

Example: Competences related to the degree of economics offered at UA in the academic year 2010/2011

General Competences (CG)

- CG1: Capacity to find and analyse information.
- CG2: Capacity for team work.
- CG3: Capacity for self-learning.
- CG4: Ability to apply professional criteria based on the use of technical instruments to analyse problems.
- CG5: Capacity to make decisions by applying acquired knowledge to practical situations.
- CG6: Ability to obtain important information from the data that is impossible for non-professionals to recognise.
- CG7: Exhibition of ethical commitment and social responsibility at work, respecting the environment, being aware of and understanding the importance of respecting human rights, equal opportunities for men and women, universal accessibility for the disabled and respect for the values of a peaceful culture with democratic values.
- CG8: Ability to analyse problems using critical reasoning, without prejudices, precisely and rigorously.
- CG9: Capacity for synthesis.

General Competences acquired at University of Alicante (CGUA)

- CGUA1: Ability to read and communicate in a foreign language in a professional environment, especially in English.
- CGUA2: Proficient use of computer, I.T. and communications technology tools in all of one's professional activities.
- CGUA3: Capacity for oral and written communication.

Specific Competences (CE)

- CE1: Contribution towards the correct management of resource allocation in both the private and public context.
- CE2: Identification and anticipation of relevant economic problems relating to resource allocation in general, in both the private and public context.
- CE3: Rational approach to the analysis and description of any aspect of economic reality.
- CE4: Evaluation of the consequences of different potential steps and selection of the best option according to the objectives set.
- CE5: Issuance of expert reports on specific economic situations (international, national or regional) or on sectors of the same.
- CE6: Drafting of economic management projects at international, national or regional levels.
- CE7: Involvement in business management.
- CE8: Identification of the sources of relevant economic information and their content.
- CE9: Understanding of economic institutions as the result and application of theoretical or formal representations of how the economy works.
- CE10: Capacity to apply the knowledge and skills acquired to solve theoretical and applied economic problems.
- CE11: Analytical skills for developing theoretical frameworks that simplify study of the real economy, and capacity to set appropriate levels of abstraction when studying different economic questions.
- CE12: Ability to use the appropriate tools for the analysis, diagnosis and solution of economic questions and problems.

3. Implementing CBL at the University of Alicante

The process at a glance:

The following shall provide an overview of the strategy applied by the University of Alicante to integrate competence-based learning concepts into the study programmes:

- For each degree offered at the university, faculties are required to develop a comprehensive study programme and teaching guide – including CBL objectives and methodologies, following the structure set out in the university regulation for the implementation of graduate studies provided by the responsible vice-rectory.
- **Competences:** The competences related to each degree programme are set out in the Libros Blancos provided by ANECA as an orientation for Spanish universities. Studies, surveys and feedback from a number of diverse actors from the university and other stakeholders provide additional relevant input to define the competences.
- Each faculty at the UA has to develop and publish the new degree programmes as well as teaching guidelines for each course offered (“Teaching Guide”). The development of these documents is supervised by the Technical Unit for Quality Assessment and has to follow the university’s internal process of quality control and approval before they are presented for final accreditation to the Spanish Ministry of Education.

Practical tools available to faculty members for the integration of CBL in the new study programmes:

With a view to effective integration of competence-based learning methods in all study programmes across faculties, the University of Alicante has been promoting a set of initiatives and tools. The most important tools are illustrated as follows:

- **White Papers / Libros Blancos** - The framework proposed by the Libros Blancos serves as a starting point for determining the competences for each degree at the University of Alicante.
- **University Regulation** - To comply with the requirements of the EHEA and the reforms of the Spanish national and regional laws, the responsible vice-rector of the University of Alicante published a regulation which established the procedures to be followed in the process of defining the new degree programmes, focussing on CBL. The regulation establishes the global structure of the degrees at UA, the various required elements to be included in the proposals for the new degree programmes (i.e. description, justification, objectives, access and admission of students, academic staff, materials services and resources, expected results, quality control system, and work plan), procedures for the elaboration and approval of the new study programmes, and methods of evaluating the competences acquired by students, etc.
- **Teaching Guide for all courses offered** - In order to provide further practical assistance to faculty members in developing the new study programmes, the research centre Institute of Education Sciences (Instituto de Ciencias de la Educación) was asked to develop and publish a model teaching guide to be used for all courses offered at the university.

Based on this model, faculty members are required to develop and publish a teaching guide detailing the course programme contents, and specifically the interrelationship of competences and learning objectives, the detailed work planning of activities, and methods proposed to evaluate the learning outcomes and competences, among other things.

The teaching guide for each course shall illustrate the following information:

- The contribution of the course to the professional profile to be developed within a certain degree program, and to the development of the related competences; the role of the course within the study program and interrelationship with other courses.
- Competences
- Generic competences, which need to be developed within each and every study program and are defined as follows:
 - o Instrumental competences, which enable the student to use the knowledge acquired as an instrument to reach other objectives
 - o Interpersonal competences, i.e. the capacity to work in teams, social interaction and cooperation
 - o Systematic competences, i.e. the capacity of vision, integration and relation of the different parts of any system; organisation and entrepreneurship
- Specific competences according to the officially accredited study programmes
- Objectives and learning outcomes in relation to the specific competences:
 - o Cognitive objectives
 - o Instrumental objectives
 - o Attitudes
- Learning contents
- Teaching methodologies
- Evaluation methods

- Project “University Teaching Research Networks” (“Redes de Investigación en docencia universitaria”)

This project is an initiative of the Vice-Rector for Strategic Planning and Quality Assessment, and it has created networks of different actors which shall work together to improve the teaching and learning processes at the University of Alicante regarding CBL and the requirements of EHEA. Specifically, the networks are aimed at promoting research and reflections regarding teaching and learning processes, while encouraging the participation of students and other stakeholders, with a view to widen the perspectives and come up with new, improved teaching methodologies for the development of the required competences. Each network consists of eight to ten members and may include academics, students and management/administrative staff.

The networks aim to provide a platform for university teachers to share experiences, as well as for professional development, and to promote research about teaching and learning methodologies. The network activities and results are periodically reported to the Vice-Rector for Strategic Planning and Quality Assessment.

Once a year, a conference is organised in the framework of the teaching networks project, in order to promote the cooperation and exchange of experiences among the different networks. To further promote the interaction and exchange of experiences and knowledge among teachers, a blog was created within the teaching research networks project (<http://blogs.ua.es/redesice/informacion/>).

The teaching networks project has been operating for more than eight years and has proven to be an important tool for constant improvement of teaching methodologies. In 2010 there were 76 active networks at the University of Alicante, with more than 774 members (university staff and students).

- Teacher training project

Continuous training and skills development of university teachers is considered a core requirement for providing high-quality training programmes and integrate CBL at the University of Alicante. Therefore the university, through the Institute of Education Sciences, offers a training program that responds to the re-training needs of university teachers, particularly regarding issues related to innovation, new technologies and new teaching methodologies. The programme is implemented in coordination with the trainings offered by the regional government for university teachers. Professionals from academia and business deliver the training courses in the following areas:

- Evaluation, teaching methodologies, planning (in general and specific areas)
- Integration of information and communication technologies in teaching
- Job search tools and up-to-date information on labour market needs
- Scientific research, communication and networking
- Basic competences for professional development
- Courses on specific topics on demand

4. Conclusions

At the University of Alicante, like in most other universities in Europe, the integration of competence-based learning into the university study programmes was driven by the Bologna Process and the creation of the EHEA. As Spanish policy actions were taken rather late, the actual implementation of the new degrees including focus on CBL were only fully effective by the academic year 2010/2011. In the process of preparing for the implementation of the new degree system in accordance with the EHEA requirements, several initiatives were taken on national and institutional levels, which led to remarkable results and an efficient and effective transition process. This may be traced back to the fact that UA maintains a long-standing relationship with the private sector and has been studying the labour market

for many years, with the aim to adapt the study programmes as closely as possible to the actual needs of graduates to be successful in the labour market. At the moment, however, not much can be concluded on the experiences of teaching and evaluating competences as per EHEA requirements at UA. Nevertheless, the tools created for the definition and integration of competences in the degree programmes at UA, as discussed above, may well be useful by other universities that seek to integrate CBL.

In summary, the UA experience suggests that the following factors are of particular relevance for integrating CBL in universities:

- Define and communicate clearly the process, responsibilities and timeframes for the integration of CBL
- Facilitate the active involvement of stakeholders, particularly professional organisations and private sector representatives, in the definition and evaluation of competences
- Promote cooperation and provide platforms for the exchange of experiences, learning and networking for faculty members (networking projects, blogs, meetings, conferences)
- Offer targeted training for teaching staff to prepare them to adapt their teaching methodologies to the new requirements
- Propose concrete, hands-on guidance, while at the same time leaving room for flexibility and innovative ideas.

Resources

http://www.ua.es/es/presentacion/vicerrectorado/vr.estudis/grado_posgrado/index.html

<http://www.aneca.es/Documentos-y-publicaciones>

http://www.investigacion-psicopedagogica.org/revista/articulos/15/english/Art_15_267.pdf

<http://rua.ua.es/dspace/bitstream/10045/13199/32/PROPUESTAS%20CAP.%2032.pdf>

http://rua.ua.es/dspace/bitstream/10045/13540/1/ALT_16_01.pdf

<http://library.iated.org/view/CANTEROVICENTE2011ANE>

http://www.investigacion-psicopedagogica.org/revista/articulos/15/english/Art_15_267.pdf

http://www.eassw.org/conferences/Dubrovnik/Presentations/6DubravaSection_II/Session4W7/A_New_SW_%20Education_in_Spain.pdf

Competence Catalogues and their Practical Use

Josep Juandó i Bosch; Magüi Pérez Cabaní, University of Girona, Girona, Spain

1. The concept of competence - how it is defined and its value for establishing links with society

In the context of the European Higher Education Area, the term “competence” is at the heart of the terminology used in relation to teaching. Parallel with it the term “learning outcomes” can be found, which is a concept that is well known and highly acknowledged. Further, the qualifications frameworks are also an important aspect when discussing the term “competence” in relation to the European Higher Education Area. The main point of reference for qualifications frameworks is the European Qualifications Framework.

The need to achieve full transparency and comparability between Europe’s educational systems has been identified as one of the ultimate aims of the Bologna Process. This is also the case for the comparability of results and qualifications.

The concepts employed (e.g. competence, learning outcomes and European Qualifications Framework) are needed to combine and to achieve the objectives of transparency and comparability which ultimately intend to promote mobility among students and workers and strengthen the very identity of the European Union itself by encouraging mutual knowledge, communication and cohesion.

To be able to organise the concepts mentioned in a convenient and effective manner, it is essential to agree on their precise meanings. Therefore whenever it is referred to “competence” or “learning outcomes”, all relevant stakeholders will be talking about the same concept. A consensus on the meaning of these concepts is essential for the construction of a shared discourse and the achievement of solid results.

On the basis of our own experience it is proposed that a specific interpretation of the concepts concerned and an equally precise definition of the relationship between them be tested out, with the aim of establishing a model that is straightforward, uncomplicated, easily understandable and acceptable to the university community. In other words, it would be the “kitchen” where the Bologna Process “recipes” will be put to the test. If the same recipe for the same ingredients and procedures is not given, the dishes that will be served may not be very appetizing. Only too often at meetings involving teaching staff, discussions start without such considerations in mind and therefore it is of the utmost importance to clarify the interpretation of the most common terms in the beginning in order to have the same understanding and to lead discussions in the right direction. The European Commission, when defining and recommending the application of the European Qualifications Framework (EQF), stated the following: “The core of the EQF concerns eight reference levels describing what a learner knows, understands and is able to do – ‘learning outcomes’.”

In accordance with this approach applied with “learning outcomes”, the research group established its initial premise that, among the four foundations of education that Jacques Delors defined in his report “Learning: the Treasure Within”, the one that is most interesting from a teaching point of view, and in terms of thinking about assessment and qualifications right from the planning stage, is “learning to do”. The main argument is that learning to do

is something that can be directly taught and evaluated. It can be reliably determined, for example, whether a student knows how to speak in public, how to compare different political systems, or how to work in a team. At the same time, while teaching and assessing the process of learning to do, it is possible by implication to impart knowledge and assess to what extent students have retained it (the first “pillar” of the Delors report). Moreover, while people are involved in doing something and are immersed in a specific context, they relate to this context in a specific, observable way (the third pillar of the Delors report), and also show themselves as they really are (the fourth pillar of Delors report).

In short, learning to do involves learning, commits students to learn to live together and shows the way to learn how to be. This is why in this proposal competence, the concept at the core of the Bologna Process is identified with learning to do. From the perspective of the research team, a competence is always a question of learning to do. It is a complex form of learning to do that depends on a combination of multiple factors, but which can ultimately be measured in a clear and direct manner.

The research team also finds such an interpretation appropriate because at the same time it provides a meaningful link with society at large. Contemporary European society requires a close relationship with its universities. The key concept in this relationship is the concept of competence. Universities need to know which competences are required by the society they serve and of which they form a part, viewed in terms of an assessable process of learning to do. Once these competences have been identified, the purpose of the teaching task will be to ensure that students achieve the highest degree of competence possible.

Several experts have pointed out that it is crucial to focus on the question of which competences need to be learned during the studies in order to apply them directly at a later stage in the labour market.

If we accept a wider interpretation of the concept of competence, it can be defined as embracing all fields of learning. Thus competence is an objective that involves going beyond the mere acquisition of knowledge and aims to ensure the practical application and use of the knowledge concerned. The concept of competences may already be valuable on its own, but it is also a useful concept of further extending the scope of our knowledge. When viewed from this perspective, competences can be implicated in relation to any field of learning.

2. The Relationship between Competence and Learning Outcomes and, ultimately, the Qualifications Framework

As indicated above, a key issue of this article is the relationship between competences, learning outcomes and the qualifications framework. Once the concept of competence has been accepted as defined above, i.e. as the objective of the learning process and the true role of education, learning outcomes can be viewed in terms of the competence concerned and the extent to which competences have been acquired by the end of the studies. Thus the level of acquired competence must be reflected in the qualifications framework. The following table aims to illustrate this relationship:

Teaching process			After the teaching process.
Start of course	During the course	End of course	Definitions of COMPETENCE are an element of comparison for the qualifications framework.
COMPETENCE is the objective.	COMPETENCE is the reference point for the entire learning and assessment process.	Levels of acquisition of each COMPETENCE are the learning outcomes.	

3. Competence-Based Learning versus Content-Based Learning

Competence-based learning is not a concept that can be implemented easily. The tradition of learning based on the acquisition of a specific content is long and well established. For this reason competence-based learning needs to be approached with a clear vision.

What ultimately changes is the focus of the learning process. In the content-based model, content is at the core of the process, and the objective is for students to acquire this content. It is thus a model based on the transmission of this content. In the competence-based model, the focus is on the use of the content and its significance in relation to society and its evolution. This is a more constructive model.

There is another, extremely direct response to this argument, which is to remark that university students have always acquired knowledge (to a greater or lesser extent depending on how much they studied and the university concerned), and, once their studies were completed, have always had the capacity to apply this knowledge wherever and whenever necessary.

This counter-argument is undoubtedly valid. The difference between the two paradigms, then, is that in the one case the educational institution aims to provide the knowledge and its application is delegated to the graduate's individual initiative, while in the new model the use of the knowledge concerned is dealt with directly and explicitly during the learning and teaching process within the educational institution itself.

Thus it is ultimately a question of focus, so that the focus on the knowledge acquired becomes a focus on competence, i.e. the use of this specific knowledge. It is self-explanatory that the knowledge must be present before it can be used, which means that content continues to be the basis of the learning process.

These approaches are accompanied by roles that vary between the two models:

	Content-based model	Competence-based model
Student's role	To learn content	To acquire competence (i.e. reflective, constructive involvement based on content)
Teacher's role	To teach content	To guide the building of competence (based on content)

As a conclusion it may be stated that competence-based learning does not exclude content-based learning, but rather goes a step further, while at the same time giving the student greater responsibility.

Of course, particular educational centres, universities or lecturers can be identified that have always approached the learning process from this viewpoint, and for whom this reform represents no change at all. In fact, the learning model which is proposed is based on existing principles that are already considered to be valid and able to be extrapolated, which likely is equally true of the majority of reforms in any field. It is not so much a case of inventing new approaches as of sharing good ideas that already exist.

4. Kompetencat e përgjithshme dhe të veçanta

From the very start of the discussion of the question of competence, a classification of competences has been established (e.g. in the Tuning project) so as to organise them into different categories. In this proposal the research team simplifies these classifications by dividing them into generic (i.e. transversal or across-the-board) and specific competences, on the basis that the greatest possible simplicity will give the greatest possible chance that the system will be applied.

The difference between generic and specific competences is clear: the generic category refers to transversal or across-the-board competences that apply to different fields of knowledge. By “specific”, the research team refers to particular aspects concerning a given field of knowledge.

As an example, the generic competences at the University of Girona include the following:

- Use of English
- Effective collection and selection of information
- Use of information and communication technology
- Team-work
- Oral and written communication
- Evaluation of the sustainability of students' own proposals and actions
- Analysis of the ethical implications of professional actions
- Design of creative proposals.

The following are examples of specific competences:

- Establishing priorities, aims and objectives for treatment (psychology)
- Identifying and describing how the relationship between the natural world and cultivation is shown in different terrains (geography)
- Discussing and providing legal arguments in relation to various sections of the legal code (law)
- Designing courses of treatment intended for individuals, families or groups; evaluating their impact and making appropriate adjustments (nursing)

The entire content of a given course is thus included in the list of competences for the course concerned, in such a way that the list of competences (both generic and specific) makes up a profile of the graduate. This constitutes what may be called the Competence Catalogue, corresponding to the relevant courses.

The Competence Catalogue for a given university may thus adopt the following pattern:

University Competence Catalogue		
Course A	Specific competences for course A.	Generic competences of the university.
Course B	Specific competences for course B.	
....	...	
Course N	Specific competences for course N.	

5. How to Compile the Competence Catalogue

When a university and its teachers are not dealing with setting up a new framework for the university or a new course, then the first source of reference for the list of competences which the course should cover is to be found in the details of the course concerned in its current form. For the re-design process it is necessary to part from the basic premise that the existing practices and learning processes are valid and useful. Therefore the focus needs to be changed from content based to competence based. External consultation will also play an essential role. The research team thus proposes to define competences using two complementary methods: internal reflection and external consultation.

Internal reflection:

The first step is to agree to adopt a given definition of competence. As already mentioned in this article, one must consider that gaining competence is a complex process of learning to do, and it should therefore be formulated in the appropriate terms: real activities that are easily observable and assessable, accompanied by the performance of the activity concerned. On the basis of this premise it is then necessary to review the study programmes and their contents subject by subject, with a view to identifying the objective of each course. Which form of “learning to do” will they be preparing for? Which form of learning to do constitutes the purpose for which the course was conceived? The following table is an example of a possible working profile. The first line, for example, might include the following details:

Course: Architecture		
Subject	Content	Competence targeted
Graphic Representation 1	Slopes, roofs and ground surfaces.	Graphic representation of areas and objects.

...

By following this procedure it can be determined whether different content material is intended for the same competence. This is natural, since competences are considered to be complex activities which require different forms of content in order to be put into practice.

The same process of internal reflection, which is more fruitful if conducted in collaboration with other people, may contain a second aspect focused on the question of which competences need to be explicitly developed to achieve the particular vision.

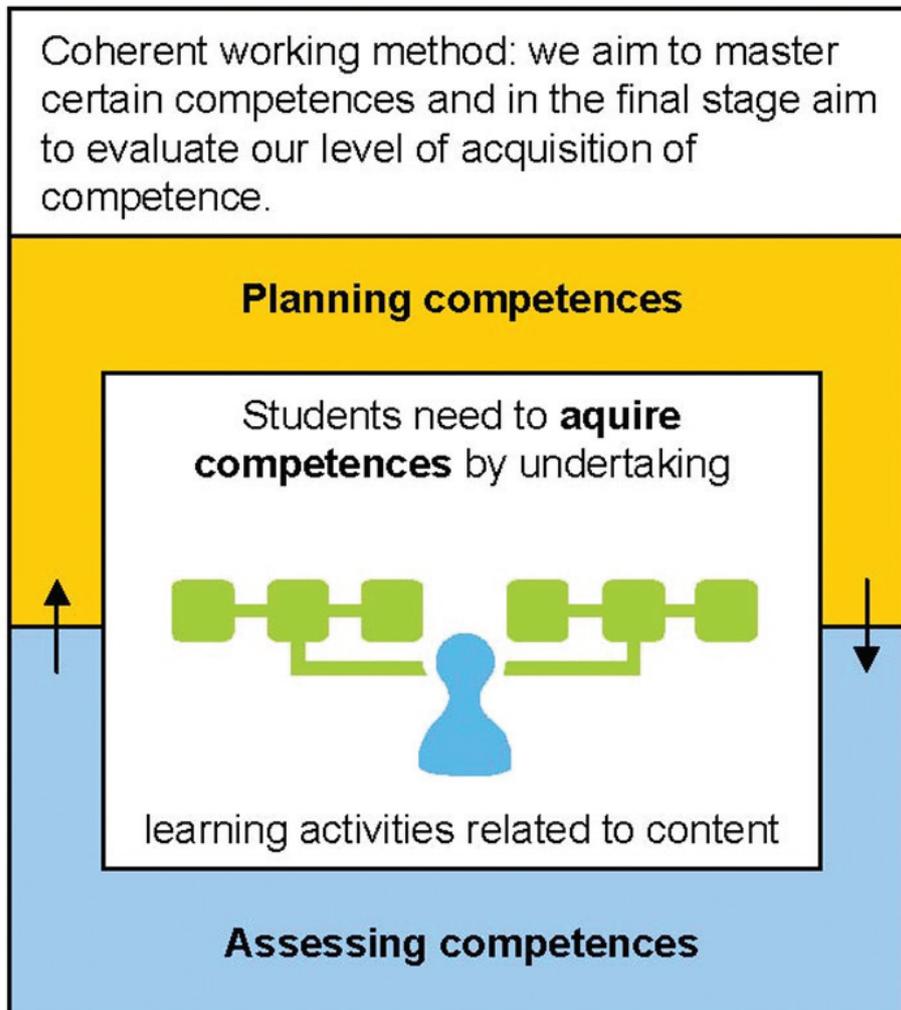
External consultation:

Some sections of this manual make explicit reference to the methods and systems of consultation employed in society at large in connection with this question. It is important to emphasize the fact that, before undertaking any type of consultation, it is necessary to make it clear which definition of competences is used and to employ this when dealing with social contacts.

6. From the List of Competences to the Classroom

The main danger when planning a competence-based learning process is that it is not actually based on real competences. The ultimate objective when approaching the task of planning competence-based learning processes is that there should be a real relationship between the competence and what takes place in the classroom.

In some way it must be ensured that the first stage in the learning process (i.e. planning) and the last stage (i.e. assessment) are linked, as shown in the following diagram:



The path that should be followed in the developed model in order to transfer the relevant competences to the classroom will be as follows:

- Consider the possibility of dividing each competence into levels of complexity or component parts, so as to achieve the most precise definition possible.
- Link each competence or component part of a competence to precise subjects, so that each subject is assigned the role of developing part of the relevant competence.

During this process each competence may be assigned to more than one subject, at different levels of complexity or in different component parts. This operation ensures the overall coherence of the degree course. It ensures that each competence is developed sufficiently and that no subject is linked to a single competence or overloaded with material. A straightforward dual-axis table facilitates this operation:

Course: _____

Competence in the course Subjects in the course	C1	C2	C3	C4	C5		CN
	A1	X		X			X
A2		X	X		X		
A3		X		X			
	X		X		X		X
AN		X		X		X	

Working Plan

Within the framework of each specific subject, plan the work involved in each “loaded” competence by answering the following questions:

- Which learning activities do students need to engage in so as to develop this competence? How long will they take?
- Which content material will need to be used for these learning activities?
- Which of these activities, already linked to competences, will also be considered as assessment activities?
- Are any other assessment activities explicitly designated to determine the acquisition of competences?
- Which assessment criteria will be applied?

7. Obtaining and Expressing Learning Outcomes

Once the learning process along the lines indicated above has been completed at the end of a given period of a course, qualifications (or marks) will be issued as a result of the assessment activities undertaken in each subject during the period concerned. It is possible (and desirable) that different assessment activities and even different subjects should be linked to – and should provide an assessment of – the same competence. This situation enables the research team to obtain the learning outcomes in relation to each subject and each competence, through the appropriate management of the results. The information

obtained is of significant value for the application in different contexts: e.g. as a European qualification supplement, or in the context of a qualification framework, etc.

At the same time, the system also makes it possible to monitor, over various course periods, the development of students' competences; this constitutes an instrument of the highest significance that enables lecturers to regulate the learning process and students to re-direct their energies if needed.

Developing Competences on Non-routine Tasks: Matching Skills to Labour Market Needs in light of Opportunities from New Technologies

Brunella Botte; Giada Marinensi; Carlo Maria Medaglia, CATTID-LABeL, Sapienza University of Rome, Rome, Italy

1. Abstract

Labour markets and universities throughout Europe have long been in search of a point of contact able to encourage the creation of synergies. However, the recent evolutions of the working contexts, caused in part by the global financial crisis, rapidly led to a significant increase in new needs of companies concerning the competences of professionals and the expertise of the workers.

Thus how can universities meet these new demands?

First of all, in order to answer this question the key competences required by the labour market need to be identified. Further, an analysis of the European project “Labour Market In Touch” will be conducted in order to add another perspective. Afterwards, it can be seen how the competence-based learning paradigm can be used to deliver those skills needed by the labour market to future workers in an appropriate way, especially in light of the capabilities of new technologies.

2. Introduction

Over the last years the world’s events have led to severe changes affecting all sectors of the global economy and consequently severely damaging all the inherent economic processes. In order to stay competitive during and even after this pitfall within the global economy it is now necessary to speed up all processes again in order to increase the competitiveness and minimize the risks which are inherent to the financial crisis.

The financial crisis has caused a massive stir within the European Union economy and therefore actions need to be taken in order to stabilise and reshape the economy and its work dynamics.

The need to handle the labour market’s new requests somehow forced companies to search not only for different expertises but also for more appropriate and continuous training for workers.

To achieve this aim, Cedefop, the European Centre for the Development of Vocational Training, conducted a survey in 2010 to analyse the most desired and relevant skills and qualifications for the existing jobs in the labour market (according to ISCO classification) among the European Union member states. The report highlighted that the most important skills are the ones which allow the employee to manage non-routine tasks, namely tasks

not manageable through technology. Through this survey it was identified that cross-competences like problem solving, self-management and communication skills are among the most important in the European labour market.

But which exactly are the skills that facilitate the management of non-routine tasks?

At the present time a classification of those skills in the European context is not available, although Europe is moving toward this direction.

An example of this trend in the European Union is the project “Labour Market In Touch: New non-routine skills via mobile game-based learning”, which started in 2010 and is sponsored by the Leonardo da Vinci Program for Development of Innovation.

3. The In Touch Project

The aim of the In Touch project is to define an innovative approach useful to new generations of workers in order to improve their non-routine key competences in a flexible and technologically advanced way. Further, the approach is also intended to be coherent with the newly arisen labour market needs.

The source of inspiration for this project and its aims is the European strategy summarised in the document “New Competences for New Jobs”, a study conducted by the European Union. According to this study, the In Touch European partners will set up an innovative training kit for adult workers based on mobile learning in a step-by-step process.

The first step towards this goal has been the identification of the most significant non-routine skills in each country involved. This has been done through a research project comprising preparatory secondary research and successive field research.

The aim of the secondary research was the identification of the most relevant non-routine skills involved, through observing significant work scenarios in small and medium enterprises.

In order to identify the ten non-routine skills most needed in Europe, every partner then identified ten subjects among office workers and managers involved in decision-making activities.

The method used was the semi-structured interview. In the first phase of the field research, every respondent was asked to score every presented skill from 1 (not relevant) to 4 (very relevant), in order to clarify the degree of relevance of each skill.

After that, every skill was subdivided into its basic components (between four and six were identified for every skill); each skill was voted on in range from 1 to 4 according to its importance. A description of the motivation that led to the score chosen was also required from the respondents in order to get a better understanding.

In the next step all the gathered data was examined and combined in order to attain a common evaluation of the relevance of every skill.

The skills which were rated highest concerning their importance were the following: initiative, innovativeness, strategic thinking, openness to change, inspiring motivation, teamwork,

continuous improvement, decision making, planning, conflict management, communication and flexibility.

Yet how can those skills be learned?

The Competence-Based Learning (CBL) methodology provides an answer to this question. It is a learning paradigm able to bridge the educational and training world to the labour market.

Through this methodology it would become possible to describe qualifications and skills not only in terms of university qualifications but also in terms of competences.

4. Competence-Based Learning

For the labour market it is important to know not only how many years of theoretical knowledge was acquired, but more importantly, which performances can be achieved with this available knowledge. This is, in short, the competence-based learning concept.

This paradigm emerged from the United States in 1970 and refers to an educational movement supporting the definition of learning goals in terms of accurate and measurable description of knowledge, skills and behaviours that students should have at the end of their academic careers.

Unlike traditional learning systems, which use time as a unit of progress and have a teacher-centred approach, competence-based training has its own unit of measurement in the achievement of a certain skill, and moreover, is student-centred.

In competence-based training, it is essential to choose skills and competences to be learned precisely and to put the theory behind those skills into practice. It is also important to provide an adequate structure for the training in order to implement the learned theory.

But even competence-based training, like any other learning paradigm, has its advantages and disadvantages.

On the one hand, the acquisition of competences and skills can be easily implemented in the labour market and learning time is optimised due to the new role of the teachers.

However, these advantages can also turn into disadvantages when not reviewed carefully in advance: for instance, an inaccurate specification of skills and competences to be taught can lead to a poor training outcome.

Therefore, it is important for the course goals be made clear in the beginning in order to structure training properly.

Lastly, it should not be forgotten that running a training course based on competence-based training is more expensive than a classic learning course because of the practical elements required.

5. Promoting the Adoption of a Competence-Based Learning Paradigm: the Opportunities of New Technologies

In the previous paragraphs the most desired non-routine skills in the European labour market were described and identified, and an adequate learning paradigm to achieve the mastery of those skills was proposed. What has not yet been considered is the question of which the most appropriate learning tools for this purpose are.

In the competence-based training field the practical elements are essential in order to recreate an environment in which the target group wants to experience real situations. However, it should be considered that this can be expensive due to the amount of resources required.

A solution to this impasse can be found in the use of simulations. There are many different kinds of simulations and they can also have different purposes. For example, they can be used to study scientific events or behaviours and they can be based on mathematical knowledge or a simple branching structure.

Simulations are usually used when the topics of the training are not theories but skills and the leading paradigm is “learning by doing”.

In particular, a suggested tool to put the competence-based training theory into practice is a peculiar kind of simulation, born from the interception with the game world is the “serious game”.

Serious games can be defined as interactive experiences presenting the look and feeling of an actual game but having different purposes like training, educational and awareness campaigns, promotional activities and social campaigns. Moreover, they reproduce real situations in which using knowledge and strategising could help to reach a final goal.

Using serious games in a competence-based training context leads not only to the typical advantages of simulation and “learning by doing” but also adds a benefit through the engaging power of video games.

As previously mentioned, the non-routine skills needed in the European labour market are soft-skills. These are important in order to choose the appropriate kind of serious games; according to the classification made by Botte, Matera and Sponsiello (2009) the right kind of serious game to teach soft-skills is TaleSim.

In TaleSim, the user “lives” and “acts” within a real story.

Starting from an initial background the user has to make choices in order to achieve a final goal. This achievement, however, is not the only aim. The users of this serious game need to benefit from it in terms of application of soft skills but should be pointed out that the degree of skills gained depends on the user.

In this case, the interface represents the elements and the scenarios of the story in a highly engaging way thanks to what Ronsivalle calls “direct manipulation”.

The complexity of TaleSim depends on the kind of scenarios applied. Either a simple branching structure or a complex system dynamic engine can be used.

6. Conclusions

This document has outlined a possible way for universities to find a new point of contact with the labour market. Further, it pointed out how the competences and skills of professionals and workers changed as a consequence of the financial crisis through the analysis of the European project In Touch.

For the matching of educational and professional needs it is important to choose the right learning paradigm. In this case, the competence-based learning theory was identified as the right choice.

Through practical experiences the students can achieve mastery of the needed skills: this can be possible thanks to serious games, an affordable and effective way to “act” into real scenarios.

It would be beneficial for universities to try a new method of educating students: The involving power of games combined with theory can provide a stronger and more complete foundation, with a better understanding of real work dynamics.

This can be an excellent way to decrease the real distance between universities and the labour market.

ECTS-Based Competence System

Filip De Bal, KaHo Sint-Lieven, Ghent, Belgium

1. Introduction

In 2004, the first competence management meetings were organised at KaHo. The central management decided to implement competence-based learning in all the departments. Thanks to the positive drive of our local educational staff, many teaching activities were already competence driven. Still, most of the work needed to be reorganised and restructured. A learning flow-chart, no matter in which area, has the same steps as in the Deming cycle.

2. Plan-Do-Check-Act

The learning activity must be planned to enhance the aimed competences, and the student needs to carry out the planned activities in order to acquire the aimed competences. The following step measures up to which level the student obtained these competences. During the last step, any necessary actions are taken.

First of all, everything a student should learn, including the profession-specific content of the topics, needs to be translated into competences, which are grouped together.

The first group is the group of general competences, such as “acting methodically and systematically in the function of creative knowledge generation/development” or “communicative competency: to communicate information, ideas, problems and solutions, both to specialists and non-specialists”.

The second group consists of the profession-oriented/general scientific competences. These are generic, general competences based on the level of the degree, such as professional or academic degree.

In the Flemish educational system the competences from the first and second group are listed and specified by the Ministry of Education.

Table 1 provides an overview of the competence list, specified by the Ministry of Education. The codes refer to the degree (PB=Professional Bachelor, AB=Academic Bachelor, M=Master).

- ual and cognitive capacities
- on and processing of information
- eflection
- ethodically and systematically in function of creative knowledge generation/development
- ip
- icative competency to communicate information, ideas, problems and solutions, both to specialists and non-specialists
- earning
- ig appropriate cognitive and reasoning skills
- e to acquire and handle information
- e to critical reflection
- ative
- e to implement basic management tasks
- g to communicate information, ideas, problems and solutions, with specialist as well as with laymen
- ool of the engagement of life-long-learning
- le to think and handle in a scientific way
- e to handle complex problems
- le to reflect on the own way of thinking and working, able to translate this reflection to a development of more adequate solutions
- re capacity to communicate about own research and problem solutions with colleagues and laymen
- re capacity to form a judgement in an uncertain context
- for teamwork
- for problem solving : competency for independent determination of problems, analysis of complex problems in professional practice and development of useful solutions
- bility to society and professional field
- earch minded
- re knowledge of methods and techniques of research and able to apply them adequately
- e to obtain relevant data in order to evaluate social, scientific and ethical questions
- re possibility to generate an appreciation of the uncertainty, the ambiguity and the restraints of knowledge
- e to apply paradigms in the field of science and to identify the restraints of the paradigms
- ool of the power of originality and creativity with regard to the continuous expansion of the knowledge and insights
- e to work together in a multidisciplinary environment
- e to initiate research in a problem-based way
- e to work in a team
- e to use methods and techniques in research
- e to design research
- e to work towards solutions in the sense of defining independently and analysing complex problem situations in the professional practice and being able to develop and to implement significant strategies for solutions
- scious of the social responsibility in the context of the professional practice
- ool of the comprehension of the scientific-disciplinary basic knowledge of a specific field in science
- ig the systematic knowledge of the essential discipline elements, including acquiring coherent and detailed knowledge, partly inspired by the newest developments of the discipline
- e to understand the structure of the field of study and the connection with other fields of study
- advanced comprehension and insight in the scientific-disciplinary knowledge of a certain field of science
- ight in the newest knowledge of the field of study or parts of it
- to follow and to interpret the way in which the theory evolves
- to contribute an original contribution to the knowledge in one or several parts of the field of study
- using specific skills, regarding to the field of study, such as designing, examining, analysing and diagnosing
- to do scientific research independently at the level of a starting researcher
- to apply independently the scientific knowledge at the level of a starting professional

The third and fourth lists concern the profession-specific competences or scientific competences. Profession-specific competences correspond to professional degrees and scientific competences correspond to academic degrees. These competences are specified by the departments, based on reviews by those in the field.

In engineering degrees, the third and fourth competence lists are comprehensive. For example, take the strength calculation of a steel bridge: One either can or cannot design and calculate a bridge. Learning activities are easy to plan, and exercises can be based on case studies. Project-based education will be very common in such an example. The professor is no longer interested in the number of hours a student is spending on this topic. The student has to solve the problem and carry out his/her own planning. In the end the result is mathematical; this makes it easy to evaluate. If the student fails this competence, it's easy to remedy: He has to study harder, do more exercises, and so forth. General competences, however, are much more complicated in engineering degrees. Often they are already present thanks to project-based learning. Evaluation is often narrowed to peer evaluation or traditional subjective judgment.

After several meetings the motivation to implement general competences in the engineering department decreased. The consensus was that engineers were not qualified for this. Engineers have a need for mathematically measurable systems.

At that critical moment, competence systems were also being implemented in different industries. The main drive to do this is in some cases purely financial. A competence-based evaluation defines the status of the employee, which in turn defines his or her salary.

Thanks to close collaboration with the industries, KaHo obtained access to this system. At KaHo, the engineering department chose a very simple and direct system which was developed by the human resources department of a major company. The target group of this system was a technical production group.

This system consists of several competence sheets. Each sheet deals with one competence. From the description of competence indicators, one can determine at which level of competence one appears, but not at which level one is. One can only decide how the environment perceives that person, and this can be quantified using competence indicators.

The competence file PB 06, for example, is concerned with the competence that students should “possess the ability to communicate information, ideas, problems and solutions, both to specialists and to non-specialists”.

	Disanji mekanik dhe teknologjia e prodhimit	
	Dosja e kompetencave PB 06 përmban aftësinë për t'ua komunikuar informacionin, idetë, problemet apo zgjidhjet si specialistëve ashtu edhe laikëve	

E shpreh vetveten në mënyrë të qartë, të plotë dhe të kuptueshme dhe kujdeset që mesazhi të arrijë ashtu si është më së miri, deri të audienca së cilës i drejtohet.

Konteksti	Komunikimi është një kompetencë e avansuar e interakcionit që është e rëndësishme për të gjitha situatat profesionale ku punohet së bashku dhe ku krijohen kontaktet.
-----------	---

Indikatorët e sjelljes

Mungesa/pjesërisht	<ul style="list-style-type: none"> - Nuk arrin të formulojë idetë e veta në mënyrë të qartë apo të kuptueshme me lehtësi. - Harron disa hapa në rrjedhën e diskursit, është konfuz. - Nuk e merre parasysh publikun e targetuar
Themelore (D)	<ul style="list-style-type: none"> - Njeh disa nocione të mjeteve dhe teknikave të komunikimit. - I formulon idetë e veta në mënyrë mjaft të qartë pa u përqendruar te publiku i targetuar.
Mirë (C)	<ul style="list-style-type: none"> - I zotëron mjetet dhe teknikat e komunikimit. - Zakonisht ia del që të shprehë idetë e veta në mënyrë të qartë dhe të kuptueshme dhe merr parasysh publikun e targetuar. - Interesohet për të kuptuar nese mesazhi është kuptuar si duhet.
I avancuar (B)	<ul style="list-style-type: none"> - Sjell mjete dhe teknika të reja për të përmirësuar komunikimin. - Ia del që të shprehë idetë e veta në mënyrë të qartë dhe të kuptueshme, edhe nese ato janë të komplikuar. - I adapton shprehjet e veta në mënyrë mjaft fleksibile në funksion të bashkëbiseduesit, iu përgjigjet në mënyrë të përshtatshme pyetjeve të një grupi (të madh) partnerësh.
Shkëlqyeshëm (A)	<ul style="list-style-type: none"> - Posedon standarde të larta për të gjitha format e komunikimit. - Gjithnjë ia del të formulojë idetë e veta në mënyrë të qartë dhe të kuptueshëm madje edhe atëherë kur ato janë shumë të komplikuar. - Bën pyetje që të marrë vesh nese idetë e tij/saj janë kuptuar ashtu si duhet. - Iu ndihmon të tjerëve dhe i inkurajon ata që të kenë diskutime të qarta.

Indikatorët e rezultateve

Studentët që posedojnë këto aftësi do të:	Studentët që nuk posedojnë këtë kompetencë do të:
Mund të kuptojnë mesazhe të caktuara në mënyrë të qartë.	Shprehin idetë që u bien ndërmend në mënyrë të pastrukturuar.
Bëjnë një prezantim apo shkruajnë një dokument në mënyrë të strukturuar.	Në shprehjet e tyre shfaqin padurimin.
E bëjnë veten të kuptueshëm për nivelin e lexuesve të audiençës së vet.	Flasin më shumë se sa shkruajnë.
I parashikojnë pyetjet e lexuesve.	Japin informacionin e duhur, asme shumë e as më pak se sa nevojitet.

This simple structure provides clear criteria. These criteria, the competence indicators, are used by the staff to evaluate the students. The complete competence list is then divided throughout the curriculum. Each competence is evaluated in several conditions, several domains and by different supervisors. The competences are then listed in the ECTS sheets.

Example ECTS sheet:

Bachelor in mechanical design- and productiontechnology : 3rd Ba Mechanical design and productiontechnology	2010-2011
Automation 5	
1. General info	
<ul style="list-style-type: none"> • Code: 3604220 • Number of ECTS credits: 4 • Credit contract possible: Yes • Examination contract possible: Yes • Teaching language: Dutch • Subject coordinator: Merckx Dirk • Tolerable: 	
2. Course unit type	
<ul style="list-style-type: none"> • specializing 	
3. Course Activity	
<ul style="list-style-type: none"> • Hydraulics • Lab automation 2 • Control techniques 	
4. Content	
<ul style="list-style-type: none"> • Hydraulics: advancement and functioning of hydraulic pumps, motors, valves, attributes, pressure control valves, flow control valves • lab automation: programming of PLC in machine applications, robotics, practical PID regulations • Control techniques 	
5. Learning outcomes	
A. General competences	
PB - 01. Intellectual and cognitive capacities PB - 02. Acquisition and processing of information PB - 04. Acting methodically and systematically in function of creative knowledge generation/development	
<i>Explanation</i>	
lab automation: exercises on solving complex automation problems through PLC programming using the knowledge of automation 1-4. integration of the part of automation in the industrial project	
B. Profession-oriented/ General scientific competences	
PB - 09. Capacity for problem solving : competency for independent determination of problems, analysis of complex problems in professional practice and development of useful solutions	
<i>Explanation</i>	
Using the known problem solve methods (grafcet, cascade, timedigram) to reach a correct working solution on the automation problem	
C. Profession-specific competences	
Being able to describe the working and the properties of electronic parts. Being able to describe to describe the working of simple circuits build with these components. Being able to describe an electrical equipment of a house. Being able to describe the working and the properties of different kinds of securities for household equipments Being able to design, write and test a correct working PLC program for realistic automation problems. Being able to describe the working and the properties of a control loop. Being able to explain the properties of a PID-controller. Getting familiar with control technology. Being able to determine the PID-control parameters using different set up rules. (Ziegler-Nichols, Trial and error, ..) Being able to explain the working of different kinds of sensors (pressure, flow, level, ..) Being able to describe and to design a hydraulic circuit. Of different kinds of hydraulic components being able to describe the working, the properties and symbols.	
contents:	
D. Scientific competences	
/	
6. Prerequisites	

A. Previously required courses

- Mechanische ontwerp- en productietechnologie // Automation 1
- Mechanische ontwerp- en productietechnologie // Automation 2
- Mechanische ontwerp- en productietechnologie // Automation 3

B. Required competences

The student succeeded in automation 3

- ↳ The student has a good knowledge about analysing DC and AC circuits.
- ↳ The student has a good knowledge about PLC programming.
- ↳ The student has a good knowledge about pneumatic components

7. Educational tools**A. Type**

- ↳ course
- ↳ audio-visual tools
- ↳ online learning platform

B. Obligatory educational tools

Courses: Labo automatisatie, "hydraulica" - Delta Press
Powerpoint presentations Hydraulics

C. Recommended educational tools

Handbook: Hydraulische Installaties - Delta Press

8. Teaching methods**A. Types**

- ↳ HC
- ↳ practice
- ↳ groupwork
- ↳ self study

B. Description

- ↳ The theoretical knowledge is offered in the colleges.
- ↳ lab automation: Practical applications are worked out in groups of 2 students
- ↳ Colleges:
Hydraulics: 12 weeks x 1,5 hours = 18 hours
control techniques: 12 weeks x 1,5 hours = 18 hours
- ↳ Labs 6 weeks x 3 hours = 18 hours
- ↳ these courses are organised during the first semester

9. Assessment**A. Types**

- ↳ written exam
- ↳ evaluation

B. Description

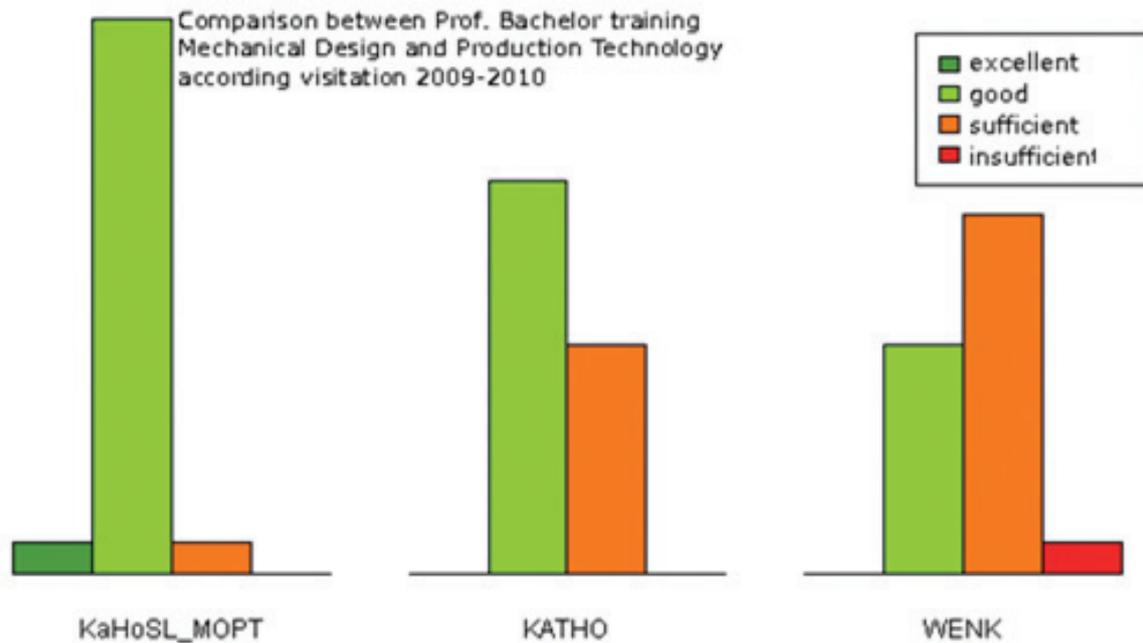
- ↳ Through an assesment the knowledge and capability in application are tested
- ↳ During the lab sessions the capability of the student in aplying his knowledge is tested (**over all-assessment - Performance-assessment**)
- ↳ the student makes a documented report describing his experiences, what he learned and remaining problems(**Portfolio**)
- ↳ assesment: hydraulics 2 Credits
- ↳ labs: permanent evaluation: 1 credit
- ↳ assesment: control techniques: 1 credit
- ↳ Second chance: depending on the competences that are not yet achieved, one or more lab sessions will be redone
- ↳ The second chance is always in period 3

10. Teaching support

The students are free to contact the teacher for additional explanations, exercises or other support. This can be done both personal or through electronic communication.
A forum is available on Toledo where students can post their questions to each other or to the teacher.

In regular intervals the staff has meetings to discuss the competences and behaviour of the students. Experience has shown that the system is very reliable and repeatable. Only rarely does one supervisor have a different estimation than another colleague, and if there is a difference, the difference is always small.

In 2009-2010 this system was evaluated by an external commission. The committee organised a survey with the work field, industry and alumni.



(plot versie: 06/09/2010-15:37) www.ikdoemechanica.be

KaHo-MOPT merited one excellent and several good scores. An important issue was the ECTS-based competence system, which was simple and easy to use, with its repeatability and reliability.

Good Practice of Curriculum Development at the University of Prishtina (UP), Kosovo

Case study: Development of a Master of Business Administration (MBA) in Health Management, Faculty of Medicine

But Dedaj; Milote Sadiku; Mjellma Carabregu, University of Prishtina, Prishtina, Kosovo

1. Introduction

This article describes the development of the Master of Business Administration (MBA) in Health Management in the Faculty of Medicine of the University of Prishtina by giving an overview of the definition of the study program's aim, the definition of the study program's learning objectives, the study program structure, the comparability and internationalisation, the cooperation with the labour market partners, the gender fairness, the accreditation and other modalities before the start of the program. At the end of the article some conclusions and recommendations have been made based on the successful introduction of competence-based teaching at UP.

2. Background Information

In the academic year 2001/2002 UP voluntarily participated in the Bologna Process by conducting a huge reform of the institution and curricula. Its study programmes are organised around the three-cycle system: Bachelor, Master and Doctorate.

By trying to respond to the needs of the health sector in Kosovo, the University of Prishtina, and specifically the Faculty of Medicine, decided to design an MBA in Health Management. Since its founding 40 years ago, the University of Prishtina has only awarded scientific degrees. This programme would be the first professional programme addressing the needs of the Kosovo health sector. Furthermore, considering that the program has a professional orientation, it was developed and taught entirely in English by local Kosovar professors and guest lecturers from EU partner institutions. Thus it represents not only the first professional degree awarded by UP but also the first one taught in English by local professors.

3. Processes of Study Program Development

Labour market relevance of the study program development:

The current situation in the health system of Kosovo is quite difficult as the health system faces constant obstacles caused by a lack of educated and skilled managers. Information systems in health are in the very early stages of development. In addition, the statistical medical newsletter of 2006 provides statistics regarding the overall health situation and

general number of employees in Kosovo's health system. Official government documents (e.g. Health Strategy 2005 – 2015) and studies of relevant international organisations such as the World Bank: Kosovo Poverty Assessment, 2007, Vol. I and II; and the Kosovo Health Financing Reform Study, 2008, indicate that there is an ultimate need for expertise in health management to enable the entire field to deal with challenges rising from the new economic and political situation.

Besides the reports mentioned before, labour market research was conducted with the main stakeholders of the health sector in Kosovo: the University Clinical Center Prishtina, regional hospitals, main family medicine centres, the Ministry of Health of Kosovo, private hospitals and clinics, and the University Clinic of Dentistry of Kosovo. The main aim of this study was to measure the requirements that the profile of an expert within the health sector should have. The results of the survey verified the conclusions of different official reports. Thus, it reinforced the fact that there is an emerging need within these institutions for the candidates to have such a profile.

Definition of the study program's aim:

Relying on the survey results the general study program objective has been designed as follows:

“The MBA in Health Management prepares students for the contemporary challenges faced by social welfare and national health systems and in doing so further develops health care at the local and national level. Furthermore, it equips students with all the administrative and management-related skills needed for a career in various private and public organizations, NGOs, companies, and institutions of health care, taking into consideration classic economic and organizational theory. In addition, it teaches students the analytical skills needed to solve problems of high social complexity as well as to increase students' competences in effective communication and team work to achieve specific goals”.

Furthermore, the program aims to prepare the graduates not just for the local market, but also for the global market.

Definition of the study programme's learning outcomes:

After designing the study program's objectives, the learning objectives of the program level have been developed to consist of general and specific outcomes. After the completion of the study program MBA in Health Management, students will:

- Be able to demonstrate critical understanding of key concepts and theories related to health management
- Develop practical skills in leading, managing, and building capacities, in relation to emerging situations and limited capacities
- Have practical knowledge of a range of applications and environments for monitoring and controlling specific problems faced in medical institutions
- Be able to develop their own innovative solutions according to the emerging needs
- Become skilled managers in typical and unusual situations

Study programme structure:

The University of Prishtina uses the European Credit Transfer System (ECTS) to structure its programmes, according to the Bologna Process. Since the programme is professionally oriented, it consists of 90 ECTS credits over a duration of two years (four semesters).

Comparability and internationalization:

The modules have been designed in cooperation with the “twinning” higher education institution from an EU country, as well with the Kosovo labour market partners (who were part of the survey). The modules were designed based on the model in order to respond to the demands and challenges of the Kosovar health system by being very practice-oriented, as well as based on the curriculum of the EU higher education twinning partner. One of the main criteria introduced by UP is that a new programme designed should have around 85% similarity with a programme at an EU university. Further developing a study programme that similar to a programme in an EU university enables easier cooperation with the EU universities and increases the programme’s comparability. Thus, easier cooperation increases chances of internationalisation of a specific faculty in terms of staff and student mobility, and this in turn contributes to UP’s overall internationalisation.

The EU twinning higher education institution contributed expertise to the programme development and supported the programme in the teaching process by sending guest lecturers to the University of Prishtina.

Cooperation with the labour market partners:

Intense cooperation developed with the most relevant key players of the Kosovar health sector in terms of providing experts to take over guest lecturer positions for specific courses within modules, providing internships, concrete topics for the final theses, etc.

Gender fairness:

Within the project different aspects of gender fairness have been taken into consideration:

- Gender balance during student selection
- Integration of gender aspects within modules/courses, i.e. introduction of specific chapters on gender-related issues
- Use of language during lectures and in teaching materials that promotes gender balance

Accreditation and other modalities before the start of the program:

Each of the newly introduced and/or modified study programmes at the University of Prishtina should pass through Senate approval. Once approved, the programme as such has to be submitted to the Kosovo Accreditation Agency. This agency with its developed procedures decides either to accredit or not to accredit the study programme. If the programme is not accredited it may not enrol new students.

The MBA in Health Management has been successfully accredited by the Kosovo Accreditation Agency. As a result, in the academic year 2009/2010 36 students were enrolled in the study programme.

Considering the aforementioned steps, the programme as such represents a good model of curriculum development not only for the University of Prishtina but also for the entire Kosovar higher education system.

4. Conclusion

The University of Prishtina, comprising 17 faculties, is faced with many problems and challenges. Thus it is very difficult for each of its study programmes to follow all the steps as they were introduced during the development of the MBA in Health Management (and some other master's programmes).

A common point for all the existing documents on higher education at the European level is the appeal of "the employability aspects of the graduates", i.e. that in the future the study programmes that have a high employment rate will survive within higher education institutions. Considering that the public universities have been recognised traditionally as more theory oriented, there is a significant challenge ahead for institutions all over Europe – not just in Kosovo – to undertake a major transformation by providing study programmes that guarantee a more seamless employment process of their graduates.

According to the Bologna Process, the envisaged European Higher Education Area will:

- Facilitate mobility of students, graduates and higher education staff
- Prepare students for their future careers and for life as active citizens in democratic societies, and support their personal development
- Offer broad access to high-quality higher education, based on democratic principles and academic freedom

By voluntarily implementing the Bologna Process, the University of Prishtina has made a great deal of effort to further realise these three objectives, as it intends to become part of the European Higher Education Area as soon as possible.

5. Recommendations

Although the University of Prishtina has many challenges ahead regarding the development of competence-based learning, some necessary recommendations have already been considered, including:

- Development of study programmes (especially new ones) based on generic and specific competences
- Close cooperation with Kosovo labour market to understand its needs through different tools and methods
- Design of curriculum with the input of labour market partners for specific fields
- Provision of continuous support to the students on their professional development through career counselling and different services



Tempus



CUP – COMPETENCE AT THE UNIVERSITY OF PRISHTINA

Project Coordinator

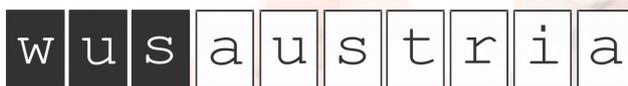


UNIVERSITY OF APPLIED SCIENCES

Project Partners



Universitat d'Alacant Fundació General
Universidad de Alicante Fundación General



right to education



SAPIENZA
UNIVERSITÀ DI ROMA



Agjencia e Akreditimit e Kosovës
Kosovo Accreditation Agency
Agencija za Akreditovanje Kosova

