Aurelio Villa Sánchez & Manuel Poblete Ruiz (Eds.)

Competence-based learning

A proposal for the assessment of generic competences

Tuning

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Introduction by Tuning General co-ordinators

The book **Competence – based learning. A proposal for the Assessment of Generic Competences** opens a new series within the Tuning Higher Educational Structures publications. Up to now, the books were international reports, publications which reflected the consensus of experts from concrete geographical regions either at a regional level (Europe, Latin America) or at the level of countries as Georgia and the Russian Federation. Other Tuning publications cover thematic fields, like Chemistry, Physics, Educational Sciences, European Studies, Medicine and Occupational Therapy.

All these publications are also available on the Tuning website which counted in November 2008 a significant number of 2.3 million visits (together with the Tuning Latin America website more than 4.500.000 visits!). By now, the general introduction to the Tuning approach has already been translated into 13 languages. Translation into the wider spoken languages was a clear strategy of the Management Committee of the project. The translation into other languages has been initiated by people involved in Higher Education from particular countries. In both cases the work was done with the objective to make the Tuning approach and methodology available for large groups of academics and other stakeholders.

Although Tuning started off as a project - set up by higher education institutions and their academics and strongly supported morally and financially by the European Commission - it has developed into a process of itself. The Tuning Process of higher education programmes results

from and is clearly related to the Bologna Process. While the Bologna Process focuses on the harmonisation of systems, the Tuning Process aims to make educational programmes compatible and comparable. The axiom of the Tuning approach is to respect and promote diversity of degree programmes. To make this possible, Tuning has given much attention to the development of a common language, which is understood by all stakeholders involved in the process. Key to this language is the development of competences and the achievement of learning outcomes. The aim of a degree programme or a period of studies is to make the learner more competent.

The Tuning publications so far were the result of transnational cooperation of academics. This book reflects the work done by a group of academics from a single university, i.e. the University of Deusto. Tuning is aware that other efforts are being made at the level of institutions, which relate clearly to the Tuning Process approach. Tuning welcomes publications in its new series which offer concrete tools for implementing its methodology.

Up to now the Tuning publications dealt with issues of general methodology. A methodology focusing on (re)designing degree programmes which contributes to the joint venture of the creation of a regional higher education area, in Europe, in Latin American, etc. This book shifts from design to implementation and it is as such a concrete example how to proceed. Translated into English at the request of a large number of academics and management in charge of implementation at institutional and degree programme level, this is a book which is prepared to accompany the process of change at a concrete university. It is meant as a case study, a possible way forward, not as a model. This is true, even at the level of the University of Deusto for which it has been developed. Many of the people who read the book thought it was useful and thought provoking. It has also been used at some international programmes and workshops, creating interesting debate and stimulating the development of new ideas.

At this particular moment in the process of educational reforms, experience shows that it is not sufficient to desire change, or even to programme it at a general or institutional level. It is absolutely required to base these changes on well developed and thought through processes which are accompanied by selected tools. It is obvious that it is not enough to identify the profile of a degree or to define the competences and their weight in the programme. It is also critical to be able to identify levels and their indicators to be able to measure the desired or expected learning outcomes. It is critical to be transparent about how these

outcomes will be evaluated, knowing that there should be a consistency line between evaluation and the way learning outcomes are taught, learned and assessed.

It is very much of interest that the book deals with the generic competences as studied by Tuning. From the year 2000, when the project started, until today, the notion of generic competences or general academic skills has really developed to reach significant levels of importance and understanding, not only at the level of 1st and 2nd cycle but also at the level of doctoral studies. There is wide acceptance now of the importance of generic competences in the curriculum. They are clearly seen as key elements to take into consideration particularly in connection to employability and personal and citizenship development.

As stated before, Tuning has always underlined the need for diversity, adaptation to context, and a creative response to needs of the objective and capacities and strengths of the institution delivering an educational programme. The Tuning tools and methodologies are never intended to be prescriptive, but rather intended to provoke reflection and inspire new way. Focusing on a number of competences does not mean that they all need to be covered or that these are the most relevant competences for a particular programme. It means that institutions, and countries for that matter, should think what is the most relevant for them in this respect, whether they want to adopt a concrete policy of stressing some competences in particular, some for specific subject areas or leave it completely open to the institutions / programmes themselves.

It is also important to emphasize that the way competences are handled in this publication is one way to implement educational reform. Naturally there are others. In this book it is suggested to use three levels for the development of a particular competence based on five indicators. One can imagine that also two or four levels can be indicated based on a different number of indicators. This is purely up to the teams responsible for developing degree programmes. What is of crucial importance, however, is that these decisions are based on reflection and discussion and that the outcome of the process should be transparent.

As Tuning General Coordinators, we present this case study as a useful tool to discuss and to develop educational programmes based on competences and learning outcomes. We think that it presents a clear example of a consistent approach and a basis for reflection and we hope that it will inspire others.

Julia González and Robert Wagenaar
Bilbao - Groningen, November 2008

Acknowledgements

The publication, which we are pleased to present today, is the result of the work carried out by a team for two years. In this case, this happens to be a publication for English-speaking people, after the two editions in Spanish.

The subject matter of the assessment of competences is currently of great interest, as European universities are setting up the European Higher Education Area (EHEA), wherein competences play a leading role.

The publication covers thirty five cross-sectional competences that had been defined within the "Marco Pedagógico" (Pedagogical Framework) (2001) issued by the University of Deusto. These are currently clearly specified in three different levels, various indicators and five descriptors, to enable its development and assessment. It is quite evident that thirty five competences are clearly excessive to attain in graduate studies or a university career. This is not the object of the publication, but rather, to present a wide range of generic or cross-sectional competences that enable one to make a selection as regards each career or degree in question, destined to become a starting point. Some modifications will probably be required as regards its indicators in order that they can be better adapted to the various contexts wherein they are to be developed, or even blend some of the indicators with the "tonality" of each of the scientific areas incorporated to the specific curriculum; nevertheless, they probably entail a starting point which will enable academicians and lecturers in charge of curricular design to obtain the different academic-professional profiles to be devised.

The competences approach changes the concept of the traditional teaching-learning process, previously focused on the lecturer and the

teaching imparted, to base it on the students themselves, on their autonomy and responsibility.

On the other hand, learning based on competences requires a transformation of how the lecture room is to be managed, renovation of its methodologies, a style involving interaction with students, geared towards joint research and a teaching method that ensures that lecturers will be facilitators and organizers of a learning project.

The publication that is currently presented seeks to become a document that will serve as support both to lecturers and degrees alike. Our experience indicates that there are various ways of incorporating cross-sectional competences in the curricular design. In some universities, these are handled as competences that are taught in *ad hoc* modules, which students work on throughout their degree parallel to the specific competences, in such a way that they will acquire these competences in an integrated manner.

This new version will enable us to receive criticism and new suggestions for coming publications which will, undoubtedly, help to improve the same.

The competences approach, which through the Tuning project has become a key issue in the Bologna process, and the European Credit Transfer System, (ECTS), make up two basic pillars of the teaching-learning process.

I would like to conclude this brief presentation by thanking all the members who have made up this work team, and I would also like to express my gratitude to the other people who provided their highly professional assistance occasionally, such as María García Feijoo, Cristina de la Cruz Ayuso, and Gema Pascual Hoyuelos.

Also of great relevance was the assistance provided during the early stages by Intermanagement's group of experts, led by Jesús Berruezo.

And, on a more recent scale, we would like to thank Eclipse Digital, S.L. for their collaboration in the preparation of software to enable the procedure required for the assessment of competences according to the model developed.

And, finally, on behalf of all the members of the team and myself, we would like to thank all the lecturers, as well as university institutions who have kindly sent us their comments and who have incorporated these competences in their curricular designs.

Bilbao, 25th September 2008
Aurelio Villa Sánchez
Vice-Rector for Innovation and Quality
University of Deusto

Introduction

This publication on Competence-Based Learning is the fruit of co-operative teamwork among a large group of professors and lecturers mainly belonging to the University of Deusto (henceforth UD).

During the 1999-2000 academic year, a phase of pedagogical renewal was begun at UD, whose authorities felt that it was necessary to modernise the excessively professor-centred teaching and methodological model of the University. The new phase was in line with the recently published Bologna Declaration (1999), announcing a future European Higher Education Area.

The transformation initiated in UD, together with the initiatives of other European universities sharing a similar outlook and need for change, helped to spawn the Tuning Project, under the leadership of the University of Deusto and the University of Gröningen (Netherlands). In the several years that it has been under way, this project has spread throughout Europe. Today over two hundred European universities are involved, and the Tuning project is also being undertaken on other continents. Latin America was first, and soon Asia and India will be initiating the project as well.

In this volume, we focus especially on the long road travelled at our University, with its approach to pedagogy and teaching, and experience in five degree programmes, producing graduates taught and assessed under the European Credit Transfer System (ECTS) and competence-based learning.

During the 1999-2000 academic year, UD created a Vice-Rectorate for Pedagogical Innovation, to underscore an essential feature of its educational commitment. Three years later, another vital dimension was added and the Innovation Vice-Rectorate was renamed the Vice-Rector-

ate for Innovation and Quality. The new Vice-Rectorate was entrusted with the challenge of promoting and implementing innovation and quality throughout the university. Its functions included:

- Elaborating a Pedagogical Framework on which to base a significant independent learning approach for students.
- Promoting pedagogical innovation in the university's Faculties, Institutes and Schools.
- Promoting innovation in the university's Departments (planning and programming).
- Facilitating the means and resources required for pedagogical innovation.
- Providing Information and Communication Technologies.
- Developing pedagogical training and updating for teaching staff.
- Promoting self- and peer-assessment processes in the university's Faculties, Institutes and Schools.
- Enhancing the quality of the teaching-learning process.
- Promoting the development of values.
- Devising pedagogical progress indicators and instruments.

1. STEPS AND MILESTONES IN DEVELOPING UD INNOVATION AND QUALITY

The first step taken by the Vice-Rectorate was to draw up a Pedagogical Framework laying down the University's mission and vision, in order to serve as a guide and reference for UD's different centres (Faculties, Schools and Institutes) as they undertook their own action, incorporating the pedagogical line set for the entire university.

The Pedagogical Framework includes what is known as the University of Deusto Training Model, better known as UDTM. Moreover, the Pedagogical Framework spells out the University's principles as follows:

1. **A university that focuses on the student as a person**

Education is aimed at the student as a whole, at all his or her facets and dimensions, from the intellectual and professional, to the psychological, moral and spiritual. UD considers each person to be a unique, unrepeatable human being and seeks to develop to the utmost each student's capacities. Students develop in all their dimensions, so that the prime indicator of the University's achievement is what they become as persons.

2. **A university that bases learning on values**

In its Deusto University Project (DUP), the UD has listed a set of values, including: to develop persons who are *free and responsible, professional and supportive, competent and creative, capable of critical thinking and teamwork, ethical and devout.* In order to train people in these values, the university as an institution must itself live by them.

Understood as guidelines for pedagogical innovation, these values fall under three main headings:

—Personal and social development
—Knowledge orientation
—Ethical and social commitment

3. **A university that fosters healthy personal and social attitudes**

Integral, wholesome growth and development at university is based not only on intellectual capacities; students' attitudes are also crucial for successful personal achievement. Attitudes, motivations and habits constitute the true basis of *drive* as a synthesis of choice and personal commitment to study.

4. **A university that promotes significant independent learning**

The proposed learning model emphasises the autonomous personal development of students, whose responsibility and commitment steadily grow throughout their university years. Learning must be seen as a fully meaningful act that contributes to personal growth and development. Ensuring that each student becomes an autonomous person embarked on the best possible project of self-realization is one of UD's most important objectives.

5. **A university that stimulates thinking**

The main characteristic of university students is clear thinking. Clear thinking distinguishes the educated individual from one who is not. Therefore one of the university's key tasks is to foster and promote a type of thinking that will enable students to become persons with well-structured, orderly heads on their shoulders, rather than heads that are merely "full".

To develop clear thinking means to foster different types of thought as instruments at the service of reason. Some of the types of thinking

considered necessary for good intellectual development are: reflective thinking, logical thinking, analogical thinking, analytical thinking, systemic thinking, critical thinking, creative thinking, practical thinking, deliberative thinking and team thinking. Course content is considered a necessary vehicle for such intellectual development, but must never become the ultimate objective.

6. A university that promotes the attainment of academic and professional competences

In order to function and integrate successfully into society and iworkplace, people need to acquire certain *instrumental, interpersonal* and *systemic* skills and abilities. These competences are therefore crucial to university degree programmes which, in addition to requiring mastery of an academic specialty, also incorporate a broad range of competences designed to enrich the student's personal life and career.

7. A university that incorporates information and communication technologies in its work

The incorporation of new information and communication technologies (ICTs) permeates all aspects of the university, from management and research, to teaching. Specifically, an important part of pedagogical innovation is based on the didactic and pedagogical use of such technologies by both lecturers and students. The use of ICTs helps to create new virtual spaces that promote student autonomy and multiply the educational possibilities of interaction and creation.

8. A university that has become a learning organisation

An organisation that promotes ongoing innovation and self-renewal aimed at a common, shared mission based on a collective commitment to the promotion of a set of values.

The essential features to be promoted are: a shared forward-looking project, an accepted style of leadership, a culture of evaluation and quality, an openness and willingness to experiment, a strong emphasis on learning, and enhanced awareness of the systemic nature of our university experience.

Learning organisations are places where people continually develop their aptitude for obtaining truly desired results, where new approaches and ways of thinking are fostered, where group expectations are given free rein, where individuals constantly learn how to learn together.

According to the European University Association, a learning organisation must be characterised by:

—Experience and assumption of risks
—Monitoring and assessment
—Openness, curiosity, capacity to admit own errors
—Inclusion of problem-solving mechanisms
—Absence of self-satisfaction
—Solid internal and external references

9. A university committed to quality service and offerings

Such a university manifests its public commitment to the quality of processes and results based on its permanent concern to assess systematically the services that it provides and undertakes to ensure excellence and quality. To this end, the university will implement a culture of quality in all its areas and sectors, together with an evaluation system that will enable it to detect any flaws or failures that might exist, with a view to introducing changes and improvements.

10. A university that leads and that fosters the development of leadership in lecturers and students

A university that exercises leadership and fosters it at all levels of the organisation, particularly among its teaching staff and students. A leadership that heightens awareness of all important matters, promotes eagerness for achievement and a job well done, learning, ongoing education, and ideals that enable us to look beyond our own interests.

11. A university that values, develops and promotes co-operation and teamwork within its own structures

It encourages and practices co-operation as a key value. Personal and institutional development are attained through a dynamic of teamwork and projects targeting common, shared goals.

12. **A university with a social commitment**

Given its Christian outlook on life, the University of Deusto seeks to combine faith and justice, a faith that sees justice as a world-transforming reality, with human culture open to constant dialogue. UD students are therefore taught to perceive, think, judge, choose and act on behalf of the rights of others, especially the disadvantaged and oppressed (Kolvenbach, 2000).

This means that the UD endeavours to create opportunities where students can encounter, participate in, live and experience situations that lead to involvement with the poor and marginalised, in order to learn about social realities and develop their sense of solidarity.

13. **A university with an open, universal outlook**

As an institution, the University of Deusto is open to new ideas and new ways of thinking. It is oriented toward serving the society to which it belongs, promoting the preservation and development of Basque cultural heritage, while at the same time maintaining an open, universal outlook that connects it to world concerns and issues.

14. **A university committed to the quest for peace and enhanced human dignity for all persons**

The idea of human dignity underlies our way of thinking and acting, and is the prime factor inspiring UD policy. On this basis, the University contributes to the quest for peace, which is so necessary, and to the education of students committed to these principles.

15. **A university that is concerned and concerns itself with the social problems of the underprivileged, both at home and abroad**

One of the University's essential aims is to be aware of, reflect on, and help propose lines of work, research and co-operation on the most pressing social issues at home and abroad.

Satisfying these general principles requires integral training based on competences spanning the different human, social, intellectual and eth-

ical facets of life. This means providing an education focused first on the student's development as a person, ahead even of his or her academic and professional training.

2. UNIVERSITY OF DEUSTO TRAINING MODEL (UDTM)

The University's Pedagogical Framework spells out the educational and learning model in terms of a four-sided pyramid on a base plate, with each side representing one of the organisation's four key principles. These constitute the habitat and atmosphere that ensure that the model will function well and strongly affect the results that can be achieved.

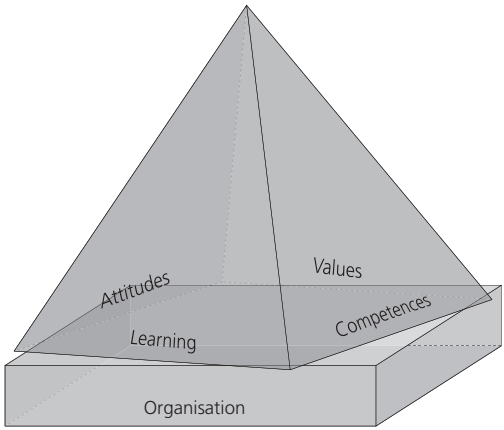

Figure 1
UD Pedagogical Framework

The four main features of an organisation that will foster the type of development sought are outlined below.

1. ***A student-focused learning organisation.*** The defining features of a learning organisation have been amply described in the abundant literature on this subject, but some of the most basic are the following:

   —A learning culture that encourages willingness to unlearn and change mental frameworks, tolerance for mistakes, experi-

mentation, an open, objective attitude, time for reflection, questioning;

—An organisation focused on students and their learning, which means finding ways to satisfy students' needs;

—Individuals learn through daily activities and organisations learn when there is feedback, for this is what leads to necessary change.

2. ***An organisation that works as a team and values co-operation.*** Both the teaching and non-teaching staff must be able to learn and work as a team, establishing common objectives, synergies, respecting and valuing differences, with clear, well-established roles and responsibilities.
3. ***An organisation that leads and empowers people.*** Leadership is encouraged at all levels of the organisation, and delegation of tasks is seen as a strategy that enhances people's potential and talents, recognising their responsibility. Leadership is based on values that promote innovation, change and continuous improvement.
4. ***An organisation with an ethical and social commitment.*** All the University's personnel are committed to society, maintaining a spirit of service and solidarity, particularly with the underprivileged. These commitments include the value of working for peace as an essential means for good social co-existence.

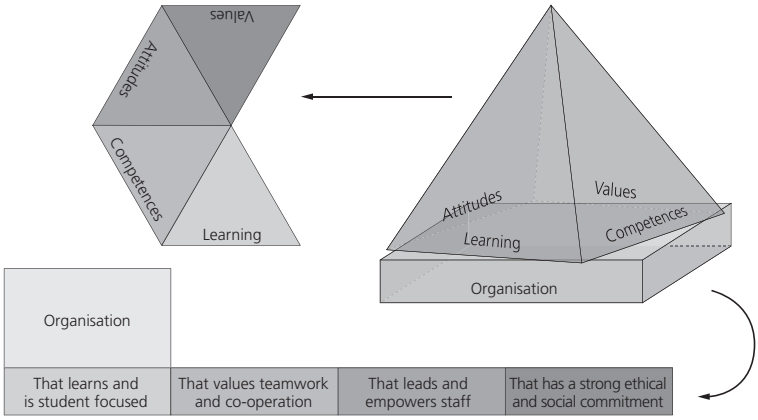

Figure 2

Deployment of the UD Pedagogical Framework

These four features affect the functioning and development of values that students experience and live.

The four sides of the pyramid represent the four core features of the model – i.e., the Values, Attitudes, Competences and Learning Model that will further autonomy and the meaningfulness of learning. As stated by Edgar Morin (2000): "*a well-formed mind is a mind able to organise knowledge, thereby avoiding sterile accumulation".* In this regard, we could say even that a *command of subject matter is insufficient*. Innovation at the university means emphasising the organisation of knowledge, and to this end it is necessary to develop different types of thinking.

Meaningful learning occurs when students are able to relate new information to prior knowledge and experience. This enables students to build and develop knowledge by linking the logical structure of the subject to their own perspective.

The proposed model is designed to help students to learn to think, enhancing their ability to research and write about aspects of their field of study, as key parts of their course of study. Learning should be based on the development of various forms of thinking: analytical thinking and synthesis, critical thinking, deliberative thinking, creative thinking, practical thinking, etc. These types of thinking help to shape a well-ordered mind capable of structuring information and ensuring that knowledge is comprehensive.

The four sides of the pyramid represent the elements to be borne in mind in the pedagogical innovation proposal (a model of learning, attitudes, values and competences). At the top of the pyramid is the *value of personal development*, the idea being to strive for well-rounded growth and development. The combined elements in the process contribute to personal growth, and not only to academic or intellectual progress.

This learning model calls for different modes of learning and the application of different types of intellectual thinking. Attitudes help to establish and systematise good habits and behaviour depending on the personal options that are assumed as values.

Learning based on the interplay of different types of skills and abilities can lead, when fully mastered, to the formation of true competences. All these elements combined promote integral learning and help students to grow and develop as individuals.

The various elements making up the pyramid are inter-related, although they are individually presented here for explanatory purposes.

One side constitutes what we have called the *learning model*, or the pattern proposed as a reference for the learning organisation. This mod-

el can be applied cyclically in five phases for each topic or teaching unit, or it may be taken into account somewhat more freely, serving as a reference or reminder that learning must be related to experience, thoughtful observation, abstraction, application, experimentation, and assessment of the process and results.

3. ATTITUDES TOWARD LEARNING

A second side of the pyramid represents the attitudes that we consider essential to this learning approach. By attitude we mean "a predisposition to act in a certain way toward an object (idea, person, institution) with a certain positive or negative intensity." In this case, the object of the attitude is *learning itself*.

This strategy is designed to get students to *internalise* positive attitudes toward what they are learning and toward the learning process itself. Specifically, it emphasises three attitudes which we consider essential, although not unique, in the teaching-learning process in question. These three attitudes are autonomy, personal responsibility and cooperation.

3.1. **Autonomy**

This attitude could be defined as a predisposition to act independently, with initiative, instead of continually depending on a professor in order to learn. Autonomy is the capacity to act for oneself and is a necessary condition for carrying out independent work.

In order to become autonomous, students must develop the cognitive habits of thinking, analysing, evaluating, argumentation, etc., which are what will open the way to academic progress.

In this regard, Burón (1993: 136) says the following:

> "The fundamental objective, according to cognitive goal research is that students should become independent, mature, efficient and able to work on their own. When this is achieved, they will not need such thorough, detailed and repeated explanations from a lecturer, but instead will be able to study by themselves, learning what is essential more effectively (understanding more and mechanically memorising less), and knowing how to use and present what they learn".

Independent learning helps students to find meaning in what they study, to see where it fits in. They become involved as persons, making

of learning something that is valuable and significant. Learning is truly meaningful if it is later used personally rather than merely repeated at a given moment. *Meaningful* learning differs from memoristic, mechanical learning in that it involves many of the student's capacities and feelings – i.e. the capacity to think and reflect individually or with others, which is what leads to positive cognoscitive and affective *internalisation* of what is learned.

3.2. **Personal responsibility**

Here the idea is for students to adopt and develop an attitude of personal responsibility for their own learning.

This means building up competence in *time management* and *planning,* short- and medium-term planning, producing quality work, abiding by the rules of teamwork, meeting deadlines for handing in work, completing courses, etc. An attitude of *personal responsibility* must be accompanied by habits that help to internalise the attitude of responsibility for mastering the competences that will make it effective, and responsibility toward the teaching environment, which must steadily increase the responsibilities laid on students.

This attitude must be developed not only in its cognitive dimension, but also in the affective domain. That is, students must learn to appreciate positively that they are responsible for their own progress (internal *locus* of control), while at the same time appreciating behavioural aspects, seeing that deadlines are effectively met, that quality criteria are recognised, and seeing too that they themselves are better able to develop such behaviour.

3.3. **Co-operation**

The idea behind a co-operative attitude is to develop our permanent willingness to co-operate with colleagues and those around us.

The cognitive dimension of co-operation requires a knowledge of teamwork techniques and procedures, which will be explained in the section on basic competences.

The affective dimension of co-operation calls for appreciation of the contributions of others, recognition that co-operation offers us an opportunity to get to know other people and other points of view, which will help to round out our own.

Finally, the behavioural dimension of a co-operative attitude is that it can help us to evaluate our way of interacting with others, to know ourselves better in relation to others and to recognise the contributions that others make, the feedback that they give us and the recognition that our social behaviour merits.

Developing these three attitudes throughout one's years at university means strengthening a key element of learning. Experience, opportunities to work together, co-operating with other persons and groups, will facilitate a change or improvement in attitude. Even though attitude is at the base of group learning and teamwork, personal and interpersonal capacities that each one must contribute to the group are also required.

4. VALUES

Universities, as the prime agents of higher knowledge, are being asked to play a new role in the defence and development of values starting within the institution and radiating outward to all aspects of the social and political milieu. This task is perhaps more important than ever at the start of the third millennium.

By values we understand the internal ideals that motivate a person to act according to his or her priorities in life. A university education cannot be reduced simply to good academic training. Universities must also endeavour to nourish values that will, above all, help students grow primarily as *persons*, meaning that they will defend and postulate values that dignify all human beings as persons, regardless of any other variables that distinguish them.

The importance of values in contemporary education has been stressed by numerous authors and institutions. As stated in the World Declaration on Higher Education (1998) for the Twenty-first Century: Vision and Action:

> "On the eve of a new century, there is an unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its vital importance for sociocultural and economic development, and for building the future, for which the younger generations will need to be equipped with new skills, knowledge and ideals." (p. 1)

Responding to social demands requires a new spirit on the part of universities, as can be seen in this declaration when it states the following:

> "Owing to the scope and pace of change, society has become increasingly knowledge-based so that higher learning and research now

act as essential components of cultural, socio-economic and environmentally sustainable development of individuals, communities and nations. Higher education itself is confronted therefore with formidable challenges and must proceed to the most radical change and renewal it has ever been required to undertake, so that our society, which is currently undergoing a profound crisis of values, can transcend mere economic considerations and incorporate deeper dimensions of morality and spirituality." (p. 2)

In a document entitled "Development of the Deusto University Project" (1992), UD spelled out the values that it seeks to promote within its sphere. Based on an analysis of this document, we have established three major guidelines along which sets of values are grouped, in consonance with the University's mission, its view of development of the person, and its desired learning model.

These three guidelines are:

—Personal and social development
—Knowledge orientation
—Social and ethical responsibility

4.1. **Personal and social development**

The first values guideline has to do with individuals. The University of Deusto centres its activity round *persons as a value*. This means, in the first place, starting from the idea that people are something central and valuable in themselves. Values such as personal dignity, the right to life, self-esteem, self-confidence, self-realisation – all the human rights are linked to this guideline.

4.2. **Knowledge orientation**

We not only want our students to learn, we want them to *learn how* to learn. We grow by accepting and, more importantly, by learning from our mistakes. This requires a high degree of confidence and a non-competitive environment in which knowledge is shared. Enabling university students to become knowledge-oriented is one of the university's fundamental tasks.

The first step is to try to turn attitudes of *merely passing* into an attitude of *wanting to know*, into seeing knowledge as something valuable. To our mind, changing this outlook means helping students to be-

come knowledge-oriented, seekers of truth, defenders of such values in all circumstances of their lives.

Achieving a knowledge orientation means undergoing a radical change in ways of working, commitment to studies and knowledge. It requires profound changes in systematic study habits; and finally, it means changing one's framework so as to be guided by this value throughout one's university years and thereafter.

4.3. **Social and ethical responsibility**

This involves taking responsibility for economic resources and for human capital and structure; balancing the quality of service offered and creating a stimulating work environment; contributing to the community in the broadest sense; and all with the ultimate objective of educating students.

The University of Deusto seeks to develop in its students an ethical and social sense that will guide their personal and professional behaviour. This means forming a conscience and acting in consonance with it, assuming responsibly for decisions and conduct made or performed in any area of life. In short, it requires that people think about the consequences and effects of their decisions on others, particularly those that contribute to social justice.

5. COMPETENCES

Society today is demanding new competences of its professionals and citizens in general, who are required to have specific skills and abilities. So two positions can be adopted: building on these competences in the professional sphere, or developing them within the academic sphere prior to a career.

Many universities in different countries are redesigning their degree programmes on the basis of new academic and professional profiles incorporating a number of competences. These competences are individual and group benchmarks calling for the development of personal resources, which then have to be integrated in the possibilities of the environment in order to obtain complementarity, or the greatest mutual benefit.

At the personal level, competences are effective insofar as each one establishes the basis and reference of achievement. That is, we are competent insofar as the achievement is effective. The origin of such achievements lies in perfecting our personal (individual and social) qualities.

Definition of competences

By competence, we understand good performance in diverse, authentic contexts based on the integration and activation of knowledge, rules and standards, techniques, procedures, abilities and skills, attitudes and values.

There are various models incorporating competences considered essential from the point of view of professional performance. In our case, we have drawn up a typology of competences, selecting those that we consider to be basic and acquirable during a university course of studies. These competences are useful and valuable for a student's future professional career, as seen in the reports and studies reviewed previously.

In our proposal, competences are consistent with our model for change and can be classified under three main headings:

—**Instrumental competences**: or competences that function as a means to an end. They require a combination of manual skills and cognitive capacities that are needed for professional competence. These include skill in handling ideas and the environment in which persons, craft skills, physical skill, cognitive comprehension, language ability and academic achievement all come into play.

—**Interpersonal competences**: require personal and relational abilities. These competences refer to capacity, ability or skill in expressing one's feelings and emotions in the most appropriate way and accepting the feelings of others, making it possible to work together toward common objectives. Interpersonal competences are related to the ability to act with generosity and understanding toward others, for which it is first necessary to know oneself. These skills imply the ability to objectify, identify and inform feelings and emotions, whether one's own or others', to foster social interaction and co-operation.

—**Systemic competences**: involve skills and abilities related to an entire system. They require a combination of imagination, sensibility and ability, enabling one to see how the parts of a whole are conjoined and related. Such competences include the ability to plan changes that will introduce improvements in overall systems, and the ability to design new systems. These competences are built on previously acquired instrumental and interpersonal competences.

6. DEVELOPMENT OF THE UD INNOVATION MODEL

During the 2003-2004 academic year, an experimental plan was undertaken to apply the proposed model in five degree courses organised according to the European Credit System (ECTS).

During this period, pedagogical guidelines were devised for the different centres (guidelines for syllabus design, for drafting Learning-Guides, for formulating and developing specific competences, and for devising instruments for assessing generic competences).

Together with this experimental approach, the University has supported initiatives and promoted a number of innovation activities through calls for Innovation and Quality Projects, which offered the opportunity to present individual and group pedagogical-innovation activities. One result of these projects is constituted by our Innovation and Quality Workshops where information is exchanged on experiences undertaken by professors or groups of professors.

During the first three years of the Vice-Rectorate for Innovation and Quality, an interdisciplinary working group was created to develop teaching materials for each of the *generic competences* defined in the Pedagogical Framework. These materials were created in online format so that students can learn and develop each of the generic competences. We are currently considering the best procedure for generalising the use of this type of training for all students, either as course subjects proposed by each respective faculty, or in the form of practical seminars or workshops conducted during the academic year in more intensive periods.

During the following three years, from 2004 to 2007, it was felt that a working group should be created to design and draw up a generic competence assessment system, since there was indeed the need to assess, but practical difficulties stood in the way of actually doing it. The professors who participated in this project came from different specialties, faculties and campuses. They therefore formed a heterogeneous group, which nevertheless undertook its activity with an excellent team spirit and a methodology accepted by all for carrying out their work along common guidelines.

The result of this teamwork can be seen in this publication, which is presented to the teaching staff of the UD and to the university world in general.

Chapter 1

Competence-based Learning

In its World Declaration on Higher Education for the Twenty-first Century (1998), UNESCO described the situation, stating that:

> "The second half of this century will go down in the history of higher education as the period of its most spectacular expansion: an over six-fold increase in student enrolments worldwide, from 13 million in 1960 to 82 million in 1995. But it is also the period which has seen the gap between industrially developed, the developing countries and in particular the least developed countries with regard to access and resources for higher learning and research, already enormous, becoming even wider. It has also been a period of increased socio-economic stratification and greater difference in educational opportunity within countries, including in some of the most developed and wealthiest nations."

We can see in this text the great paradox of our time. The more developed and wide-spread that higher education is, the wider the gap between rich countries and poor. That is, the greater the progress in science, knowledge, research and technology, the greater the difference between the developed and developing countries, not to mention in the least-developed ones. This means that progress in science and knowledge is not distributed fairly. Not only are differences not reduced, but in fact they increase and get worse.

Clearly, universities in general need to heighten awareness of this worldwide phenomenon. It is necessary to enhance students' awareness and social commitment so that they will place their capacities and competences at the service of others, rather than using them merely for their own benefit or at the service of the power-hungry corporations competing in an increasingly merciless globalised free market.

According to the Bricall Report (2000:96):

> "Knowledge, innovation and learning capacity are the three complementary aspects of current development in advanced societies".

These three facets listed above are part of a process of structural change in modern societies. The report identifies four fundamental dimensions:

- The generation of new progress in science and, especially, the diffusion of new technologies, particularly information and communication technologies (ICTs)
- Profound changes in the distribution of economic activity among the different sectors of the economy, followed by a radical redistribution of employment
- Accelerated internationalisation of societies and their economies
- An increase in the level of education and knowledge base in the countries considered most advanced

Against this background of scientific progress, incorporation of new technologies, accelerated changes in communications, increasing globalisation, priority given primarily to economic criteria and sharp competition between the companies of different continents, there arose an EU project designed to create a European Higher Education Area (EHEA).

Its aims include ensuring that European universities have their own, unique characteristics, and are able to compete with the best universities in any part of the world, each in its own style. To this end, through a series of declarations signed at the Sorbonne and in Bologna, among others, the parties have defined and spelled out a common university framework that will stimulate co-operation and collegiality among European universities and better facilitate exchanges and mobility among professors and students, at the same time harmonising teaching systems so that interrelations and connections can be achieved without special problems.

As a result of these meetings of ministers, commissions and universities, an agreement has been worked out and accepted by the vast majority of European countries on what the European Higher Education Area ought to be. From the pedagogical point of view, the most characteristic feature is the acceptance of higher education understood as Competence-Based Learning. This education is a learning process centred round the capacity and responsibility of each student, and the development of his or her autonomy and self-reliance. In short, it is a system of teaching and learning focused on the student, instead of the previous professor-centred system.

As is clearly stated in the Bricall report:

> "Universities must also make an essential contribution to social, cultural and community development within their local or regional environment. Historically, these institutions have been actively involved in promoting certain important community services (in fields such as medicine and the arts). Moreover, they contribute significant audiences for different forms of cultural and scientific expansion. They are very active in boosting volunteer activities or other altruistic initiatives. Finally, they are key factors in fostering critical thinking, monitoring opinion leaders, and producing leaders of political and civil life".

It is precisely in this idea of contributing to development in all its personal, social, cultural, political and economic facets that the need was seen to adapt universities to their national and international contexts; to prepare themselves to respond satisfactorily to the requirements of society and to any new issues, needs or interests that may arise. Universities were being asked not to devise their academic programmes and syllabuses in isolation from other stakeholders involved in the development of society and employment; and they were asked to bear in mind and consider the points of view of public and private institutions that seek to undertake their tasks with professional staff skilled in competences that today are considered essential.

Competence-based learning (CBL)

To have Competence-Based Learning (CBL), we must first establish which competences are necessary in today's world. As is logical, this cannot be decided solely by the universities without the advice and participation of corporate and professional entities. Working together, the different sectors have come up with a generic competences proposal. This document calls for delimitation of the essential competences needed in each of the professions for which the universities prepare graduates, which will be taught along with all other aspects and dimensions considered opportune, pertinent and necessary for the best training and capacitation of their students.

CBL consists in developing the necessary generic or transversal (instrumental, interpersonal and systemic) competences and the specific competences pertaining to each profession. The aim is to endow students with scientific and technical knowledge, and enable them to apply such knowledge in diverse complex contexts. To this end, knowledge is integrated along with attitudes and values in ways that are appropriate for each student's personal and professional life.

CBL is an approach to teaching and learning that necessarily starts from an academic and professional profile featuring all the knowledge and competences that need to be developed by students pursuing a given course of studies. Their programme of studies must spell out the generic and specific competences desired, and distribute them over the entire degree course in question. This approach calls for a great deal of co-ordination and co-operation among faculty to contribute effectively and efficiently to the development of the academic-professional profile through each subject or course.

CBL is based on an analysis of the professional requirements that will help to define and prioritise the fundamental competences required for a given professional and/or specialty area. As expressed in the 1998 World Higher Education Conference, there is a great need for life-long learning that will provide the competences that people must have if they are to contribute to the cultural, social and economic development of society.

CBL builds on a teaching-learning system that steadily develops students' autonomy and ability to learn how to learn. This approach loses its meaning and essence if it is incorporated only as a methodology for lecturers. As stated by Mario of Miguel et al. (2006):

> "The institutional nature of teaching requires participation of the entire teaching staff to ensure the necessary convergence of ideas and hypotheses regarding what it means to teach how to learn, and subsequent consistency of action on the part of the centre's teaching staff. Along these lines, all professors, in co-ordination with the rest of the university's teaching staff, must organise the teaching-learning of his/her subject as an intervention that is fundamentally aimed at development through progressively autonomous learning on the part of students." (p. 78).

CBL is an approach to teaching that is accepted collectively and based on the association and interrelations between different subjects, each contributing specifically by providing scientific or technical knowledge and developing generic and specific competences. In this approach, students are the true drivers of their own learning, and therefore need a certain amount of self-motivation and supervision, as well as the development of cognitive strategies and cognitive goals that will help them to learn and to reflect on their learning.

CBL is an approach that fits in well with the European Credit Transfer System (ECTS), in which students must devote themselves to their studies sufficiently to acquire or develop the competences proposed within an estimated time frame. It is an individual learning system that com-

bines theory and practice, and which distances itself from the previous system based primarily on memorisation – a system that allowed students to get by with studying intensively only at certain moments of the year. CBL requires a much more constant and systematic dedication to learning, plus a greater commitment on the part of the student to plan and manage his/her time appropriately.

CBL provides greater enrichment of learning methodologies, closer monitoring and tutoring of students individually and in groups, as well as a range of techniques for assessing learning. The teaching role of the professor or lecturer is modified, so that now he/she can concentrate on organising, supervising and assessing students' learning.

Incorporation or renovation of teaching methodologies

European universities are working to incorporate teaching-learning techniques, methodologies and strategies to favour students' independent development and more significant learning. This is achieved with a more active methodology calling for individual and group work, as well as more thinking about the work and actions undertaken by students.

Many universities are organising workshops where new pedagogical, methodological and technological developments at different university centres are presented and discussed. Different government agencies are also promoting exchange workshops where experts in methodologies, innovation and quality present talks to heighten universities' awareness of the key importance of these subjects in coming years.

In recent years, different works have been published on necessary methodological issues and providing information on how to incorporate the CBL suggested in creating the European Higher Education Area (EHEA) and which serves as a framework of reference for university centres.

Today, probably more than ever before, people are talking, studying and trying to incorporate pedagogical innovations. The benchmarking undertaken by some universities that wish to contrast their points of view, experiences and approaches with those of others is helping to standardise this process. Many Spanish universities have already incorporated into their strategic policies the ongoing training and updating of teaching staff, as a key policy for the next few years.

To switch from the teaching method that used to be used to a competence-based approach requires a strategic policy and the specific allocation to the project of significant funds in order to complete successfully complete

the change and keep it from remaining merely skin deep – a cosmetic change to improve the university's image vis-à-vis society in general.

Sooner or later all universities that do not wish to fall behind and out of the running must incorporate these new trends and see that their schools become centres of proven quality and innovation.

Competence-based learning entails a profound change, one that we call a transformational change, since it affects both the breadth and depth of the university. Breadth, because it affects university life as a whole, and all the institution's underlying structures. All stakeholders are called upon to participate in the change to be undertaken in the universities. Moreover, this change means modifying the teaching model or approach employed to date. It is difficult, if not impossible, to incorporate the new model without changing old structures and the attitudes of all concerned (teaching and non-teaching staff, university management and the students themselves).

Some people might consider that the change being proposed is just another change, one that will not be very far-reaching or significant for our universities. We think that people who feel this way are mistaken. Experience shows that it would be impossible to try to apply a competence-based learning system without modifying previous structures. In addition to causing huge headaches, such an attempt would prove futile, unworkable and even *counterproductive*. The teaching staff would soon become frustrated with the huge effort required and the vast number of obstacles and difficulties to be surmounted, most often without substantive support or points of reference.

Undertaking CBL means adapting degree programmes and syllabuses, structures and infrastructures. It means altering the role of lecturers, preparing students for a new type of teaching and learning. In synthesis, it means adequating and adapting the university to this transformational change. And this can only be achieved with the commitment and involvement of the university's highest authorities – that is, under the leadership of the university's president, vice-presidents and deans, together with all their staffs.

Transformational change gains solidity if it is well thought through beforehand, as such thinking helps to specify and formulate the new vision to be developed. This calls for good planning spelled out in strategic plans for the university, which are then transferred to the plans and projects of the university's different centres, faculties, schools or institutes for acceptance and incorporation into their everyday tasks.

Figure 3 shows the factors and agents involved in the teaching-learning process.

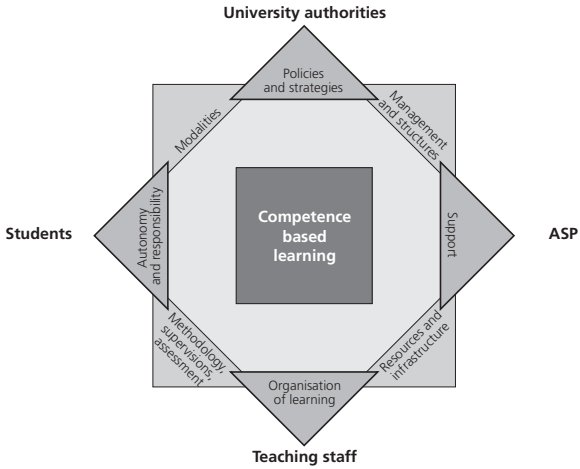

Figure 3

Factors and agents in the learning process

The figure shows the principal stakeholders involved in different ways in the teaching-learning process. First come the *university authorities*, understood as ranging from the president's team (president and vice-presidents) to the deans' teams or directors of each academic centre. These are the persons responsible for laying down policies and strategies, as well as for implementing them in the different centres. Their contribution is crucial, for they are the ones who see to it that the necessary structures and infrastructures are in place for the proper pedagogical functioning of each centre. Without them, nothing will work.

The key questions in this case are: What is the university's innovation and training policy? Does the university have a strategic plan that includes innovation as a key guideline? Has further ongoing training been formulated for the teaching staff and have means and resources been allocated? Is pedagogical change leading the centres, or on the contrary, are they being led by other outside initiatives?

The second necessary agent is the ASP (Administrative and Services Personnel), which must also be involved in the process, providing technical support and speeding up necessary administrative and bureaucratic processes in any case. The proper functioning of infrastructures and the availability of resources are crucial for the success of students' independent learning, since they must study and develop in different spaces utilising the resources and means that the university places at their disposal.

The key questions are the following: Are administrative and services personnel familiar with the innovation plan in the university's Faculties, Schools and Institutes? Are they prepared to facilitate the process as far as they are able within the scope of their job? Are they appropriately informed and trained to participate in the process? Have all the services' quality processes become a key factor for improving service to internal and external users? Are resources and infrastructures always available and in proper working order? etc.

Another agent or stakeholder is the teaching staff or faculty. It is generally claimed that faculty is crucial to the transformation of universities, but this may lead to the mistaken belief that by retraining faculty, everything has been achieved. It would be risky to think so. It is true that if the teaching staff is not on board, no programme or syllabus, no pedagogical innovation can be carried out; but with only the faculty, such things cannot be carried out either.

Implementing a new learning system, renovating teaching and learning methodologies, incorporating ICTs is not only a question of retraining teaching staff in their use, but an organisational and institutional change that goes well beyond the faculty.

What is asked of lecturers is a commitment to change, a positive attitude toward the *unlearning* of previous routines and customs that must be replaced with new ones. The teaching tasks called for in the new pedagogical system require greater capacity than a simple command of the matter to be taught, if lecturers are to organise, monitor and continuously assess the learning of students. This of course does not mean that faculty members no longer need to have a full command of the course content and topics that students will be working on. Far from it! In fact, the new system requires a greater knowledge and command of sources to organise and structure learning with full adequacy.

The key questions are: Are lecturers trained in teaching-learning methodologies? Are they familiar with, and proficient users of techniques for monitoring and assessing students' learning? Do they know how to apply techniques for assessing students' attainment of competences? Are they able to organise a teaching system that enables independent, significant learning? Etc.

Students constitutes the fourth important and crucial category of stakeholders. Under the new model, students are the true key to success of the system. Students must *learn how to learn* so that, independently and consciously, they can discover and perceive the competences that are to be developed and acquired during their university studies – competences that will help them to improve as individual and social human

beings, and that will provide them with the necessary knowledge and techniques to do well in their future career.

Students must work in a system of continuous learning which emphasises, in a systematised temporal way, what, how, why, what for, when and by when study tasks must be undertaken. That is, active learning must constitute the centre of students' ordinary activity during a period of their university lives. This system will have to resolve important problems such as how to help students to combine study with work (the situation of a high percentage of students in some universities and years). In this regard, the system must be creative and introduce mixed learning modes (for example having some subjects done online, others half in the classroom, and still others entirely in class).

The incorporation of computer technologies will undoubtedly help to resolve problems posed by different users, and not only the problems that occur within the university. Universities must strive to create opportunities and make them available to the greatest number of users possible in all different circumstances. This does not mean that learning should fall into first- and second-class situations, but rather that it should satisfactorily attend and respond to the different needs arising in society.

The main hurdle to be overcome by students is to convince themselves that the new system is based fundamentally on the continuous assessment of their individual and group work. This is measured in hours devoted to the different tasks that must be completed to achieve target competences. Acquiring and developing competences requires full personal involvement on the part of each student, who must become involved in each assigned activity, giving it a great deal of thought and making his/her own assessment of the learning achieved.

The key questions are: Is the student prepared to begin learning independently? Does the student have the basic capacities to undertake this type of learning? Does he/she have the basic competences to continue learning at the university level? If students arrive at the university with prior deficits, how can they be enabled ? Does the university respond adequately to students' personal and work/study needs by offering different modalities? Etc.

Main elements in the teaching-learning process

In the system proposed here, competences are the cornerstone. The curriculum is formulated and specified in terms of generic or transversal competences, and specific competences. The four fundamental ele-

ments in the teaching-learning process leading to the attainment of *competences* are:

1. Teaching-learning strategy and methodologies
2. Modalities
3. Monitoring
4. Assessment

1. ***Strategy and methodologies***

Here strategy means designing a regulatable process comprised of a set of procedures and rules for taking the right decisions in each situation, depending on the objectives set, incorporating appropriate methods and techniques and adjusting them to the time allowed.

In accordance with the methodological principles underlying the European convergence model and the University of Deusto Training Model (UDTM), for each subject in a degree programme the professor must specify the teaching-learning strategy that he/she has devised in the following terms:

—In the first place, the teaching-learning **strategy** must ensure that students will acquire the generic and specific competences of the subject.

—The chosen teaching-learning **methods and techniques** must be specified (lectures and explanations, document study, case study, projects, problem-solving, group dynamics, discussion and debate, delivering talks, etc.).

—The spatial, material, audiovisual, computer or other teaching-learning support **resources** to be used must be specified.

—The total amount of **time** students should expect to spend on each of the major aspects of the subject, both inside and outside class, must be calculated. This time estimate must be specified in terms of ECTS credits assigned to the subject (1 ECTS is the equivalent of 25 hours work on the part of the student), bearing in mind that the total must include all the work that the student must complete to meet the course requirements (including attendance at lectures, in-class individual and group work, information gathering, reading, individual study, preparation of individual and group work, essay writing, tutorials, study for and sitting of exams, etc.).

In a recent work, De Miguel et al. (2006) presented a number of teaching strategies and methodologies, explaining the advantages and

disadvantages of each one. This is a highly recommendable publication due to the practical advice and experience it conveys, and will be of great help to professors and universities wishing to introduce the pedagogical innovation proposed for the European Higher Education Area.

According to De Miguel, the different modalities are: lectures, seminars and workshops, exercises, external practice and training, tutorials, group work and individual work. The teaching methods analysed are: explanatory method, case study, exercises and problem-solving, problem-based learning, project-oriented learning, co-operative learning, learning contract.

2. ***Modalities***

In this work, modalities are the general ways of organising the teaching-learning process. Basically, three major modalities are considered: full-time, part-time and online studies.

- Under the full-time arrangement, students must attend class regularly. The classroom is the fundamental learning space, although it is supplemented by other outside spaces and times, such as laboratories, individual or group study outside class, the library, etc.
- Part-time studies means that the student's fundamental attendance is supplemented with virtual teaching. Universities are increasingly offering courses online, or at least online platforms enabling students to do and present work from their homes or places outside the classroom.
- The online studies modality requires electronic equipment and virtual supervision and support on the part of faculty.

3. ***Learning supervision***

Monitoring students' learning is one of the main keys in the new system. This supervision can take the form of individual and/or group tutorials; correcting essays and projects; assessing full or partial project presentations; feedback on exercises and problem-solving or case resolution, etc. In short, any procedure can be used that affords feedback to students on their progress or that leads to students' self-evaluation or reflection on how their studies and academic work are going. Monitoring can be done either in class or online, through tutorials, portfolios or other means.

The purpose of such supervision, in addition to monitoring students' progress, is to assess and advise in each case, offering necessary guid-

ance and correcting errors, or helping students to overcome obstacles in the path undertaken.

Supervision and what it entails in the way of individual guidance and control should gradually be lessened as students progress from year to year. Gaining autonomy is meant to be a steady process, so by the time students reach their final year they should be showing the highest level of autonomy achieved. Therefore, no standard advice is valid for all situations, and it is up to lecturers to adjust the guidance they give to suit students' level of maturity and year at the university.

4. ***Assessment***

As noted in the guidelines for drawing up course programmes (UD, 2006):

> "The course assessment system includes not only aspects related to final exams prior to issuing final grades, but also covers everything concerned with formative assessment. That is, assessment is undertaken in order to provide students with guidance and feedback on their work, exercises and tests, or on any learning activity which the lecturer feels can be improved if students are given such information."

The assessment system for each subject must be completely developed by the professor and presented to the students in the Learning Guide. The course syllabus should summarise at least those aspects of the assessment system that concern students' degree of progress in learning competences and how this is reflected in the final grade. The final grade is expressed in terms of a numerical score out of ten and given to one decimal point. The following must be specified:

- First, **what** is going to be assessed – i.e., the *Specific and Generic Competences* that the class has worked on. Subsequently, in the Learning Guide, the professor must itemise the assessment indicators for each of the competences. These indicators provide relevant, significant evidence of progressive proficiency in each generic and specific competence.
- Second, **how** these competences are going to be assessed – i.e., the instruments and *techniques* that will be used during continuous assessment and at the end of the process (final assessment). A variety of techniques should be used to suit the nature of the competences worked on (e.g., exams, analysis of work done, oral presentations, test problems, observation of behaviour, etc.)

—Third, students must be told the criteria that will be used in assessing their learning, and the weighting of these criteria in the final grade. The grading system should reflect a balanced distribution among the different competences worked on and the different techniques employed in calculating the final grade.

Clear evidence of the adequacy of the pedagogical innovation process and the CBL applied comes through analysis of the assessment system employed. When this system is simple – that is, based on traditional exams – it can be said that in practice, competences are not being evaluated and therefore there is an important gap in how the system is being applied. CBL requires a varied assessment system, since each competence is comprised of very different components that can only be properly evaluated through a range of procedures.

An area where university professors are in greatest need of training is in assessment techniques. Generally speaking, faculty members are unaware of, or lack experience with diverse evaluation techniques and find it difficult to plan appropriate assessment of certain competences.

Competence assessment calls for different techniques and procedures depending on what is to be evaluated. One question is *knowledge assessment*, where the techniques to be used can include long-answer tests, short-answer tests or multiple choice); quite another is *attitudes and values assessment* (done through observation techniques, self-evaluations, attitude scales, etc.). In addition, there is *competential behaviour assessment* (applying knowledge to specific situations, writing certain types of essays, developing different types of thinking (analysis, synthesis, comparison, critical thinking, creative, comparative, deliberative thinking, etc.). To this end, lecturers can use procedures such as portfolios, reports, problem-solving, essays, etc.

What is truly important in evaluating students is *consistency* between the progress to be assessed and the procedure chosen for this purpose. Occasionally it happens that a lecturer uses a procedure that is not useful for evaluating what he/she really wants to assess. This can happen simply out of lack of familiarity with more appropriate techniques, or it can happen because certain types of progress or competences are more difficult to assess than others or require more time and effort.

Assessment of competences, including generic competences, is crucial to determining the validity of the teaching-learning process, since results will depend on what is measured and how it is measured. Competence assessment requires technical capacitation of teaching staff and

awareness of its true value, so that adequate time and dedication will be devoted to it to ensure success.

Generic or transversal competence assessment proposal

Before we can develop an adequate model for evaluating competences, we must define and specify them so that the assessment will only have to consider the indicators established to reflect levels attained. When we do not have a clear idea of what we want to assess, any procedure will do, since it does not really matter what we evaluate. Assessing by competences means, first, knowing what we wish to evaluate; second, explicitly defining how it is going to be evaluated; and third, specifying the level of achievement that is going to be assessed.

Competence-based learning should not be understood as fragmented learning, as competences were seen from a behaviourist standpoint. Instead, CBL should be seen from an integrating point of view. In our opinion, competences contribute added value to the learning process, making it possible for knowledge, basic skills and effective behaviour to build on each other.

To develop competences, one needs knowledge, since competences cannot develop in a vacuum. They have an essential cognitive component, but provide meaning to learning and to the achievement aimed at, characterised by competence and quality. As noted by Argudín (2000:20).:

> "We see competences as part and parcel of the educational process. That is, a competence is the building of knowledge, while using the competence means applying that knowledge to execute a task or build an object – i.e. a practical result of knowledge. This notion of learning recalls the constructivist view of learning."

Professor Sarramona concurs with this (2000:256) when he says:

> "Insistence on the importance of theoretical (academic) knowledge used to be the dominant policy in education, particularly at the secondary level. The criticism levelled at this predominant trend can be summarised in Montaigne's well-known phrase that he would prefer a well-formed head to one that was merely well filled. In this regard, it should be noted that the educational reforms undertaken in recent times have tended to insist more on the attainment of skills broadly understood, including those that enable students to access knowledge and further it, rather than the simple accumulation of information, which today is relatively easy to find through the numerous information sources now available."

Pedagogical research stresses the need to incorporate *experiences, attitudes and values* into the curriculum, integrating them with *knowledge*. Education through competences includes *knowledge* (the theoretical knowledge pertaining to each scientific or academic area), *know-how* (the practical, operational application of knowledge to given situations), *relational know-how* (the personal and interpersonal attitudes and skills that facilitate working and getting along with others), and *perceptual know-how* (the values involved in our way of perceiving ourselves and our role in the world; our personal commitment to and on behalf of the world).

Morris (1999) describes the type of competences required by contemporary university education, noting that the enterprising spirit that characterises this new era calls for the construction of competences as a new academic culture promoting leadership that coincides with the new society, demand for technological information and development of the corresponding instructive skills, for knowledge about the products of the period, for services and interaction, for new financial paradigms and strategic alliances; and for new initiatives, for a reorganisation of existing programmes and processes which will help to build competences that, at the same time, will support the development of the *knowledge-based society*.

Competence, considered from an integral point of view, represents a dynamic combination of attributes (knowledge, attitudes, abilities, roles and responsibilities) which, according to Heywood (1993), provide:

- A description of action to the extent that a person strives to perform it as a particular type of activity
- A performance in specific situations, incorporating the idea of judgement
- Capacity to interpret followed by decision-making
- Integration and relations in specific contexts and fundamental tasks which, like "intentional acts" are a central part of professional practice
- Recovery, as a key to competent performance, ethics and values
- Context and transfer to diverse situations

There is wide-spread discussion in universities over CBL and the type of competences to be incorporated into the academic curriculum. Some universities in English-speaking countries and many polytechnic universities already have long experience with the CBL approach. Most other universities are trying to find and select the competences they consider most appropriate. Various studies have been made into what these com-

petences should be according to different sources of information: companies and public and private entities, university professors, undergraduates and graduates, as well as groups of experts that have presented their own lists of competences needed for today's professional world.

Characteristics of generic competences

The work entitled *The Key Skills Qualifications Standards and Guidance* published by the Qualifications and Curriculum Authority (2001) stresses that any theoretical or conceptual basis for defining and selecting key competences cannot help but be influenced by individual and social ideas and by what is valued in life under particular political and economic or social conditions.

They recommend selecting competences according to certain criteria.

Generic competences are consistent with the principles of human rights and democratic values

Today, cultural, religious, social and political institutions are stressing the need to promote democratic values, respect for people's ideas and beliefs, respect for other cultures and customs, etc.

Transversal competences develop individual capacity for a good, successful life

Generic competences should further develop the basic skills that help people to satisfy their individual needs. They must be ethically consistent and include the concept of a successful life healthy relations with others, with nature and with society. This is an alternative approach to considering competences predominantly from the standpoint of productivity and competitiveness.

Generic competences are not incompatible with individual and social diversity

The competences approach takes for granted that both individuals and societies are unique and have different life styles, customs and outlooks on life. It is important, when looking at competences abstractly, to recognise that their development and application can take many forms depending on individual and social factors.

Below is a list of features to bear in mind in defining and considering generic competences.

Generic competences integrate human capacities

A generic or transversal competence should not dissociate knowledge of values and attitudes from their use. On the contrary, it should integrate knowledge with personal and civic skills and consider it from the ethical and social point of view. We learn and develop not only to benefit ourselves but also to contribute to the development and well-being of others.

Competences develop individual autonomy

A competent person is clearly one who can live, work and pursue a career with autonomy. Competences should help people to gain the highest degree of individual autonomy, self-reliance and decision-making capacity.

Competences enhance the meaningfulness of learning

Competences carry the potential for learning-to-learn, which is the basis for acquiring and developing any competence. People who find it hard or impossible to learn how to learn independently never achieve the basic conditions for becoming truly competent.

Four basic conceptual features of generic competences

Rychen and Salganik (2006) suggest four analytical features that appear relevant to a multidisciplinary approach to generic competences in an international context:

1. *Generic competences are multifunctional.* The concept of generic competence is invoked only to designate competence that is needed to meet a range of different and important demands in daily, professional and social life. Key competences are needed to achieve different, important goals and to solve multiple problems in various contexts. In the model proposed here, these contexts are distinguished according to levels of competence. The first level always refers to one's closest context, one's

family and daily life. By contrast, the third level refers to a context in which one is called upon to act in complex situations or circumstances.

2. *Generic competences are transversal across social fields.* The term *transversality* is used by Rychen and Salganik with a particular meaning, suggestive of the fact that competences span various sectors of human existence. Therefore, key competences are relevant for effective participation not only in school and the labour market, but also in the political process, social networks and interpersonal relations including family life, and most generally, for developing a sense of personal well-being. In our model, it is also used in this broad sense and applies to one's personal and family life, as well as to interpersonal and social relations. Competences integrate ways of thinking, acting, feeling and behaving in any area of one's personal or civic life.
3. *Generic competences refer to a higher order of mental complexity.* Competences should stimulate the development of higher levels of thinking and mental complexity. Generic competences should help to develop more advanced mental skills, such as critical and analytical thinking, and promote the growth and development of the highest possible attitudes and values. As these authors say, "generic competences assume a mental autonomy, which involves an active and reflective approach to life." Rychen and Salganik (2006).
4. *Generic competences are multidimensional.* Rychen and Salganik propose five dimensions that enable us to recognise an adequate composition of key competences:

   —Recognising and analysing patterns, establishing analogies between experienced situations and new ones (coping with complexity).
   —Perceiving situations, discriminating between relevant and irrelevant features (perceptive dimension).
   —Choosing appropriate means in order to reach given ends, appreciating various possibilities offered, making judgements and applying them (normative dimension).
   —Developing social orientation, trusting other people, listening to and understanding others' positions (co-operative dimension).
   —Making sense of what happens to oneself and others in life, seeing and describing the world and one's real and desirable place in it (narrative dimension).

Competence-based learning and employability

One aspect of the CBL approach that has been criticised is its apparent emphasis on the workplace. There is concern that strictly academic objectives will be abandoned such as the overall humanistic education of students.

We feel that this fear is unfounded, since CBL emphasises individual growth and development as well as reflective thinking about what one learns and its application. Emphasis on humanism depends more on the way in which academics integrate these aspects into CBL than on the approach itself.

Competence-based learning is valued by employers because it better enables students to apply their knowledge. No one doubts that a university education should provide students with a *good academic background*, meaning good conceptual formation and mastery of knowledge and certain contents. However, today more than ever, higher education is expected to develop abilities and skills that can be applied to situations at work and in society that students will encounter when they finish their studies. The educational literature on this topic clearly suggests that having an education means not only knowledge, but know-how, and learning to be and to live together, as memorably stated in the Delors Report on education.

As noted above, the idea of competence includes the knowledge and know-how of certain subjects in different domains, as well as *skills or abilities* understood as practical or applied knowledge, and the personal attitudes and values that shape and guide people's conduct. What are the basic competences that all students, regardless of their chosen field, should possess?

The first important question is who should decide which competences should be acquired and developed in centres of higher education. The Tuning project (González and Wagenaar, 2003) undertook in Europe, and later in Latin America, a study in which three different sources were used. First, over 5,000 students who had completed their studies during the preceding five years were consulted. Given their work experience, they were in an excellent position to give their views on the competences that are most useful and necessary for obtaining a job and then carrying out the work involved. These students ranked a number of competences according to their *importance* in their own working lives, and then gave them a score according to the *degree to which they had been worked on and attained* at their university. This information has enabled us to appreciate the gap between students' view of the need for compe-

tences and how well they are attained at university. Many of the competences are scarcely worked on, and learning of them will enable universities (if they wish) to remedy the situation in coming years.

The second source of information was employers. Nearly a thousand organisations evaluated the list of competences, scoring the *importance* of each and the *degree* to which universities prepare students in them. Thanks to this information, we are able to see the extent to which the universities' view coincides with that of employers.

The third source were nearly a thousand academics, who also scored each competence on two scales: importance and degree of achievement. The data from the study can be seen in the Tuning Report.

It is not a question of improving students' training for a given job or career, but mainly to offer an education that is more *solid, firm* and *in accordance* with the idea of what a good university education should be – i.e. one that helps students to learn to know and do, and learn to be and to live together. This requires the development of competences that go beyond mere *knowledge*, placing the emphasis on integrating the contents of what one learns and the mental outlook of each student, so that learning will be more significant and long-lasting.

This change necessarily entails a revamping of methodology and teaching, so that through the ECTS system, innovations can be introduced to transform universities, making them centres of learning rather than teaching centres.

Universities in English-speaking countries have been working on key competences and incorporating into their curricula the ones they consider basic to today's world. Their list of competences is really quite long, and each university justifies its own choice of competences and incorporates them into each area of study. Ordinarily, every competence is defined at three or four levels of attainment, indicating the extent of the student's proficiency.

Levels of achievement in each competence are *normally* defined according to the following criteria:

1. The basic level refers to the *knowledge* that the student needs to develop the skill in question. Such knowledge has to do with dates, facts, events, features, principles, postulates, theories, etc. It may also be a first step in *self-evaluation*, enabling the student to know his/her initial level in the competence in question.
2. The second level is the way in which the knowledge or skill is applied in different situations (analysing, solving, applying, judging, clarifying, etc.)

3. The third level indicates the way in which a person is able to *integrate* the skill or ability into his/her life (or some facet thereof: academic, interpersonal, social etc.) and is able to *demonstrate* this ability. The essential feature of this level is the *use* that the person makes of the competence in question. Competences may be instrumental, interpersonal or systemic, according to one typology of competences. Under other taxonomies, competences may be labelled as methodological, technological etc.

The Higher Education Funding Council for England (HEFCE) conducted a study (March 2001) in order to compare the level of employment achieved by UK graduates with that of graduates from other European countries and Japan. The comparison is highly interesting due to the differences detected between UK and other university systems.

According to the introduction, the report "*is based upon the results of a major international study of graduate employment*". Entitled *Higher Education and Graduate Employment in Europe",* the study was funded by the European Commission. It was carried out collaboratively by research groups in 11 European countries (Austria, the Czech Republic, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden and the United Kingdom) and in Japan.

According to this study, UK graduates appeared to have advantages over other European and Japanese graduates in their greater likelihood to find jobs in the labour market or research.

Specifically, UK graduates were more likely than their European counterparts:

- To be employed three years after graduation
- To be on permanent (rather than temporary) employment contracts
- To have full-time (rather than part-time) employment contracts
- To spend less time in job search activities
- To obtain their jobs by applying for advertised vacancies
- To make more use of their higher education institution's careers office
- To start their job search prior to graduation

In the study, graduates were asked what they thought had been the most important factors in the eyes of the employers when recruiting them to their first job.

The table below ranks UK and European graduates' perceptions of the importance of recruitment criteria

Table 1

Factors, according to graduates

UK	EUROPE
1. Personality	1. Personality
2. Field of study	2. Field of study
3. Recommendations from third persons	3. Main subject/specialisation
4. Main subject/specialisation	4. Computer skills
5. Work experience during study period	5. Work experience during study period
6. Computer skills	6. Recommendations from third persons
7. Exam results	7. Exam results
8. Work experience prior to study period	8. Foreign language proficiency
9. Reputation of HE institution	9. Work experience prior to study period
10. Experience abroad.	10. Reputation of HE institution
11. Foreign language proficiency	11. Experience abroad

Skills and Competences

The graduates were asked to rate a list of 36 competences according to the extent to which they possessed them on graduation, and the extent to which they were required in their current work. The table below lists the 10 most highly rated possessed competences by UK, European and Japanese graduates.

Table 2

Competences, according to graduates

UK	EUROPE	JAPAN
1. Learning abilities	1. Learning abilities	1. Loyalty, integrity
2. Working independently	2. Power of concentration	2. Power of concentration
3. Writing skills	3. Working independently	3. Adaptability
4. Teamwork	4. Writing skills	4. Getting personally involved
5. Working under pressure	5. Loyalty, integrity	5. Learning abilities
6. Accuracy, attention to detail	6. Field-specific theoretical knowledge	6. Field-specific theoretical knowledge
7. Power of concentration	7. Getting personally involved	7. Fitness for work

UK	EUROPE	JAPAN
8. Oral communication skills	8. Critical thinking	8. Initiative
9. Problem-solving ability	9. Adaptability	9. Tolerance
10. Initiative, adaptability, tolerance	10. Tolerance	10. Teamwork

UK graduates are valued for their *learning abilities, ability to work independently* and *oral communication skills* as the predominant competences at the time of graduation. Compared to other European graduates, they are perceived to be more proficient in the use of ICTs, in planning and organising, documenting ideas and information, and working under pressure. They consider that *working under pressure, oral communication skills,* and *accuracy/attention to detail* are the competences most needed at work.

It seems clear that learning-to-learn and learning independently are at the heart of the teaching-learning process in UK universities and that this is what gives them an advantage over European and Japanese graduates where the labour market is concerned. Clearly, graduates must not only have a good knowledge base, but know how to apply it in their own way in different contexts.

Each group of graduates surveyed perceived rather differently the competences they needed in their current work. The table below shows the 10 most highly rated required competences by UK, European and Japanese graduates

Table 3

Most highly rated competences.

UK	EUROPE	JAPAN
1. Working under pressure	1. Problem-solving ability; working independently	1. Problem-solving ability
2. Oral communication skills		2. Fitness for work
3. Accuracy/attention to detail	3. Oral communication skills	3. Oral communication skills; accuracy/attention to detail
4. Teamwork	4. Working under pressure	

UK	EUROPE	JAPAN
5. Time management	5. Taking responsibility and decisions	
6. Adaptability	6. Teamwork	6. Teamwork
7. Initiative	7. Assertiveness, decisiveness and persistence	
8. Working independently	8. Adaptability, initiative, accuracy/attention to detail	8. Power of concentration; time management
9. Taking responsibility and decisions		
10. Planning, co-ordinating and organising		10. Initiative

The differences encountered among the three groups of graduates surveyed (UK, Europe and Japan) and their association with greater likelihood of employment causes us to think about curricula and the methodologies employed in different degree programmes. It would appear that UK degree programmes are much more employment-oriented than those of other countries. HEFCE provides very significant data on the different emphases found in the higher educational systems of each country.

Each generic competence included in this work comprises the following:

—A definition that specifies and delimits the meaning expressed by the name of each competence. This definition seeks only to delimit the meaning of the term in this model, and may be different to that of other models.

—How proficiency in a given competence is associated with other closely related values, attitudes and competences. Competence as a human achievement is complex and made up of abilities, skills, values and knowledge that cannot be isolated and attributed to that competence alone. Moreover, learners should be aware that when they are working on one competence, they are also developing others.

—Attainment of competences is divided into three levels. The first level reflects competence within the context of normal daily life, where individuals carry out their activity under normal conditions with proficiency. The second level indicates competency in the proper use of techniques, or competent performance. The third

level indicates competency in multiple, complex situations. Generally speaking, such situations arise in the work place, but may also occur elsewhere.
—A set of indicators (from four to eight per level) providing clues or evidence of the degree to which individuals have mastered the competence in question. Each of the indicators comprises a scale of five descriptors which are easily translatable to more traditional systems of issuing final grades.

Competence-based learning requirements

Implementing CBL involves a number of steps that must be taken into account. As stressed above, mastering a competence means drawing on different elements (knowledge, techniques, attitudes and values) in a given situation in order to deal with it successfully. In training students to acquire or develop competences, it is important to:

—Define clearly and specifically what is comprised in the competence to be developed and assessed
—Formulate explicitly the purpose of each activity
—Specify the context and circumstances in which the activities will be undertaken (e.g. in an academic setting, in the classroom, in a laboratory, in a company, hospital or institution, etc.); whether the activity will be undertaken individually or in groups; and what tools or specific techniques will be used
—Estimate the approximate time to be spent on the activity (a powerful aid in calculating ECTS credits)
—Indicate the necessary materials or resources to be used, whether assigned or to be looked up by students
—Specify the strategy (methods and procedures) for undertaking the proposed action
—Provide indicators or standards of what is understood as a satisfactory demonstration of competence (assessment criteria related to indicators and evidence).

Key competences

In the 1990s, Prahalad and Hamel claimed that a small number of competences (which they called *Core Competencies*) can account for

success in business. Their work, originally intended for business management, has also been studied and applied in the field of education.

Many universities in English-speaking countries have developed the concept of key skills or key competences for personal development and a successful life at home and at work.

The conditions determining whether competences are identified as *key skills* are listed below. Such competences must be:

—Multifunctional: helping to satisfy different demands placed on the person in daily life. They are needed to achieve important goals and solve problems in various different contexts.
—Transversal: valid and utilised in different areas of life (personal, family, social, work, political)
—High level of mental complexity: requiring independent thinking, ability to reflect and take a detached view of socialisation processes and one's own needs and convenience, in order to generate independent thinking
—Multidimensional: containing a style or way of doing things, a keen analytical and critical sense, communicative abilities and common sense

These competences include:

—Critical and reflective thinking
—Computer skills

—Working in heterogeneous groups (OECD, 2000)

Other experts add:

—Learning orientation
—Communication
—Application of mathematical thought
—Problem-solving ability

These are the key skills incorporated into a large number of university curricula in English-speaking countries (University College of London, Middle Tennessee State University, University of Central Lancashire, Toronto University, etc.).

As can be seen, all these skills are included in the list on which the Tuning Project and the ANECA whitebooks are based. However, the offer of differentiated key competences according to field of study is still not available in our country.

Some universities select a small group of key competences for all their degree courses. When this happens, they generally choose from

eight to twelve core competences. Below are some examples of universities that have become references for their CBL experience or approach.

A recent review of the key competences used by universities (Villa and Bezanilla, 2002) analyses the debate on how to implement CBL in higher education and takes note of the terms used in the different models:

> "The terms "transferable skills", "general skills", "common skills", "core skills" are defined in different ways by different authors. Generally speaking, they refer to the skills needed for gainful employment and responsible citizenship, and are important for all students regardless of the field they are studying." (Fallows and Steven, 2000).

Montfort University UK	LUTON UNIVERSITY UK[1]	ALVERNO COLLEGE USA	NAPIER UNIVERSITY UK[2]	University of Australia	MIDDLESEX University UK
Mathematical skill	Information recovery and processing	Communication	Study skills	Ability to work with sufficient knowledge	Personal and professional development
Communication	Communication and presentation	Analysis	Mathematical skill	Life-long learning preparation	Effective learning
Learning self-improvement	Planning and problem-solving	Comprehensive outlook	Management skills	Problem-solving ability	Communication
Computer technology	Development and social interaction	Problem-solving ability	Maths skills	Working independently	Teamwork
Problem-solving		Effective citizenship		Ethical action and social responsibility	Mathematical skill
Teamwork		Decision-making		Effective com-munication	Computer skills
		Aesthetic response		International outlook as professional and citizen	
		Social interaction			

[1] The University of Luton (UK) groups competences into four areas, each of which is further subdivided into other competences.

[2] The University of Napier (UK) has five types of competences: Study skills (time management, note-taking, resource identification, group work), Communication skills (spelling

University of Wollongon Australia	Bowling Green State University USA	Curtin University of Technology Australia	Oxford Brooks University UK	Leeds Metropolitan University UK	Sheffield Hallam University UK
Commitment to independent learning	Communication	Communication	Manages own learning	Study skills	Written expression
Broad, consistent knowledge of field	Analysis	Literacy and computer skills	Learning skills	Learning methods	Oral communication skills
Self-confidence and communi-cative ability	Problem-solving ability	Literacy in information management	Communication	Information and research	Visual communication
Teamwork	Critical judgement	Teamwork	Teamwork	Evaluation	Information management
Analytical capacity	Leadership	Decision-making	Problem-solving ability	Social skills	Teamwork
Adaptability and appreciation of multiculturality	Self-confidence		Computer skills	Personal development	Computer skills
Management and information skills				Work-oriented	Mathematical skill
Participation in organisational and social change					Problem-solving ability
Acceptance of individual and social responsibility					Enhanced learning
					Time management

and grammar, essay writing, oral presentations, using telephone); Computer skills (user proficiency: computer, text processors, e-mail, spreadsheets); Information/library management (information gathering, key words, Web searches, compiling bibliographies); Maths skills (arithmetic, simple equations, basic statistics, graphs).

The table shows some of the universities analysed. Each one selects the skills and competences it considers most important for its students, bearing in mind the degree courses it teaches.

Below are the top thirteen skills that appear most frequently in the more than twenty universities studied. They are listed in order of frequency:

1. Written communication and presentation skills (essay and report writing, spelling, grammar, note-taking, etc.)
2. Oral communication and presentation skills (listening, oral expression, using the telephone, etc.)
3. Computer skills
4. Information management (information processing and management)
5. Teamwork
6. Problem-solving ability
7. Learning-to-learn (effective learning, life-long learning, learning strategies, awareness of own learning abilities)
8. Social interaction skills (human relations, interpersonal relations, interpersonal comprehension, ability to form relationships, etc.)
9. Collaborative learning and working (working with others, co-operative work)
10. Self-confidence
11. Time management
12. Ethical sense (ethics, ethical commitment)
13. Decision-making (powers of judgement)

Generic competences at the University of Deusto

As noted earlier, the Pedagogical Framework of the University of Deusto distinguishes three types of generic or transversal competences:

- Instrumental competences: considered as means or tools for obtaining a given end.
- Interpersonal competences: different capacities that enable people to interact well with others.
- Systemic competences: concerned with comprehension of an entire set or system. They require a combination of imagination, sensibility and ability to see how the parts of a whole are inter-related.

This organisation of generic competences is summarised in the table below:

Table 4

Organisation of Competences

Table of generic competences		
Instrumental	Cognitive	Analytical, systemic, critical, reflective, logical, analogical, practical, team, creative and deliberative thinking.
	Methodological	Time management Problem-solving Decision-making
		Learning orientation (in the pedagogical framework, learning strategies) Planning
	Technological	PC as working tool Use of databases
	Language	Oral communication skills Written communication skills Foreign language proficiency
Interpersonal	Individual	Self-motivation Diversity and interculturality Resistance and adaptation to environment Ethical sense
	Social	Interpersonal communication Teamwork Conflict management and negotiation
Systemic	Organisation	Objectives-based management Project management Quality orientation
	Enterprising spirit	Creativity Enterprising spirit Innovation
	Leadership	Achievement orientation Leadership

Brief description of the draft generic competences model proposed by University of Deusto

For each competence, this publication provides:

—A description, with orientations on how to interpret and apply it
—The definition given by UD to the different competences
—Overlap with other competences, attitudes and values
—The description of three levels of mastery for each
—A set of progress indicators at each level
—Five descriptors for each indicator

The volume provides a wealth of information to be used either in conjunction with the UD pedagogical platform, or to draft guides supporting lecturer assessment, student self-assessment, or student peer assessment.

The structure of generic competences assessment can also serve as a guide for organising the assessment of specific competences, which each professor must explain in the students' learning guide.

Chapter 2

Instrumental generic competences

These are competences that serve as a means or tool for attaining a given goal.

Instrumental competences can be further subdivided into types, including cognitive, methodological, technological, and language skills. There are many other ways of classifying them. However, UD has adopted the system shown in table 1.

Some of the most important instrumental competences are different types of thinking. The more modes of thinking that a person develops, the greater his/her intellectual prowess will be. The UD model distinguishes ten types of thinking whose relative importance depends on the type of studies undertaken by the student.

These ten types of thought are: analytical, systemic, critical, reflective, logical, analogical, creative, practical, deliberative and team thinking. Each profession develops its own predominant way of thinking, although of course it also uses others. Indeed, other complementary types of thinking are necessary and will be more or less abstract, or more or less experimental depending on the field of study.

Another important group of instrumental competences are those that we call methodological. Each field of study has its own methodologies and procedures for the advancement of knowledge. However, we can distinguish more general methodologies, which cover any type of study and can be considered basic or fundamental. Such key methodologies include time management, a competence which, like planning, supports students' independent development. The other three included in this section are very frequently encountered in many universities. Problem-solving and decision-making are two key tools for organising and

undertaking tasks at school and at work. The third competence is learning orientation, understood as a systematic, permanent procedure throughout life. Learning-to-learn is considered a strategy *par excellence.* Some authors consider it so important in fact, both for people and for organisations, that there are two organisational approaches based on these principles: organisational learning and learning organisations.

Under the heading of instrumental competences, a third group is technological skills. The University of Deusto pedagogical model features two basic technological competences: "computers as a working tool" and "database use". In a world such as ours where technology is so important, students must become proficient users of computers, meaning that they must have a basic mastery of the main types of software: text processors, spreadsheets, audiovisual presentations. In addition, at least a basic knowledge of databases is considered not only advisable but necessary for good academic progress in any field of study.

Finally, there is a fourth group of instrumental competences which we call language skills. They include good oral and written communication skills, both of which are key competences for university students. Moreover, students should become proficient in at least one foreign language. In such an increasingly internationalised world, more and more students take part of their studies abroad, need to be able to read in other languages, and find that their future jobs depend on this since proficiency in other languages is required by companies and institutions.

COMPETENCE: ANALYTICAL THINKING

Description

Analytical thinking is the type of mental process we use to understand reality. It is based on a methodical approach whereby we break down complex situations into their constituent parts to study them and identify the most qualitatively or quantitatively significant items, distinguishing these from items that are not important. This process highlights the interrelations between the elements identified, groups them to allow interpretation of the situation, presents it in a clear and orderly way, and so facilitates a diagnosis, the taking of decisions or solving of problems.

Analytical thinking is almost the antithesis of intuitive thinking, since:

A. It proceeds systematically, step by step, to identify, separate and evaluate the components of a situation, instead of allowing interpretation to be based on its most salient features or preconceived ideas.
B. It identifies relations of priority, hierarchy, cause and effect, etc. before arriving at conclusions or offering solutions to a problem, and instead of vaguely expressing a situation in general terms or presenting conclusions unsupported by available information.
C. It uses tools for analysis, redefining the situation in doing so, and for presenting conclusions, instead of relying on ideas that merely pop into one's mind as an approach to truth. Mastery of this competence involves developing a set of skills such as:

   —Identifying, in the unordered description of a situation, the informative elements it contains, classifying them according to the degree of reliability or certainty attached to them. (An objective fact from a reliable source is not the same as an opinion expressed by someone who has a vested interest in the matter, for example.)
   —Recognising information gaps, for which one must have a prior theoretical model for sorting information elements into categories. Lack of sufficient or sufficiently reliable information can lead to decisions to search for new information or to posit reasonable hypotheses or estimates before attempting to reach conclusions.
   —Using analytical tools to organise available information and show the relations between different components. Such tools include figures, outlines, tables, concept maps, graphs, etc.

showing clearly both the elements and the relations between them. Of the various types of relations that can exist between elements identified, causal relations are particularly important for a correct interpretation of the situation to be analysed.

Interaction with other competences, attitudes, interests and values

Analytical thinking is closely related to other types of thought, particularly critical thinking and practical thinking, for which it provides a prior rational basis. For these same reasons, it is essential for problem-solving skills, and the competences of planning and decision-making.

Analytical thinking develops the ability to apply logic, observation and conceptualisation, and helps to form systematic methodological habits that are useful for coping with all kinds of tasks, especially those related to information gathering and research. Therefore, it is a type of thinking that is basic for learning.

By helping us to comprehend reality, analytical thinking also helps to generate confidence in our own ability to face and deal with it. Consequently, it reduces our insecurity when we are faced with new tasks, projects, etc. It also facilitates growth by providing us with a tool for independently interpreting matters without need of guidance from above.

Importance of this competence for academic and professional life

From a very early age, students are constantly encountering tables and classifications produced through analytical thinking, but they do not always understand how these "summaries" have been arrived at and they simply memorize them. In daily life they also encounter manifestations of this type of thinking (a doctor's diagnosis, for example) but may not be familiar with the underlying process of analysis, believing simply that such outcomes are the result of "memory" or "opinions".

To build concepts – i.e. to achieve meaningful learning – students need to master the processes of analytical thinking. They must learn how to draw their own diagrams and graphs, create their own tables and concept maps. No matter what the field of study, comprehension of theory and its application to real situations requires the development of analytical thinking.

At work, the ability to understand and explain situations, and the ability to provide sound argumentation for one's points of view or con-

clusions, marks a very significant difference between good workers and mediocre ones. Clearly, success at work correlates closely with mastery of this competence.

How to incorporate it into the academic curriculum

To develop these skills, it is best to begin with simple situations (few elements and direct or linear relations), giving clear guidance as to the tasks to be undertaken sequentially. At subsequent levels, the complexity of the situations can be increased, both in the number of elements involved and in the types of relations between them. Preliminary instructions, on the other hand, can be decreased to stimulate students' initiative as to the course to take, the tools to use and ways of presenting conclusions.

Specifically, the case-study method often proves very appropriate for introducing students to this competence and developing it up to the highest level.

COMPETENCE: ANALYTICAL THINKING

Definition: **This is the mental behaviour that enables one to distinguish and separate the parts of a whole to arrive at its principles or elements. Analytical thinking is thinking in detail, accurately, enumerating and distinguishing.**

Mastery of this competence is closely related to: **Reflection, logic, power of observation, comprehensive vision, ability to conceptualise, planning, problem-solving ability, oral and written communication skills, etc.**

Levels of mastery:

1. Describing, relating and interpreting simple situations and propositions
2. Selecting the most significant elements and their relations in complex situations
3. Identifying information gaps and finding relations with elements outside the situation in question

Indicators:

1. Analysis of written information (books, cases, articles, etc.)
2. Quantitative analyses
3. Process analyses
4. Qualitative analyses
5. Use of graphic support

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Describing, relating and interpreting simple situations and propositions***	Listing in orderly way the elements in a text	Only identifies the most obvious or salient items in a text.	Lists most of the elements contained in a text.	Identifies and lists all elements according to pre-established criteria.	Lists and sorts all elements (by similarity, date, etc.).	Classifies elements in systematic, orderly way (index, table, etc.).
	Grouping and describing sets of qualitative elements in pre-established categories	Groups haphazardly or cannot use suggested categories.	Makes mistakes in applying suggested categories.	Correctly groups qualitative elements in pre-established categories.	Correctly explains grouping and describes groups formed.	Proposes new categories or subcategories to improve grouping.
	Correctly describing sequential processes	Fails to understand the sequential process concept. Confuses "process" with "enumeration".	Confuses the temporal or logical succession of a sequential process.	Correctly describes the temporal or logical sequence or process.	Explains the importance or logic of a sequence.	Identifies possible changes in a sequential process and their consequences.
	Interpreting simple series of data (of one or temporary variables)	Is not able to interpret a set of numerical data.	Makes mistakes in interpreting simple data series.	Calculates averages, percentages and constant trends.	Explains the significance of data analysis.	Draws conclusions from analysis of data.
	Expressing information in simple tables or graphs suggested by lecturer	Cannot condense information in a table or graph.	Utilises tables and graphs but does so incorrectly or incompletely.	Correctly utilises double entry tables and simple graphics (lines, columns, sequences, etc.).	His/her tables and graphs are clear and highlight important information.	Shows originality, his/her graphics are self-explanatory thanks to use of forms and colours.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Selecting the most significant elements and their relations in complex situations***	Correctly identifying the main ideas in a complex text	Confuses main and secondary ideas. Levels of importance not distinguished.	Identifies main ideas but attributes importance to some that are not.	Correctly selects and enumerates all main ideas.	Logically orders ideas (premises and conclusions, hypotheses and arguments, etc.).	Clearly orders and describes with originality the relations between main ideas (concept map).
	Relating and ordering qualitative elements	Only identifies obvious relations or establishes incorrect relationships.	Establishes correct but fairly insignificant relationships.	Identifies without help significant relationships (temporal, hierarchical, or others).	Explains the type of relationship identified and its importance.	Justifies relationships identified and draws conclusions.
	Correctly describing non-sequential (parallel, several possible lines, reversing) processes	Reduces any complex process to a series of sequences.	Makes mistakes in identifying the different paths of a non-sequential process.	Correctly describes the different lines of a non-sequential process.	Identifies and explains the reasons why a process is not sequential.	Suggests improvements proposing possible new paths.
	Relating two or more quantitative variables	Does not know how to correlate two variables.	Makes mistakes in correlating variables.	Correctly correlates variables.	Correctly describes the significance of correlation analysis.	Draws conclusions from correlation analyses.
	Interpreting complex time series	Analyses series as linear when they are not (e.g. adjusts a line to a seasonal series).	Makes mistakes in analysing complex time series.	Correctly identifies trend or cycle changes.	Correctly explains type of adjustment made.	Correctly interpolates and extrapolates from adjustment made.
	On own initiative, selecting the right tool for presenting information (table and type of graph)	Tables and graphs are always the same. Only knows how to use one way of representing data.	Uses various types of tables and graphs but chooses them more for aesthetics than for appropriateness to situation.	Correctly uses best type of graph for representing each type of situation (static, evolution, comparisons, etc.).	Accompanies tables or graphs with explanatory text highlighting most important features.	Designs own graphs and tables, adding visual elements that improve their comprehension.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Identifying information gaps and finding relations with elements outside the situation in question*	Identifying information gaps or lack of logical argumentation in written texts	Fails to see gaps or inconsistencies in text.	Identifies only some of the gaps or inconsistencies.	Identifies need for additional information. Points out inconsistencies.	Proposes additional sources of information. Suggests improvements in argumentation.	Incorporates additional information. Solves inconsistencies.
	Seeing cause-effect relationships or developing ideas from qualitative elements	Doesn't identify causal relations. Doesn't generalise from the particular.	Establishes incorrect causal relationships. Makes unfounded generalisations.	Identifies cause-effect relationships. Develops ideas from observation.	Provides correct argumentation to justify relations or generalisations identified.	Brings in outside facts (analogies) to support and strengthen conclusions.
	Designing the right process for attaining objectives in specific situations	The process designed does not lead to results. Important facts or activities missing.	Designs theoretical process that does not suit the situation in hand.	Designs effective process for achieving objectives, taking into account the facts of the situation.	Designs effective process suited to the situation to meet objectives.	Designs original, innovative process or proposes various alternative processes.
	Using sophisticated methods for analysing data and interpreting results	Unfamiliar with sophisticated statistical models.	Knows and utilises some sophisticated statistical models but doesn't know how to interpret results.	Utilises sophisticated statistical models and knows how to interpret results.	Justifies the type of analysis made and correctly describes the significance of results.	Draws significant conclusions from statistical analysis of the data.
	Basing ideas and conclusions on facts and the relations between them	Presents ideas as opinions without basing them on facts or on the relations between them.	Uses facts but only those that support own opinion.	Utilises all the facts and relations between them to argue in favour of ideas.	Evaluates and weighs facts and relations to arrive at conclusions.	Considers various possible options based on different weightings of the facts and relations between them.

Description

The idea of *systems* can be approached from a very general, basic point of view, where we could say that a system is a set of elements organised to interact dynamically toward a given end. A more demanding idea of systems, such as those at work in social spheres, would refer to complex (open, alive, social) systems conceived as an ordered combination of parts which, although working independently, interact forming a functional, rational and organised whole for the attainment of previously established common objectives. In any case, what is always recognised in systems are the basic features of totality (the whole is more than the sum of the parts) and purpose (objectives-oriented).

Systemic thinking means focusing on the whole to see how the parts fit together, interrelate and interact. It is a way of thinking that tries to look at a situation and see the system or systems of which it is comprised. Consequently, we would say that students have developed the competence of *systemic thinking* when they can see and comprehend situations using systemic patterns. The ability to work with totality refers:

—Both to the productive dimension of creation, where the individual is able to build and/or communicate a unique production based on various elements (a summary, a synthesis, a theory, model or system of abstract relations, a plan, a method, a project, a design, etc);

—And to the receptive dimension of comprehension, where the individual is capable of seeing the systems at work in daily life or experience, and understand how the parts of which they are comprised interact.

Interaction with other competences, attitudes, interests and values

Systemic thinking is clearly an instrumental competence that depends on proficiency in other basic competences for its own development, but that at the same time is also necessary for other complex competences to develop.

—It is closely related to knowledge transfer, or the capacity to transfer specific knowledge to diverse situations, and to the abil-

ity to interact with and understand other fields or disciplines. So it is based on other instrumental competences, particularly the cognitive skills of analytical thinking (which it complements), logical thinking, analogical thinking, creative thinking, practical thinking and team thinking.

—It is necessary for decentration and transversality – to transcend one's own objectives and co-operate with others to achieve more comprehensive objectives, to develop the capacity to deal with different internal and external agents of an institution and understand their points of view, and the capacity to comprehend the real extent of certain problems or conflicts. It is related therefore to the interpersonal competences of interpersonal communication, teamwork, conflict management and negotiation, and also with ethical sense, diversity and multiculturality.

—Finally, it constitutes the primary instrumental basis for developing the systemic competences required for work in social, organisational and institutional contexts. It is needed in order to identify new opportunities for improving effectiveness and quality, to gather information and advice and take the right decisions, to organise resources, to analyse and evaluate results. That is, it is essential for objectives-based management, project management, quality orientation and achievement, innovation, creativity, enterprising spirit and leadership.

Importance of this competence for academic and professional life

The degree to which students develop this instrumental competence is crucial to the success of their academic work, given its close relation to theoretical and practical knowledge transfer, and to complex mental operations. Therefore, despite its complexity, work on this competence should not be put off until the last years of a degree course, but instead should be worked on from the very beginning (at its least complex level) to familiarise students with the systemic outlook that characterises scientific and technical knowledge in any discipline, in contrast to the more lineal thinking so often used in everyday knowledge. Moreover, students who take a systemic view of their studies and of the medium- and long term are the ones who will seek advice and take the right decisions concerning a future career (itineraries, choice of subjects, internships, etc.).

In talking about the interactions of this competence, we have stressed the fact that systemic thought is the basis for comprehending and deal-

ing with complex interpersonal, social and institutional situations and contexts such as are to be found in any job. So it is one of the competences given highest priority by academics and students in different fields of study.

How to incorporate it into the academic curriculum

Systemic thinking is a transversal competence that can be used in numerous situations and circumstances. Therefore, special situations do not have to be created in order to teach this kind of thinking. Instead, the idea is to take advantage of the potential offered by certain kinds of academic work and situations in order to develop this competence. In incorporating it into the curriculum, the main thing is to become aware of when we are working on a dimension in which this type of thinking appears to a greater or lesser extent:

- *Integrating* knowledge: relating knowledge within a subject, between subjects and between disciplines.
- *Attitude* toward analysis and comprehension of the *complexity* and dynamics of a situation: first becoming aware of this complexity and then showing curiosity and interest to learn more and delve further so as to understand different perspectives and dynamics.
- *Knowledge transfer*: relating theory and practice, applying what has been learned to practical situations and to integral projects.
- *Analysis of systems* and their interactions: this refers to the logical part of the competence, meaning capacity to work simultaneously with the parts and the whole, identifying systems and subsystems, differentiating micro- meso- and macrosystems, analysing their interdependent relations, their interactions and their dynamic transformations.
- *Mental models*: becoming aware of the mental models underlying our own and others' actions and situations, identifying, recognising, analysing, and contrasting them, and proposing integral models.
- Use of different *techniques* to develop systemic thought (cause-effect, sequential analysis, circular analysis, work with data and generalisations, etc.).

In this way, students can gradually delve deeper into the complexity of tasks and objectives:

—At the first level, students should simply become aware of the systemic nature of reality, which does not allow reductionism and defies simplification if it is to be known and understood with a minimum of professional rigour.
—At the second level, students should be given complex, comprehensive tasks and situations to study and develop from a clearly systemic point of view.
—At the third level, students' systemic vision should determine their action and be manifested in dynamic actions and interactions, exercised responsibly, knowing the impact that their actions will have on the people and teams with which they interact.

For these reasons, no general recommendation can be made on the type of situations to use for assessing this competence. Instead, we should go directly to the indicators, which will enable us to assess its manifestations in salient situations of the subject and course. The complexity of the indicators makes it hard for students to participate in the assessment process until they are in their final years, so most of the responsibility falls to the lecturer. However, the lecturer should nevertheless share and discuss with students his or her observations and evaluations, especially in the context of ongoing evaluation, and particularly with certain students who may be having greater difficulty in making progress with systemic thinking.

COMPETENCE: SYSTEMIC THINKING

Definition: This is the mental behaviour that enables one to organise and integrate interrelated components to form a whole. Understanding and dealing with reality through overall patterns.

Mastery of this competence is closely related to: Capacity to transfer specific knowledge to diverse situations. Transversality: transcending one's own objectives and co-operating with others to achieve more comprehensive objectives. Understanding the scope of certain problems or conflicts. Decisiveness. Enterprising spirit, leadership, etc.

Levels of mastery:

1. Mentally organising and integrating diverse components of reality, explaining it using holistic (global) models
2. Dealing with reality by using holistic knowledge
3. Having positive impact on team with a systemic, dynamic vision.

Indicators:

1. Integrating knowledge
2. Comprehending complexity
3. Knowledge transfer
4. Analysing systems and their interactions
5. Mental models
6. Using techniques

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Mentally organising and integrating diverse components of reality, explaining it through holistic (global) models***	Incorporating different course components into own analysis	Fails to relate key elements of the subject or makes illogical associations.	Establishes significant relationships between some components, facts etc. of the subject.	Explains processes, relations, interactions, connections, dependencies, etc. of the subject.	Orders and ranks elements, facts, processes, relations, etc. of the subject.	Diagrams processes, relations, interactions, etc. of the subject.
	Becoming aware of complexity and proceeding to analyse it	Shows no interest in complexity. Does not seem affected by it.	Gets blocked by complexity.	Discovers complexity without blocking, although insecure or uncomfortable with it.	Accepts the complexity of reality and feels able to cope with it.	Orders and ranks the elements to be considered in dealing with complexity.
	Showing ability to transfer theoretical or classroom knowledge to practical situations	Fails to relate theory and practice.	Has hard time seeing the practical applications of what has been learned.	Identifies practical applications of the contents studied.	Makes some practical applications of contents.	Systematically projects and applies contents to practice.
	Distinguishing systems and subsystems (meso systems and microsystems) in personal life and/or at work	Fails to identify the existence of systems and subsystems.	Has difficulty in identifying systems and subsystems.	Detects the systems and subsystems at work in the environment.	Analyses some relations between systems and subsystems.	Grasps interdependencies and explains the interactions between systems and subsystems.
	Considering the mental models underlying a situation	Unaware of the existence of mental models in a situation.	Has hard time seeing some mental models underlying the situation.	Reflects on the impact of mental models on the situation.	Identifies and explains the mental models underlying the situation.	Compares and contrasts different mental models underlying the situation.
	Utilising basic techniques to engage in systemic thinking	Only identifies isolated cause-effect pairs.	Only makes linear analyses of sequences of facts.	Makes circular analysis of sequences of facts.	Grasps circular interactions correctly and easily.	Identifies the effects of intervention and regulation on circular sequences.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Dealing with reality using holistic knowledge in complex tasks and situations***	Integrating elements from different subjects or fields in analysing reality	Fails to relate elements from different subjects.	Sees relationships between some elements, events, facts, etc. from different subjects.	Integrates elements from various subjects in the same field of knowledge into a model for analysing reality.	Integrates elements from different disciplines or fields of knowledge into a model for analysing reality.	Works with an interdisciplinary approach.
	Adopting different perspectives, sources, dimensions, etc. to analyse reality	Adopts a sole perspective, source, dimension, etc. in analysing reality.	Adopts a few perspectives, sources, dimensions, etc. in analysing reality.	Adopts a variety of perspectives, sources, dimensions, etc. in order to understand reality.	Orders and ranks various perspectives, sources, dimensions, etc. in analysing reality.	Logically integrates the diverse perspectives, sources, dimensions, etc. used in analysing reality.
	Transferring contents into practice, through their integration in a project	Fails to apply contents to practice.	Partially applies contents to practice.	Applies contents to practice through integration in a project.	Designs and develops a project where contents are applied.	Evaluates project and introduces improvements as a consequence.
	Identifying and explaining any salient macrosystems in the situation	Doesn't distinguish macro- from meso- and microsystems.	Only describes the macrosystems in the situation.	Explains the salient macrosystems in the situation.	Establishes relationships between macro-, meso- and microsystems.	Clearly presents the interrelations between macro-, meso- and microsystems.
	Becoming aware of own mental models	Not aware of own mental models.	Has difficulty in recognising own mental models.	Is aware of own mental models.	Considers other mental models apart from own.	Explains the situation from the point of view of others' mental models.
	Differentiating between isolated facts and generalisations inferred from facts	Generalises impulsively and without caution.	Confuses isolated facts and generalisation, although shows some caution.	Generalises with caution and critical sense based on observation.	Utilises generalisations in decision-making taking into account their degree of accuracy.	Systematically checks the validity of generalisations.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Having positive impact on team thanks to dynamic systemic vision integrating various perspectives***	Viewing various fields of knowledge and/or disciplines systemically	Fails to integrate elements from various subjects, fields, perspectives, etc. in a single proposal.	Integrates some elements from different fields in a single proposal.	Approaches situations systemically, going beyond the levels of each of each field of knowledge.	Presents own systemic vision comprehensibly for others.	Helps team to develop systemic vision.
	Understanding the mechanisms of resistance to change in self and others	Reacts negatively to people who resist or reject change.	Exerts pressure to overcome resistance to change.	Identifies the mechanisms (implicit rules or power relations) underlying resistance to change.	Devises strategies to overcome the mechanisms (implicit rules or power relations) underlying resistance to change.	Motivates team to overcome the mechanisms (own implicit rules or power relations) underlying resistance to change
	Viewing systems dynamically	Has difficulty in explaining the evolution of a system over time.	Looks for the immediate effects of change.	Describes a system's time perspective.	Foresees the delayed effects of change and their impact on the system.	Foresees (short-, medium- and long-term) evolution of systems and their alternatives.
	Proposing motivating, feasible ways to advance beyond existing mental models	Partial, limited vision of reality hinders team's progress.	Supports team members who propose progressive systemic views.	Proposes mental models that would improve the team's predominant ones.	Stimulates improvement of team's mental models.	Helps team to develop mental models that better enable it to deal with situations.
	Helping to integrate conflicting mental models	Does not consider others' mental models.	Shows willingness to consider others' mental models.	Explains situations using mental models other than own.	Identifies consistencies, inconsistencies, meeting points and points of difference between different mental models.	Proposes new mental models acceptable from antigenic perspectives.
	Participating in team considering its complexity and interdependency	Tends to simplify problems and cast blame.	Avoids and rejects search for scapegoats.	Recognises the responsibility of multiple agents in problems.	Specifies the systemic impact of each agent's responsibility.	Distinguishes each agent's capacity to contribute to change in the system.

Description

Critical thinking goes beyond the skills of logical analysis since, according to Brookfield (1987), it involves questioning the underlying assumptions behind our usual ways of thinking and acting, and then, on the basis of this critical questioning, being willing to think and act differently. In the opinion of Moya (2005), critical thinking is *why* thinking: Why are things like that? Why can't things be some other way? Why do you think things are like that? Why would anyone want things to be like that?

Consequently, we will say that students have developed the *competence of critical thinking* to the extent that they wonder about things and are interested in the foundations underlying their own and others' ideas, actions, judgements and evaluations.

Interaction with other competences, attitudes, interests and values

Critical thinking is an instrumental competence that depends on proficiency in other basic cognitive competences such as reflective thinking, logical thinking, analytical thinking, systemic thinking, practical thinking and team thinking.

It is necessary to develop critical thinking in order to be able to recognise the conditions under which a given set of ideas can be transformed into knowledge or beliefs that will have a decisive influence on decisions and actions, as well as the way in which people construct their own mentalities based on ideologies. Therefore, it is an essential basis for developing individual interpersonal competences (self-motivation, adaptability and ethical sense) and social competences (interpersonal communication, teamwork and conflict management). Finally, at the systemic level, critical thinking enables people to revise, question and improve social and organisational practices (quality orientation, achievement orientation and enterprising spirit).

Importance of this competence for academic and professional life

Critical thinking can be recognised in our private lives and at work, and in its social and political implications. According to Brookfield (1987), being a critical thinker is part of what it means to be a growing, developing individual. Going even further, we could say that critical thinking is

crucial for creating and maintaining a healthy democracy. Without it, we could not grow at any of these three levels: our personal relations would atrophy, organisations would stay the same as twenty years ago, and political participation would deteriorate.

> "Learning to think critically is one of the most significant activities of adult life. When we become critical thinkers, we develop awareness of the assumptions under which we and others act. We learn to pay attention to the context in which our actions and ideas are generated. We become sceptical of rapid solutions, single responses to problems and appeals to universal truth. Also, we open up to alternative ways of seeing things and behaving in the world. The ability to think critically is important to our lives in many different senses (....) In our personal relations we lean to see our own actions through the eyes of others; in the work place we try to exercise democratic control of the organisation and functions of our jobs, and to take initiatives to go in new directions and design the form and content of our activities. We become aware of the potential for distortion and predisposition in public and private life. Politically, we value liberty, we practice democracy, we encourage tolerance toward diversity, and we submit to review the demagogic tendencies of politicians" (Brookfield, 1987: IX).

For these reasons, it is very important that university students receive training in the type of critical thinking that is required in adult life and life at work, a correspondence which must be taken into account in facilitating the transfer of this competence, since often the activities and tasks undertaken in academic contexts to work on this competence lack such correspondence.

How to incorporate it into the academic curriculum

As just noted, more than mere cognitive training, the situations and tasks proposed to develop students' critical thinking should prepare for this transfer, stressing awareness and consistency between our thoughts and our actions, a willingness to revise them, and the importance of sharing these activities and reflections with other persons.

The idea therefore is to create situations where assumptions can be examined and checked against others. The object of analysis will always be our own and others' discourse and actions, either directly expressed and observed (for example in the case of our own thoughts or behaviour), or else gleaned from a written document (article, news item, story, etc.) or audiovisual item (audio recording, radio or TV programme, documentary, film, etc.). Dialogue and discussion will make it possible to con-

trast reasonings and broaden the perspectives of analysis. To this end, we should try to approach the different manifestations of critical thinking analysed in the competence indicators congruently:

—Formulating *own judgements*: asking questions about surrounding conditions, reflecting on them, formulating and arguing own judgements.
—Analysing *others' judgements*: being interested in and analysing others' judgements (distinguishing fact from opinion, strong and weak points, and identifying underlying ideas, principles and values).
—*Using well-grounded criteria* to analyse judgements, adopting a constructive attitude: internal criteria (consistency, logic, congruency, reliability,...) and external criteria (utility, feasibility, validity, etc.).
—Becoming aware of the *practical implications* of judgements and acceptance of responsibility for such implications: the pros and cons of decisions, their consequences for others and for the rights of individuals.

Progress in the competence depends not so much on the type of situations worked on, but on how deep students delve in the following dimensions:

—At first, the idea would be simply to pose questions and reflections on surrounding conditions, formulating one's own judgements and checking them against those of others.
—Later, students should explore the consistency between thought and action, and the personal and social implications entailed thereby.
—Finally, students should be able to give a reasoned, well-founded account of it, in view of the principles and values inspiring their decisions and actions.

Although as we have said critical thinking involves both thought and action, what lecturers can observe is essentially the student's reasoning, so this becomes the pathway to assessment (the reasonings and arguments that the students produces orally and in writing, as well as how he/she reconsiders and redevelops them as a result of dialogue with others).

Here again, the complexity of the indicators makes it hard for students to participate in the assessment process, with the result that most of the responsibility falls to the lecturer. However, the lecturer should share and discuss with students his or her observations and evaluations, especially in the context of ongoing evaluation, and particularly with certain students who may be having greater difficulty in making progress with critical thinking.

COMPETENCE: CRITICAL THINKING

Definition: **This is the mental behaviour that questions things and concerns itself with the foundations on which our own and others' ideas, actions and judgements are based.**

Mastery of this competence is closely related to: **reflective thinking, logical and analytical thinking. Recognition of the conditions that make it possible for a given set of ideas to be transformed into knowledge. Decision-making, innovation, etc.**

Levels of mastery:

1. Asking oneself questions about life around us and actively participating in discussions about it, analysing the judgements made and reflecting on the consequences of one's own and others' decisions
2. Analysing the consistency and logic of one's own and others' judgements, evaluating their personal and social implications
3. Arguing the pertinence of judgements made and analysing the consistency of one's own conduct, given the principles and values that one defends

Indicators:

1. Own judgements
2. Judgements analysis
3. Judgement criteria
4. Practical implications
5. Responsibility

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Asking oneself questions about surrounding life and actively participating in discussions on it, analysing the judgements made and reflecting on the consequences of one's own and others' decisions***	Showing critical spirit	Never questions the situation or conditions of own life.	Questions certain situations in own life.	Shows critical attitude towards conditions of own life.	Questions and explores reality, reflecting on life.	Formulates own judgements and evaluations based on systematic reflection on reality.
	Distinguishing fact from opinion, interpretations, evaluations, etc. in others' argumentation	Accepts as own judgements or decisions based on opinions, evaluations, etc. as though they were objective facts.	Accepts without question judgements or decisions based on opinions, evaluations, etc. as though they were objective facts.	Questions judgements or decisions based on opinions, evaluations, etc.	Distinguishes objective facts from opinions and evaluations.	Correctly analyses judgements or decisions based on opinions, evaluations, etc.
	Actively participating in discussion	Remains passive during discussions.	Finds it hard to participate in discussion situations.	Actively participates in discussion.	Participates constructively in discussions, contributing to construction of rich, shared reflection.	In discussions serves as constructive point of reference for others.
	Foreseeing the practical implications of decisions and approaches	Unaware of the effects of decisions and proposals.	Ignores the practical implications of decisions and proposals.	Foresees the practical implications of decisions and proposals.	Analyses the pros and cons of the effects of decisions proposed.	Gives importance to proper evaluation of the pros and cons of decisions and proposals.
	Reflecting on the consequences and effects that one's decisions have on others	Doesn't think about the consequences of own actions.	Simply accepts others' observations and criticisms of own behaviour.	Reflects on the consequences and effects that own decisions have on others.	Recognises and accepts own mistakes.	Asks for, weighs and takes into account others' feedback on own conduct.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Analysing the logic of own and others' judgements, weighing their personal and social implications***	Formulating own judgements and evaluations	Incapable of making own judgements and evaluations.	Lets self be influenced when making judgements and evaluations.	Makes own judgements and evaluations.	Makes well-founded judgements and evaluations.	Defends own evaluations and judgements with conviction.
	Considering others' judgements	Not interested in others' judgements or opinions.	Accepts without question others' judgements.	Considers the judgements of other persons.	Appropriately analyses and evaluates the strong and weak points of others' judgements or opinions.	Incorporates others' ideas into own reasoning and judgements.
	Making judgements based on internal criteria (internal consistency, logic, congruency, reliability, etc.)	Arbitrarily judges others' opinions.	Sometimes introduces criteria of internal consistency and logic in own opinions.	Usually introduces criteria of internal congruency and logic into own opinions.	Correctly criticises the congruency and consistency of argumentation.	Analyses the logic of an argument in relation to a reference model or pattern.
	Weighing the practical implications of decisions and proposals	Ignores practical implications.	Considers practical implications, without adequately weighing them.	Weighs the probable implications of decisions and proposals.	Reconsiders proposals and decisions in light of reflection, weighing probable implications.	Considerably improves proposal/ decision thanks to evaluation made.
	Identifying the human rights implications of a problem or proposal (dignity, self-esteem, etc.)	Evaluates situations according to own interests.	Occasionally expresses disagreement with situations that infringe other people's rights.	Normally identifies the relationship between certain situations and individual rights.	Takes a stand on situations involving the rights of others.	Defends the rights of people and groups against particular positions and interests.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Arguing the pertinence of judgements made and analysing the consistency of own behaviour, based on underlying principles and values***	Supporting and justifying own judgements	Doesn't express own judgements, evaluations or opinions.	Makes judgements without being able to defend them.	Justifies own judgements and evaluations.	Supports and justifies both the strong and weak points of own judgements and opinions.	His/her capacity for reasoning makes others question their own ideas or beliefs.
	Identifying underlying ideas, principles, models and values of critical judgements	Makes unfounded statements.	Loosely associates some statements with certain stands.	Identifies the principles or ideas underlying judgements.	Relates statements and judgements to underlying values.	Justifies judgements on the basis of underlying theoretical models and values.
	Making judgements based on external criteria (utility, feasibility, validity, etc.)	Ignores external criteria in formulating judgements.	Occasionally relies on external criteria in emitting judgements.	Evaluates positions according to some external criteria.	Selects appropriate external criteria to use in supporting a judgement.	Analyses with appropriate criteria the pertinence and relevance of arguments and proposals.
	Acting with consistency and responsibility in decisions and behaviour	Avoids reflecting on own conduct or behaviour.	Analyses *a posteriori* the consequences of own actions.	Accepts responsibility for own actions and behaviour.	Analyses the consistency between own beliefs and actions.	Bases own behaviour on the values he/she defends.

Description

Creative thinking does not follow a logical process, and in this is different from other types of thinking, since all the rest follow more or less orderly, systematic patterns. By contrast, creative thinking seems to zigzag, going back and forth with steps that apparently lead nowhere, but that can later be used to find a solution or way out.

To engage in creative thinking one needs to overcome the barriers of the obvious and traditional, challenging what is established and even becoming iconoclastic during a given phase. One needs to be ready to surmount any metal barriers found on the path of creation, before finally arriving at the moment of evaluation, with its corresponding use of critical judgement. In the development phase of creative thinking, one must ceaselessly seek ideas, words, images. This *fluidity* provides a foundation based on quantity. According to the experts, quantity is the key to quality of ideas. That is, out of many ideas produced, a few may prove valuable and provide an original solution.

Another important aspect of creative thinking is *flexibility*. Creative thinking is the opposite of rigidity, inflexibility, resistance. The essential feature of creative thinking is that it is elastic, ductile, malleable, shapable. Flexibility means seeing things from different angles, different, and even opposite, points of view. In short, it is the ability to perceive something, an object, situation or problem, from many different perspectives. Herein resides the true contribution of creative thinking. When a person or group is able to face a problem and see it from different sides, new possibilities of solution are opened up that may lead to a truly original, creative solution, at least for that person or group, even though it might not be so for everyone everywhere.

Along the *continuum* of development of this competence, three levels of complexity have been established:

- Identifying and developing manifestations of creative thinking in simple situations
- Using creative thinking to organise or relate information in novel ways
- Systematically using and evaluating creative thought in academic or professional work

The criteria for assessing progress in this competence are set out in the different indicators for each established level.

Interaction with other competences, attitudes, interests, values

Engaging in creative thought means making use of many intellectual and affective capacities. In the creative phase *per se*, creative thinking occurs along with analogical, synthetic, and comparative thinking, which it uses to develop its own divergent thought.

However, creative thought can also take advantage of any of the other type of thinking, if only to place it in doubt, question its validity, in order to find a position contrary to the one presented and explore new pathways.

Creative thinking can be done individually or in groups. Research shows that groups usually achieve the best results, although the time employed is much greater. Group creative thinking is based on a lack of criticism when group members are in the midst of creating or searching for solutions. Moreover, it calls for the conscious, necessary withdrawal of rejection or criticism of any proposals that come up, no matter how strange or outlandish they might seem. Only by creating a productive climate of brainstorming can we bring to light subconscious ideas and solutions that could produce practical, feasible solutions.

During the phase of selecting ideas and proposals, creative thinking calls on other types of thought, such as analytical thinking and critical thinking, which make it possible to analyse and weigh each of the alternatives proposed, applying pertinent evaluation criteria and choosing the best ideas according to established criteria.

Importance of this competence for academic and professional life

In all facets of life (personal, academic, social, work), there are times when solutions can be found only if one is capable of overcoming intellectual, cultural and social barriers. That is, one must see problems from new and different angles and perspectives that might at first seem unusual or weird.

Both in academic and professional life, mental flexibility, the basis of creative thought, is a very helpful tool for understanding and comprehending human evolution and the evolutionary, cultural, technical and scientific development of peoples and civilisations.

At work, we often encounter problems that require imagination and originality in order to be solved. Such solutions can only be found in the right atmosphere, where there is mutual trust and creative, enriching participation on the part of all the members of the group when faced with a problem or difficult situation.

How to incorporate it into the academic curriculum

Creative thinking works very well in academic life, where it is well suited to many different situations, as for example when different ideas or views of a problem are needed, or when a situation needs to be analysed from different standpoints (social, personal, cultural, economic, practical, legal, etc.). Creative thinking is especially helpful in situations where a problem seems unsolvable.

The use of creative thinking throughout a degree course is mind-broadening, enhances flexibility, oral fluency and the originality of persons and groups. Creative thinking applied systematically in academic life means asking students to present more than one possible alternative whenever they hand in a project or action proposal. Having to think of more than one alternative leads to creativity and enhances the originality of proposals.

COMPETENCE: CREATIVE THINKING

Definition: **This is the mental behaviour that generates searches to find new and unusual solutions that make sense in different areas of life.**

Mastery of this competence is closely related to: **Reflective, analogical, analytical and systemic thinking, the ability to observe, to see relationships, to solve problems and take decisions, enterprising spirit, creativity, innovation, flexibility, open mindedness, etc.**

Levels:

1. Perceiving information with an open mind, from different angles, utilising it to generate new ideas and approaches
2. Formulating a variety of questions and open alternatives to better understand a situation and generate original reasoned actions
3. Systematically developing creative and original approaches when doing academic or professional work

Indicators:

1. Independent thinking
2. Using information
3. Diversity of approaches in interpreting information
4. Versatility in searching for ideas
5. Using analogy
6. Applying criteria

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Perceiving information with an open mind, from different angles, using it to generate new ideas and approaches*	Freeing self from restrictive effect of received ideas or concepts	Ideas still very traditional.	Proposes ideas with well-known bases or without going beyond bounds of tradition.	Formulates ideas that overcome social and cultural barriers.	Expresses ideas that go beyond common thinking (*status quo*).	Tests ideas maintained through tradition.
	Using received information as a means to generate new ideas	Sticks with received information.	Uses information, but always within received perspective.	Uses information as springboard to developing new ideas.	Works with received information, offering a new view of the situation.	Restructures information producing a new proposal that stands out due to its originality.
	Perceiving information or a situation from different angles	Is unable to break free of received perspective.	Perceives situations from different, but common or well-known angles.	Views situations from divergent points of view.	Proposes different perspectives and argues them with rigour.	Proposes promising new ideas that could prove feasible.
	Exploring each idea from different standpoints	Is unable to imagine different paths or possibilities for each idea.	Contributions concentrated in a well-known or common circle.	Proposes different directions to explore each idea.	Traces different paths for each idea.	Traces original paths for each idea presented.
	Grouping related ideas in original categories	Is unable to group similar ideas in categories.	Classifies new ideas in foreseeable ways.	Groups related ideas in original categories.	Comprehensibly classifies ideas in original categories.	Classifications noteworthy for originality and explanatory capacity.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Formulating variety of questions and opening alternatives to better understand situations and generate original reasoned actions***	Asking completely uninhibited questions to facilitate flow of options	Doesn't raise questions that would jeopardise the *status quo*.	Asks questions that stay within the ordinary or known conceptual framework.	Asks questions without self-censorship that favour the divergence of ideas.	Leaves aside all types of censorship and poses all kinds of questions that help broaden the span of possible options.	Asks deep, well-founded questions without sociocultural limits.
	Achieving variety of alternative ideas	Doesn't propose alternative ideas.	Has difficulty in proposing alternative ideas.	Proposes variety of alternative ideas.	Offers diverse, well-developed ideas.	Justifies with good reasoning the range of ideas presented.
	Asking diverse questions from different angles about particular situations	Asks some questions about situations, but does so insufficiently.	Asks all questions from the same perspective.	Asks numerous divergent questions about a situation or issue.	Systematically and thoroughly raises all possible questions about an issue from different angles.	Outstanding for the way in which he/she raises questions about situations or issues from surprisingly different angles.
	Seeing the consequences that each option may have	Fails to see the consequences of options or does so inadequately.	Sees some but not all consequences of proposed options, and does so insufficiently.	Sees possible consequences for each option proposed.	Systematically and rigorously foresees the possible consequences of each proposed option.	Foresees the possible consequences of each proposed option, taking into account the different perspectives for each one.
	Sharing and utilising others' ideas, expanding on or transforming them in original ways	Doesn't know how to use others' ideas to develop own creativity.	Utilises others' ideas without changing perspective, failing to achieve original modification.	Utilises others' ideas turning them into original ideas thanks to own transformation.	Shares and utilises as basis others' ideas transforming them into new and original ideas.	Creatively uses others' ideas and stimulates the creation of original ideas in the group.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Systematically using creative and original approaches when doing academic or professional work***	Proposing creative approaches based on information given or found when undertaking a project	Doesn't contribute original ideas to the project.	Contributes ideas that are rarely original or important.	Proposes an original approach based on information given to class prior to undertaking a project.	Makes the most of any idea, viewing it from angles that are unusual and relevant to the project.	Transforms any approach into a more original one by modifying or combining it with other approaches.
	Asking pertinent questions to stimulate others' creativity	Questions asked are convergent or unidirectional.	Asks questions that are only slightly divergent.	Stimulates group's creativity by asking pertinent questions.	Asks challenging questions that prompt original responses and stimulate group participation.	Questions others' responses and reutilises them from other perspectives to prompt new ideas and views.
	Making proposals based on well-pondered choice of best ideas	Proposals are not well justified.	Makes poor or insufficient evaluations.	Selects ideas on the basis of evaluation.	Makes systematic evaluation before selecting the best ideas and incorporating them into a project.	Uses original evaluation perspectives to select best ideas and incorporate them into a project.
	Developing an original approach for a highly developed project	Project lacks originality and elaboration.	Level of originality and/or elaboration is very poor.	Undertakes project with an original, well-developed approach.	Undertakes project with original, very well-developed elements.	Integrates with originality all elements of the project.

Description

When faced with a challenge, task or problem, we deal with it using a certain kind of thinking. When taking a decision, we give importance to different things, tending to reason in certain ways or using particular types of thinking. Even the same person will deal with different situations using different types of thought. Their capacity to do this is what enables them to adapt to the environment and to act appropriately both in their personal lives and at work.

It is possible to develop the competence of reflective thinking in order to be aware at all times how we are thinking. This will enable us to alter some of the keys to our way of dealing with situations. Reflective thinking consists precisely in recognising how we go about addressing a task or problem, and to take steps that will lead to growth in our way of thinking.

There is abundant literature on reflective thinking. Frequently, this label is applied to very different books and articles, making it quite difficult to establish clearly and definitively what reflective thinking consists of and what its main features are.

In this volume we have chosen to identify some of the features of reflective thinking that appear most often in the literature and which can best be worked on and developed during the course of university studies. Therefore, we will be particularly interested in the ability to: 1) identify and overcome the preconceptions that frequently impede access to alternative reasoning; 2) identify the key elements of a situation or issue; 3) formulate appropriate questions that will frame the problem and give some preliminary guidelines on how to handle it; 4) represent forms of thinking – e.g., using concept maps; 5) identify the forms of thinking being used; 6) overcome mental blocks; 7) pursue elaborate thought suited to a professional or academic situation, and then reconstruct and verbalise it; 8) realise the importance of context and the moral implications of challenges or issues.

Interaction with other competences, attitudes, interests, values

Reflective thinking has to do with all the forms of thinking dealt with in this volume. To the extent that competence in other forms of thinking is well developed, students will have easier access to alternative modes

of thought and action. Reflective thinking is also related to the ability to change mentalities and recognise other modes of thought. It is also associated with more specific capacities such as the ability to make thinking explicit and represent it. Moreover, in each field of knowledge, the contributions of theories and studies are essential for deeper reflective thinking in each particular field.

Importance of this competence for academic and professional life

Professionals or students who have not developed the competence of reflective thinking will tend always to repeat the same patterns of thought, and will have few opportunities to grow in them. In order to overcome conflicts, self-imposed limitations and other types of problems both in one's personal life and at work, reflective thinking is required.

Moreover, different professional fields, such as education, medicine, architecture, engineering, etc.) establish degrees of hierarchy or paths of career promotion that are characterised to a large extent by increased ability to think reflectively. The highest professional levels tend to be characterised by more reflective thinking, the ability to overcome preconceptions, ask the right questions, appropriately identify and rank key elements, overcome mental blocks, develop elaborate thinking and later make it explicit or reconstruct it, etc.

Accordingly, an undergraduate or graduate degree should lead especially to development of the competence of reflective thinking, for use both in studies and later at work.

How to incorporate it into the academic curriculum

The levels of this competence have been defined bearing in mind their application in three types of context. These go from projecting reflective thinking onto others' reasonings, to development in simple academic situations, and finally to dealing with more complex academic and professional situations.

First level indicators focus on situations where students must observe, analyse and propose guidelines for improving others' thought processes. This may be done through case studies, narratives, newspapers, reports, stories, etc. where the student is not the protagonist. Instead, others confront personal or professional situations showing more or less explicitly what their thinking is in and on the action.

Second level indicators refer to students' quality of thought when they are dealing with simple academic situations. Therefore, these indicators can be used in activities where students must reflect and explain their thinking orally or in writing when analysing a situation or document, or when trying to solve a problem, etc.

Finally, third level indicators allow us to assess the quality of the reflective thinking of students who have somehow participated in a situation. Naturally, the students must verbalise their reasoning, preferably in writing, in the form of narratives, critical incidents, diaries, action reports, etc.

COMPETENCE: REFLECTIVE THINKING

Definition: **This is the mental behaviour that facilitates the recognition and growth of the modes of thinking that we use in solving problems or performing tasks.**

Mastery of this competence is closely related to: **identifying and overcoming preconceptions, the ability to conceptualise, solve problems, represent ideas and thought diagrams, change mentality and recognise other ways of thinking, etc.**

Levels:

1. Identifying and understanding the way of thinking that a person utilises in a given given situation
2. Identifying and developing one's own way of thinking and reasoning in usual academic situations and tasks, adopting strategies for improvement
3. Consciously and systematically identifying strategies and resources for analysing and developing one's own thinking in the course of one's work

Indicators:

1. Identifying and overcoming preconceptions
2. Identifying and ranking key elements
3. Asking questions
4. Representing ways of thinking
5. Identifying and growing in ways of thinking and learning
6. Overcoming mental blocks
7. Thinking in action and its reconstruction
8. Importance of context and ethical implications

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Identifying and understanding the way of thinking that someone uses in a given situation*	Identifying the preconceptions (things taken for granted, stereotypes, etc.) in others' reasoning	Attributes preconceptions inaccurately and inappropriately.	Doesn't know how to identify preconceptions in reasoning.	Accurately identifies some underlying theories, beliefs or assumptions.	Accurately identifies most preconceptions.	Accurately reconstructs all preconceptions and their origin.
	Appreciating the effect of preconceptions on the quality of others' thinking and action	Sees wrong or nonexistent relationships between preconceptions and ensuing thought and action.	Describes thought and action of protagonists without any mention of preconceptions.	Correctly describes at least one of the effects of preconceptions on thought and action.	Correctly explains various effects of preconceptions on thought and action.	Accurately and comprehensively discusses the way in which preconceptions condition thought and action.
	Appropriately representing others' reasoning through concept maps or other procedures	Represents others' thinking in a clearly disorganised way.	Represents others' thinking with notable errors or deficiencies.	Represents others' reasoning in a fairly organised way.	Represents others' reasoning completely and with good organisation.	Represents others' reasoning completely and with organisation well-suited to the type of contents or style of thought.
	Recognising and dealing with others' mental blocks	Ignores the existence of a mental block in the scenario.	Identifies a situation of mental block without actually proposing reasonable solutions.	Proposes some appropriate action to overcome a situation of mental block in others.	Proposes an appropriate, well-founded strategy for overcoming a situation of mental block.	Reasonably estimates the feasibility of the strategies that he/she proposes for overcoming a block.
	Reconstructing thought in action of agents in professional scenario	Cannot reconstruct the thinking behind actors' actions.	Poorly or incorrectly reconstructs the thinking behind actors' actions.	Accurately describes the most important elements of a professional's reasoning in a given situation.	Correctly and completely narrates a professional's reasoning in a given situation.	Correctly and completely explains the reasoning followed and the consequences of that reasoning.
	Identifying the characteristics of reflective professionals	Fails to identify any of the distinctive features of a reflective professional.	Recognises the opportunity of reflective thinking in some academic and professional situations.	Manages to identify some distinctive features characteristic of reflective professionals.	Explains the basic characteristics that make someone a reflective professional.	Appreciates the characteristics of reflective thinking and discerns how it contributes to the professional scenario.
	Formulating appropriate questions about a situation	Formulates questions that are unimportant or lead to nowhere.	Questions disperse and not well thought out (partial, incomplete or not well focused).	Formulates some relevant, key question.	Formulates almost all key questions.	Orders and interrelates key questions.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Identifying and developing one's own way of thinking and reasoning in normal academic situations and work, adopting strategies for improvement***	Identifying the main concepts or ideas behind own reflections	Confuses main and secondary concepts. Doesn't distinguish levels of importance.	Identifies main ideas but gives importance to some that are not.	Correctly enumerates main ideas.	Logically orders concepts (premises and conclusions, hypotheses and arguments, etc.).	Orders and explains with clarity and originality the relations between main ideas.
	Identifying preconceptions in own reasoning (things taken for granted, stereotypes, etc.)	Obvious existence of prior reasonings that condition his/her thought.	Erroneously identifies some preconceived ideas as present in own reasoning.	Identifies preconceptions present in own reasoning.	Correctly describes the main preconceptions present in own reasoning.	Explains the preconceptions present in own reasoning, as well as their origin and weight.
	Reflecting on how preconceptions affect own thinking and action	Doesn't take into account how preconceptions affect own thinking and action.	Partially identifies the effect of own preconceptions.	Explains how preconceptions limit own thinking and action.	Explains in depth how preconceptions limit own thinking and action.	Clearly in process of identifying and overcoming own preconceptions.
	Describing the learning strategies utilised	Doesn't recognise any of own learning strategies.	Gives poor account of some learning strategies that he/she uses.	Adequately describes the elements characterising the learning strategies that he/she uses.	Explains in depth and detail the elements characterising the learning strategies that he/she uses.	Explains in depth and evaluates the learning strategies that he/she uses.
	Selecting a learning strategy suited to a given situation	Ignores the existence of possible alternative learning strategies.	Chooses wrong learning strategy.	Chooses right learning strategy.	Wisely chooses a learning strategy and rejects others.	Wisely uses various complementary learning strategies.
	Adequately representing own knowledge and ideas using concept maps or other procedures	Represents own thinking in a clearly disorganised way.	Represents own thinking with notable flaws or deficiencies.	Represents own reasoning with fair organisation.	Represents own reasoning completely and with good organisation.	Represents own reasoning completely and with organisation that reflects the structure of thinking processes.
	Showing capacity for surprise and discovery	Fails to detect novel or disturbing elements in the situation.	Identifies partially or incompletely novel or disturbing elements in the situation.	Correctly detects novel or disturbing elements in the situation.	Draws some conclusions from detection of novel or disturbing elements.	Shows good learning and changes in own thinking based on surprising factors.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Identifying and developing one's own way of thinking and reasoning in normal academic situations and work, adopting strategies for improvement***	Explaining own thinking on action in journals, narrations, reports, etc. (reflection after leaving professional scenario)	Cannot reflect on own action.	Poor or superficial reflections on action.	Reasonable reflections on own action.	Makes reasonable, complete, well-structured reflections on action.	Reflections reveal process of personal growth.
	Identifying ethical and political implications of own professional practice	Fully confident that professional activity is innocuous and has nothing to do with ethics and politics.	Has difficulty in identifying ethical and practical implications.	Identifies the moral and political facets and context of own practice.	Makes proposals for progressing in the political and ethical issues inherent in professional practice.	Makes reasonable proposals for substantial improvement in the ethical and political dimension of professional practice.
	Identifying the reference frameworks of roles and issues	Describes roles and issues without reference to any framework.	Identifies reference frameworks partially or incompletely.	Correctly describes the reference context that makes it possible to understand roles and issues.	Interprets roles and issues from various angles or complementary frameworks.	Appreciates and weighs the implications of considering different reference frameworks in analysing roles and issues.
	Formulating lessons learned from reflection on practice	Discourse does not reflect lessons learned from practice.	Formulates some lessons learned, but partial or somewhat unfocused.	Expresses important core lessons learned.	Elaborates important, core lessons learned in an interrelated, well-structured way.	Manages to convey effectively important lessons learned about practice.
	Using heuristic resources (exploration and discovery) to revise own thinking	Wrongly interprets the results of analysing own thinking.	Makes superficial or incomplete analysis of own thinking.	Utilises some tools of analysis or diagnosis of own thinking and identifies some important aspects.	Makes complete, well-reasoned interpretation of own ways of thinking based on analysis or diagnosis.	Shows progress based on systematic analysis or diagnosis of own ways of thinking.
	Using reflective thinking to deal with own states of mental block	Doesn't recognise own states of mental block.	Recognises some mental blocks, but fails to identify the accompanying ideas, feelings and emotions.	Identifies main ideas, feelings and emotions accompanying a state of mental block.	Manages to use reflective thinking to deal with the ideas, feelings and emotions accompanying a state of mental block.	Clearly overcomes states of mental block, using reflective thinking to deal with the accompanying ideas, feelings and emotions.

COMPETENCE: LOGICAL THINKING

Description

This is the type of thinking that shapes the most significant mental processes, primarily through deduction. This type of thinking is based on the acceptance of certain conditions, and mainly makes it possible to identify, define, analyse, classify and infer. Logical thinking means proceeding in a reasoned, sufficiently argued way.

It is developed through numerous procedures, which appear associated with concepts, judgements and demonstrations. Its aim is to apprehend reality and endow it with significantly ordered, rational meaning.

In short, it is the way of thinking that enables us to order reality through simple or complex logical procedures and generate new, well-reasoned, well-argued ideas.

The levels of mastery of this competence reflect how students are expected to proceed with this type of thinking. The first level of mastery concerns how students use logical procedures to recognise concepts, and to distinguish and infer ideas, factors and/or consequences of real situations or cases.

The second level of mastery reflects how students employ their capacity to argue their analyses of real situations or cases. This argumentation should show their capacity to use appropriate logical procedures.

Since logical thought generates ideas, the third level of mastery reflects how students make logical analyses of real situations or cases to reason out solutions and generate new ideas.

The way of measuring these levels is through indicators that evaluate how students work "logically" on real situations or cases; fundamentally to reason and explain reality, to identify determining factors, to construct ordered enunciations and arguments, to deduce relations and results and, finally, to find solutions.

Interaction with other competences, attitudes, interests, values

This competence is related to reflective, analogical, analytical, systemic, critical, practical, deliberative and team thinking. It is present in the competences of time management, problem-solving, planning, oral communication and objectives-based management.

It also plays an important role in computer skills and the use of databases. This competence contributes to the development of interest in knowledge and research. It boosts motivation and self-confidence.

Importance of this competence for academic and professional life

Logical thinking should be a constant in the life of university students, since their work and study depend in good measure on this skill. Their capacity to reason and argue their points forms part of the foundation of their work.

In professional life as well, their capacity for logical thinking greatly helps them to deal with daily events with realism and the ability to generate new ideas to solve problems and sort out different situations without difficulty.

How to incorporate it into the academic curriculum

The study and analysis of cases, simulated or real, is the best way for students to work on this competence. These cases should stimulate the development of logical thinking through diverse procedures – e.g. argumentation or the delimitation of causal factors. It is also wise to grade the complexity and difficulty of the cases used.

This work can be undertaken through learning strategies such as problem-based learning, case studies and the project method. Students also learn how to handle sources of information and to apply different techniques for data processing and interpretation.

COMPETENCE: LOGICAL THINKING

Definition: **This is the mental behaviour that develops ways of thinking that lead to knowledge in general and to scientific knowledge in particular, paying close attention to its structure.**

Mastery of this competence is closely related to: **Reflective thinking, analytical thinking, deliberative thinking, planning, problem-solving, decision-making, project management, autonomy, etc.**

Levels:

1. Utilising logical procedures to conceive, distinguish and infer ideas, factors and/or consequences of real situations or cases
2. Proceeding with logic to justify analyses of real situations or cases
3. Making logical analyses of real situations or cases to reason out solutions and generate new ideas

Indicators:

1. Analysing cases or situations to reason and explain them
2. Identifying determining factors of real situations or cases
3. Constructing enunciations and arguments to order ideas or concepts
4. Deducing relations and possible results
5. Questioning the logical value of real situations or cases to find solutions

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Utilising logical procedures to conceive, distinguish and infer ideas, factors and/or consequences of real situations or cases***	Reasoning the meaning of a real situation or case	Doesn't know how to reason out the meaning of a real case or situation.	Confuses, in a real situation or case, the whole with one of its parts or vice-versa.	Identifies the meaning of a real situation or case.	Enunciates with clarity the significant facts of a problem or case.	Infers significantly the meaning of a real situation or case.
	Identifying with ideas and/or concepts the main facts of a real situation or case	Confuses primary and secondary data. Doesn't distinguish levels of importance.	Identifies the main facts but gives importance to some that are not.	Correctly selects and enumerates all the main facts of a real situation or case.	Grasps the real situation or case with appropriate ideas and concepts.	Adequately explains the determining factors of a real situation or case.
	Arguing the reasons behind a real situation or case	Confuses, in a real situation or case, effects with causes.	Only enumerates the possible causes of a real situation or case.	Classifies the motives behind a real situation or case.	Discerns the possible causes behind a real situation or case.	Rationally reasons the motives behind the case or the real situation.
	Deducing the relational sense of the factors or phenomena that constitute a real situation or case.	Fails to obtain consequences in analysing a real situation or case.	Wrongly utilises the relations between factors or phenomena of a real situation or case.	Compares factors or phenomena of a real situation or case to find relations.	Finds possible relations between the factors or phenomena that constitute a real situation or case.	Reasons the relations between factors or phenomena behind a real situation or case.
	Reasoning away doubts, proposing alternative reasons	Doubts get in way of resolving a real situation or case.	Turns doubts into criticisms without contributing solutions to the real situation or case.	Reasons away doubts to settle the analysis of a real situation or case.	Dissipates doubts constructively when analysing a real situation or case.	Rationally reasons out possible alternatives that could resolve a real situation or case.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Proceeding with logic to argue one's analysis of real situations or cases***	Making sense of real situations or cases to explain them	Lacks logical order in his/her analyses of real situations or cases.	Grasps, but does not logically explain the meaning of the real situation or case.	Significantly defines the meaning of a real situation or case.	Explains in order the characteristics of a real situation or case.	Clearly conveys in detail his/her explanation of a real situation or case.
	Analysing real situations or cases to discern their determining factors or phenomena	Confuses the logic of causality in a real situation or case.	Finds wrong factors of a real situation or case due to incorrect analysis.	Adequately distinguishes the determining factors of a real situation or case.	Classifies, in determinative order, the factors or phenomena of a real situation or case.	Applies in logical order cause-effect and consequence relations of the real situations or cases that he/she analyses.
	Constructing arguments in orderly way	Arguments disorderly since he/she doesn't analyse the real situation or case in a logical way.	Argues the real situation or case without testing premises.	Sensibly checks the motives behind the case or real situation.	Logically organises sound argument on the real situation or case analysed.	The premises utilised to reason the real situation or case are consistent with conclusions.
	Systematising the logical relations of factors or phenomena in a real situation or case	Enumerates factors or consequences illogically.	Describes factors or phenomena of a real situation or case without saying how they are linked or related logically.	Reasons out the relations between factors or phenomena that give rise to a real situation or case.	Uses the relations between factors or real phenomena as triggers of inferences.	Systematises the relations between factors or phenomena of real situations or cases to formulate novel approaches.
	Using logic to do away with uncertainties	Deals with real situations or cases without stopping to consider their logical implications.	Diffuse in reasoning about real situations or cases.	Rationally reasons out the possible alternatives that could resolve a real situation or case.	Foresees possible contradictions in eliminating doubts that cause uncertainties.	Uses logical analysis to resolve doubts and overcome uncertainties in each real situation or case.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery : *Making logical analyses of real situations or cases to reason out solutions and generate new ideas*	Arguing without affirming more than can be proven	Uses unreliable statements without checking them carefully.	His/her conclusions cannot withstand objections concerning the factors of the real situation or case.	His/her arguments prove clearly and in detail the explanation of a real situation or case.	Explanations are well based on his/her analysis of the real situation or case.	His/her affirmations have been duly checked against the factors of the real situation or case.
	Using appropriate logical procedures	The procedures of logical analysis utilised for the real situation or case are questionable.	Applies logical procedures based on basic causality only.	Applies with logical rigour the cause-effect and consequence relations of real situations or cases analysed.	Uses only the procedures (inductive or deductive) of logical analysis that are appropriate to the real situation or case in hand.	Appropriately utilises different procedures to further his/her analysis of the real situation or case.
	Making and presenting verified analyses	Suppresses proof. Only presents, from analysis of the real situation or case, the premises that support his/her argument.	His/her argument concerning the real situation or case does not follow from the evidence.	The premises used to explain the real situation or case are consistent with conclusions.	Correctly correlates and infers the content of a real situation or case.	In his/her analyses, finds limits and formulates alternatives to overcome them in verifiable, feasible way.
	Generating new possibilities of knowledge	Overlooks possible alternatives due to failure to establish links between the factors of a real situation or case.	Generalises and extrapolates without checking the relations between factors or phenomena of the real situation or case.	Systematises the relations between factors or phenomena of real situations or cases to formulate novel approaches.	Utilises logical procedures as a learning strategy and to solve problems.	Makes new connections and generates inferences to arrive at new factual hypotheses or responses.
	Supporting objections with sound argumentation	Contradicts self in analysing real situation or case.	Undertakes analysis of a case or real situation without calculating possible objections.	Uses logical analysis to resolve doubts and overcome uncertainties in each real situation or case.	Analyses doubts and possible objections to improve own arguments about real situations or cases.	Foresees, with *ad hoc* arguments, how to overcome objections in analysing a real situation or case.

COMPETENCE: ANALOGICAL THINKING

Description

Analogical thought organises each person's cognitive experience of reality, since it is a process that makes it possible to interrelate and transform ideas, perceptions and concepts. This type of thinking enables us to turn the ordinary into extraordinary and the extraordinary into ordinary, and and to approach the unknown through what we already know. Simple observation of similarities and differences in an object, phenomenon or situation is a way of practicing this style of thinking.

On occasion, we are able to understand and comprehend a situation or event as a consequence of an interrelation of ideas, concepts or events which, in principle, were incomparable. We are able to comprehend because we have associated ideas, concepts or events which, in appearance, were divergent.

Occasionally we also manage to convey a complex idea or concept because we have utilised a simile or comparison that facilitated understanding and communication. We explain something unknown to a person in terms that he/she understands, so making ourselves understood.

Analogical thinking is expressed in the analogies and/or similarities that we use to explain reality, communicate ideas and resolve problems. The history of scientific knowledge shows how progress in explaining natural or social phenomena is achieved by allowing our thoughts to interact with apparently unrelated fields of knowledge.

The development of this competence should start from the simple use of analogies to relate and explain ideas. This process is a regular habit in daily life that can be built on to structure the way in which students utilise analogies to relate and explain their thoughts. The first level of mastery consists in testing the simple association of divergent ideas.

The second level of mastery measures what the student draws from close or divergent fields of knowledge to establish useful and rigorous analogies that will serve to solve problems or cases.

The use of comparisons and similarities to create knowledge comprises the third level of mastery. This level is characterised by the systematic resources used by students when they employ this type of thinking to create and organise ideas.

Registering explicit use of this type of thinking consists in verifying how students relate ideas, how they create analogies or examples, how they explain complex ideas simply, how they propose novel solutions to problems or cases and, finally, how they link different fields of knowledge.

Interaction with other competences, attitudes, interests, values

Analogical thinking is related to reflective, logical, systemic, analytical, critical and creative thinking. Moreover, it is associated with creativity and innovation. It is also closely related to diversity and interculturality and is of strategic help in problem-solving.

This type of thinking serves to relativise problems and find solutions. It helps to develop values concerning the social and human sense of living together in groups. It enhances the willingness to change, rationally and logically, ideas and preconceptions about a phenomenon or contingency.

Analogical thinking is useful for reflecting on the value and limits of knowledge, for knowing how to formulate complex explanations, and for developing creativity and imagination.

Importance of this competence for academic and professional life

Mastery of this competence facilitates the comprehension and development of abstract notions. It makes it possible to modify preconceived notions and plays a key role in the generation of new ideas.

This is the best type of thinking for developing interdisciplinary or transdisciplinary knowledge, and for addressing learning in specialised fields of knowledge. In both procedures, the most methodical way of practicing this type of thinking is by systematically employing comparisons to examine relations, interactions, similarities and differences between two or more objects, ideas, concepts, events or phenomena.

Learning these procedures enables students to examine the ins and outs of research and to see the need for rigorously updating information and acquired knowledge, not only at university but in their personal and professional lives as well.

How to incorporate it into the academic curriculum

This competence can be developed through learning strategies that confront students with situations where they can use, understand and apply things they learn as a procedure to solve problems and propose solutions.

The most appropriate learning strategies for this competence are: problem-based learning, case studies and the project method. Practice in analogical thinking also teaches students to handle different sources of information and techniques for data processing and interpretation. It is useful as well for simulations or field work.

COMPETENCE: ANALOGICAL THINKING

Definition: **This is the mental behaviour that seeks relations of similarity or analogy between different things. It is usually used in examples.**

Mastery of this competence is closely related to: **Creative thinking, problem-solving ability, creativity, innovation, project management, etc.**

Levels of proficiency:

1. Utilising analogies intuitively to relate and explain ideas
2. Utilising analogies to compare and establish interdisciplinary relations
3. Utilising comparisons and similarities to create knowledge

Indicators:

1. Relating ideas
2. Using correspondences between ideas to create analogies or examples
3. Explaining complex ideas in simple ways
4. Finding novel solutions
5. Knowledge transfer

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Utilising analogies intuitively to associate ideas and explain them***	Relating concepts and ideas in original ways	Associates ideas without contextualizing the cases or problems enunciated.	Finds similarities but does not resolve basic cases or problems.	Associates different ideas to grasp the meaning of a case or problem.	Links different ideas to change perceptions of a case or problem.	Compares ideas to find new meanings of a case or problem.
	Identifying in models the correspondence between ideas and examples	Mistakenly omits or relates examples and ideas present in a model.	Overlooks the correspondences between ideas and examples.	Finds the correspondence between the ideas and examples in a model.	Finds analogies between certain models.	Utilises the correspondences between models to generate new comparisons.
	Drawing on analogy to create explanations	Uses inappropriate examples.	Confuses examples with with fundamental ideas.	Uses examples to explain abstract processes or ideas	Uses comparisons to formulate examples.	Uses similes to explain abstract processes or ideas.
	Drawing on analogy to find solutions	Overlooks comparison as a guide to solutions.	Imagines solutions without systematising them.	Seeks possible solutions in other examples.	Utilises comparison to create solutions.	Draws on comparative examples to transfer solutions.
	Transferring ideas from different domains	Dissociates ideas and overlooks possible relations.	Identifies simple relations without analysing their correspondence.	Establishes relationships between ideas not otherwise associated.	Identifies the relationship between dissociated ideas, as a way of resolving problems or cases.	Uses the relations between ideas as a way of resolving problems or cases.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Using analogies to compare and establish interdisciplinary relations***	Systematically associating divergent ideas	Confronts ideas without paying due attention to the similarities suggested in a case or problem.	Compares ideas without fitting them into a line of argument.	Compares ideas to argue new approaches to a case or problem.	Gives arguments for the correspondence between comparisons utilised.	Uses comparison systematically to justify solutions.
	Establishing correspondence between divergent ideas	Compares without establishing adequate correspondence between ideas.	Confronts ideas without comparing them.	Utilises correspondences between ideas and examples to generate new comparisons.	Compares ideas and concepts to resolve cases or problems.	Deduces comparisons extrapolating appropriately.
	Drawing on analogy to create comprehensible explanations	Overlooks examples as a way toward explanation.	Uses ineffective examples to explain ideas.	Uses examples to explain abstract processes or ideas.	Uses analogy to clarify own and others' ideas.	Explains complex ideas with effective analogies.
	Employing analogies to communicate solutions	Analogies utilised are confusing.	Utilises examples that are insufficiently concise and clear.	Conveys ideas with clarity thanks to the comparative examples he/she uses.	Utilises appropriate explanatory similes for the ideas to be conveyed.	Draws clear, effective analogies to convey novel solutions.
	Transferring ideas from different disciplines	Overlooks transversal knowledge in resolving cases or problems.	Inappropriately associates ideas in trying to resolve cases or problems.	Utilises relationships between disciplines as a way of solving problems or cases .	Utilises techniques from other disciplines to compare ideas or concepts.	Appropriately transfers ideas or concepts from one discipline to another to resolve cases or problems.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Using comparison and similarities to create knowledge***	Conceiving ideas analogically	Uses analogies unsystematically.	Uses similarities without duly testing them.	Uses comparisons systematically.	Uses comparative procedures that are appropriate to each case or problem.	Creates comparative procedures that are appropriate to each case or problem.
	Reasoning the similarities or comparisons utilised	Uses confrontations as comparisons.	Uses analogies without basing them on argumentation.	Deduces reasoned comparisons.	Uses similes as part of his/her argumentation.	Justifies the extrapolations that he/she uses.
	Finding the correspondence between (divergent) ideas and real situations to come up with solutions	Utilises similarities without taking into account their contextual relations.	Uses examples without clarifying their correspondence with what he/she is trying to explain.	Explains complex cases or problems with effective analogies.	Creates effective analogies that are appropriate to each case or real problem.	Uses comparison to posit reasoned hypotheses.
	Creating analogies to convey novel solutions and approaches	Uses examples but fails to clarify discourse.	Draws on stale analogies.	Conceives own clear and effective analogies to convey solutions.	Builds analogies within well-argued discourse.	Transfers ideas from one context to another through own analogies.
	Using analogy as an interdisciplinary working method	Uses analogies drawn from a single discipline.	Links ideas or concepts from different disciplines.	Appropriately transfers ideas from one discipline to another to resolve cases or problems.	Resolves cases or problems with interdisciplinary procedures.	Generates interdisciplinary procedures to resolve real problems or cases.

COMPETENCE: PRACTICAL THINKING

Description

This is the action-oriented way of thinking that we use in daily life to adapt to new situations that arise, take decisions and consequently to act. It is a type of thinking aimed at achieving results in circumstances not necessarily well defined beforehand.

Practical thinking involves clarifying the objectives to be attained, which often must be defined by the subject, and identifying all the information available, including the restrictions or obstacles that must be taken into consideration to accomplish those objectives. In particular, limitations on time or other available resources must be taken into account in addressing the situation. Practical thinking also requires paying close attention to effectiveness and efficiency.

Quantitative and qualitative information must be interpreted and evaluated as to its importance in resolving the situation in hand, meaning that one must use information-processing criteria and procedures that are clear and preferably explicit, which must be consistently applied throughout the thinking process.

One of the characteristics of this type of thinking is that it means confronting uncertainty, since in real-life situations, as opposed to theoretical assumptions, one does not always have all the information that formal models require. The use of one's own or others' past experiences and of reasonable hypotheses may prove indispensable for furthering thought.

Courses of action, or solutions to situations, are not predetermined. Therefore we use practical thinking to select, on grounds of effectiveness, efficiency and available information, the most appropriate course, after which we can plan how to proceed to accomplish our objectives. This will necessarily include the actions to be undertaken, the resources required and an estimated time sequence.

Interaction with other competences, attitudes, interests, values

From the above definition, we can see that practical thinking is clearly related to the competence of adaptability.

It is also closely related to other types of thought such as analytical, creative, reflective and deliberative thinking, since it utilises and develops them to understand and evaluate the situation and find solutions to help us accomplish our objectives.

It is related to planning, objectives-based management, enterprising spirit, achievement orientation, problem-solving and decision-making. Any of these competences would be impossible to master without appropriate use of practical thinking.

Practical thinking provides people with a mental structure capable of dealing with complex situations in the knowledge that they will be able to address and resolve them. Consequently, proficiency in this type of thinking greatly enhances self-confidence.

In our relations with others, proficiency in practical thinking is reflected in the speed with which we find ways to meet objectives, and in our superior argumentation as to why these ways are the right ones. It is also reflected in the ability to evaluate critically the arguments of others, all of which facilitates leadership, or at least assuming a role of authority in groups.

Importance of this competence in student and professional life

One of the problems that may be occasioned by classical methods of teaching is that students always receive the necessary information to do prefabricated exercises in order to gain practice in applying specific techniques. This can make students think that all situations have a specific solution that must be reached. Their response will be correct or incorrect according to whether or not it matches the "right answer" – i.e. the answer of the lecturer. Consequently, students become dependent on teachers in evaluating the quality of their responses. Worse still, when information is lacking, they do not know what to do.

Furthermore, in academic life, students do not have to put into practice the solutions they come up with. They do not have to take responsibility for the success or failure of their proposals. This is why theoretical responses, which may be unviable if all real constraints are taken into account, may seem sufficiently valid to students.

By contrast, exercising practical thinking prepares students to deal with situations where it is not sufficient to apply pat solutions or formulas, and where the solutions or decisions proposed must be well-argued and consistent with available resources. Therefore, practical thinking prepares students to deal with real problems.

In the course of professional work, besides finding viable solutions to problems that arise with greater facility, people with the capacity to argue their positions in detail and critically examine those of others, pointing out possible flaws and ways to complete or improve them, will have

greater chances of success and promotion to positions of higher responsibility.

How to incorporate it into the academic curriculum

Positing real situations as a basis for learning is fundamental for developing this competence. Students should be given precise instructions at first, but later become accustomed to handling real facts and taking responsibility for their decisions.

Both the case method and project-based learning can significantly help in developing this competence. Lecturers should pose questions such as: What are the objectives to be reached? What facts do we have? How important are they? What do they mean? What difficulties do they entail? Are there any constraints? What other facts would we need? What other situations does this seem similar to? How are they different? What possible solutions exist? Which seems best? And above all, Why?

COMPETENCE: PRACTICAL THINKING

Definition: **This is the mental behaviour that makes it easier to select the best course of action on the basis of available information and to decide how to proceed to achieve objectives with effectiveness and efficiency. It is the action-oriented way of thinking.**

Mastery of this competence is closely related to: **Deliberative thinking, creative thinking, reflective thinking and analytical thinking, planning, objectives-based management, achievement orientation, adaptability, self-motivation, enterprising spirit, problem-solving ability, decision-making, etc.**

Levels:

1. Utilising own capacities and the resources available to achieve objectives in usual situations, following instructions
2. Addressing new or complex situations with own approach leading to the design and development of a plan containing concrete actions
3. Addressing new or complex situations together with others until a sound plan has been devised with concrete actions

Indicators:

1. Identifying or deciding objectives. Specifying the problem to be resolved or situation to be overcome
2. Using information. Identifying information gaps. Dealing with uncertainty
3. Specifying criteria to evaluate information reliably
4. Using helpful procedures to analyse information
5. Results of thinking process (planning, decision, action) and its argumentation

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Using own capacities and available resources to achieve objectives in usual situations, following instructions***	Identifying the concrete objectives to be achieved in assigned tasks	Confuses objectives with procedures (the goal and how to get to it).	Simply repeats the instructions received, confusing objectives and procedures.	Clearly distinguishes the objectives to be achieved from the procedures used to attain them.	Defines in own words the concrete objectives of assigned tasks.	Defines concrete objectives and relates them to the steps to follow in attaining them.
	Correctly utilising all available information	Doesn't take into account all available information.	Confuses relevant and irrelevant items of information.	Correctly identifies all the relevant items of information provided.	Identifies, in addition, the relevant items of information still lacking.	Makes reasoned assumptions about information gaps.
	Having clear criteria for evaluating the quality of information provided	Doesn't evaluate available information. Considers all types of information equally valid or reliable.	Uses arbitrary or variable criteria during the evaluation process.	Uses clear criteria to evaluate different types of available information according to instructions received.	Explains (showing good understanding) how evaluation criteria have been applied.	Consistently applies evaluation criteria during entire process.
	Correctly using procedures for processing information corresponding to the subject	Doesn't use the procedures indicated.	Uses proposed procedures badly.	Correctly utilises the procedures proposed.	Explains the steps taken in applying procedures.	Correctly interprets the results obtained.
	Turning analysis of situation into decisions or concrete actions	Doesn't arrive at concrete conclusions. Gets lost in digressions or ambiguities.	Proposes concrete actions but they do not lead to objective.	Proposes concrete actions to achieve objectives.	Gives good arguments for the relationship between information, proposed actions and the objectives set.	Identifies the weak points or risks contained in proposal.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Addressing new or complex situations with own approach leading to the design and development of a plan containing concrete actions***	Setting concrete objectives concerning the situation in hand	Doesn't set concrete objectives.	His/her objectives are not appropriate for the situation.	Sets appropriate concrete objectives for the situation in hand.	Sets final objectives and the intermediate steps for attaining them.	Sets various attainable objectives simultaneously and explains the relations between them.
	Identifying the information needed to address the situation	Is unable to enumerate the types of information needed to address the situation.	Overlooks some types of important information for addressing the situation.	Draws up a complete list of the information items needed to resolve the situation.	Locates information, filling in gaps with well-reasoned assumptions.	These assumptions include several possible values for the information that is lacking.
	Setting own criteria to evaluate the validity of information	Doesn't specify the criteria used to evaluate information.	Uses poor criteria to evaluate different types of information.	Uses appropriate criteria to evaluate different types of information.	Explains and argues the appropriateness of the criteria utilised.	Defines procedures to ensure consistent application of evaluation criteria.
	Selecting adequate procedures for processing information	Uses procedures that are inappropriate for the situation.	Selects appropriate procedures, but uses them badly.	Correctly utilises appropriate procedures for processing information.	Adequately explains the procedure followed to process information and its appropriateness for the situation or the type of information.	Correctly interprets results in relation to the situation and objectives defined.
	Devising a sound plan for addressing the situation	Proposes a theoretical plan not suited to the situation in hand, or not spelled out in actions.	His/her plan is not consistent or logical. Proposes a set of uncoordinated actions that do not lead to attaining objectives.	Designs a sound plan to achieve objectives.	Clearly explains why his/her plan is feasible and will lead to accomplishment of objectives.	His/her plan includes a risk analysis and at least one contingency plan ("plan B").

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Addressing new or complex situations together with others until a sound plan has been devised with concrete actions***	Agreeing appropriate concrete objectives for the situation in hand	Doesn't accept approaches different from own.	Delays or even impedes agreement by criticising the approaches proposed by others.	Agrees concrete objectives including different approaches to the situation in hand.	Facilitates agreement on objectives by searching for intermediate positions.	Devises a proposal for ranking or weighing objectives and the relationships between them that is acceptable to all.
	Agreeing the set of information items needed to address situation	Fails to take into consideration information items different from those that support own point of view.	Hinders agreement by casting doubt on the information items provided by others, without convincing proof or arguments.	Agrees to take into consideration all the types of information proposed by others.	Helps to identify information gaps and to incorporate uncertainty into the process.	Proposes reasoned assumptions on information gaps that include different sensibilities.
	Agreeing shared criteria to evaluate the validity of information items	Doesn't accept criteria different from own for evaluating information items.	Hinders agreement by insisting on imposing own criteria despite arguments against by others.	Agrees the majority criteria for evaluating the validity of information items.	Identifies errors of judgement in evaluating information items and proposes ways to overcome them.	Proposes a consistent system for evaluating the validity of information items, achieving unanimous agreement.
	Agreeing the procedures to be used in processing information	Only accepts the procedures that he/she already knows and applies.	Waits for results before accepting or rejecting procedures.	Agrees the procedures that most consider opportune and the results obtained.	Proposes procedures that are simple or are recommended by experts to facilitate agreement.	Offers a reasoned interpretation of results, taking into account different objectives and sensibilities.
	Agreeing a sound plan to resolve the situation	Utilises false dilemmas or other fallacies to oppose plan.	Only accepts part of the actions. Opposes overall plan.	Takes part in designing the plan, accepting the action proposals supported by the majority.	Includes everyone's proposals in order to facilitate agreement on the group plan of action.	After identifying risks, incorporates minority options as possible contingency plans.

Description

Seeing thinking as a competence is a decision that the professional world agrees on and requires as the basis of all action. Deliberative thinking is a mental process that is closely related to decision-making. This seems obvious. However, decision-making, a daily practice in many professions and in human activity in general, demands correct utilisation of thought mechanisms in a given direction.

When competences are concerned with specific types of thinking, they are considered to be instrumental skills. Deliberative thinking helps to organise ideas and concepts according to certain criteria, norms and values that will ensure the soundness and consistency of any decisions taken. The better grounded the ideas, the greater the assurance that they will serve as a good basis for decision-making.

In developing this competence, one must first identify the characteristics of deliberative thinking and how it is best employed in daily life situations. At this stage, deliberative thinking calls for a certain amount of reflection and logic geared toward action; it provides explanatory support for the decisions to be adopted and should adequately justify them.

During a second stage, students learn to identify the connotations of their own decision-making style, which may be more or less reflective (depending on the amount of time devoted to reflection). Such connotations may be more or less pragmatic, more or less fleshed out, etc.

At the third level of mastery of this competence, students learn techniques to fortify their own style when faced with complex decisions. They analyse and put into practice various alternatives to improve decision-making, justifying their use.

The indicators of the different degrees of development of this competence are the identification, recognition and utilisation of principles and techniques involved in deliberative thinking.

Interaction with other competences, attitudes, interests, values

This competence is closely related (as noted above) to other types of thinking, such as reflective, logical, analytical, critical and systemic thought. It is related to identifying, problem-solving and decision-making.

Deliberative thinking requires flexibility, fairness and a sense of justice. It is essential for adequately exercising competences such as leader-

ship, innovation, project management, enterprising spirit and values such as self-esteem, self-motivation, creation of a new order, global justice, etc.

Importance of this competence for academic and professional life

People's personal and professional quality is attested to by the quality of the decisions they take. Such quality is based on solid deliberative thinking.

Development of this competence is especially necessary for students studying Law, Business Administration and Education. Generally speaking, all university studies require some decision-making ability, above all those whose exercise has a direct influence on people.

Deliberative thinking is also a key competence at work, where certain jobs involve resources management, commercial activity, personnel management, public relations, etc.

How to incorporate it into the academic curriculum

Activities that involve ordering ideas or concepts to arrive at conclusions or to organise discourse can be included in a course syllabus as ways of developing this competence.

Learning deliberative thinking is compatible with almost all academic subjects, as long as activities are chosen where the above-mentioned behaviours can be practiced.

Recommendable for this competence are evaluation techniques that involve student participation, through self-evaluation and the evaluation of other classmates.

First level activities could include reading a case or listening to a situation (narration, film, etc.), and analysing the process followed in elaborating a proposal, so that students identify whether the components and phases of deliberative thinking are present.

At a more advanced level, importance should be given to the originality of deliberative thinking, transferring the process to different fields and contexts.

COMPETENCE: DELIBERATIVE THINKING

Definition: **This is the intellectual behaviour that considers the pros and cons of our decisions before taking them and examines the validity of points of view before making a judgement.**

Mastery of this competence is closely related to: **reflective thinking, logical thinking, analytical thinking, critical thinking, problem-solving, decision-making, leadership, justice, etc.**

Levels:

1. Closely considering the pros and cons of the motives behind a decision before adopting it in a simple situation not involving the student
2. Closely considering the pros and cons of the motives behind a decision before adopting it, in a situation where the student is personally involved
3. Closely considering the pros and cons of the motives behind a decision before adopting it in complex situations

Indicators:

1. Gathering information to deliberate on a situation
2. Taking into account the criteria, norms, values, references, etc. in the deliberation
3. Analysing the different components of the situation
4. Construction of a proposal based on own deliberative process

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Closely considering the pros and cons of the motives behind a decision before adopting it in a simple situation not involving the student***	Gathering information to deliberate on a simple situation	Responds intuitively, without seeking information.	Gathers insufficient information	Gathers all available information to deliberate on a situation.	Checks to see whether he/she has information from all the sources.	Gathers all the information possible, presenting it in an orderly way.
	Taking into account reference criteria in the deliberation	Doesn't make reference to criteria.	Uses inappropriate criteria for the situation or context.	Takes into account appropriate criteria for the context or situation.	Incorporates appropriate and original criteria in a given context.	Takes into account appropriate criteria of different types (norms, values, references, etc.).
	Analysing the different components of the situation	Confuses the components of a situation.	Recognises some components of the situation.	Distinguishes the different components of a given situation.	Finds relationships between the different components of a situation.	Discovers the model, pattern, system or principles that regulate the relationships between components.
	Constructing a proposal based on own deliberative process	Deliberates without arriving at a proposal.	Formulates an incomplete or poorly justified proposal.	Devises a proposal based on own deliberative process.	Justifies own proposal with solid arguments.	Constructs a proposal based on careful, detailed consideration of the pros and cons.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Closely considering the pros and cons of the motives behind a decision before adopting it, in a situation where the student is personally involved***	Gathering information to deliberate on own situation	Responds intuitively, without seeking information.	Gathers insufficient information.	Gathers all available information to deliberate on own situation.	Checks to see if information from all sources has been gathered.	Systematises all the information gathered.
	Taking into account reference criteria in the deliberation	Fails to refer to criteria.	Uses inappropriate criteria for the situation or context.	Takes into account appropriate criteria for the context or situation.	Incorporates appropriate and original criteria in a given context.	Takes into account appropriate criteria of different types (norms, values, references, etc.).
	Analysing the different components of a situation where he/she is involved	Confuses the components of the situation.	Recognises some components of the situation.	Distinguishes the different components of the situation.	Establishes relationships between the different components of the situation, overcoming own involvement in it.	Discovers the model, pattern, system or principles that regulate relationships between components.
	Constructing a proposal based on own deliberative process	Deliberates without arriving at a proposal.	Formulates an incomplete or poorly supported proposal.	Devises a proposal based on own deliberative process.	Justifies own proposal with solid arguments.	Constructs a proposal based on careful, detailed consideration of the pros and cons.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Closely considering the pros and cons of the motives behind a decision before adopting it in complex situations***	Gathering information to deliberate on a complex situation	Leaves out important information.	Gathers information without order.	Gathers all information, presenting it in an orderly way.	Systematises all the important information.	Addresses the complex situation with an exact definition of the case or problem.
	Taking into account different reference criteria in deliberating on a complex situation	Utilises insufficient or inappropriate criteria.	Only utilises standard criteria.	Takes into account diverse appropriate criteria for the context or situation.	Incorporates appropriate and original criteria in a complex situation.	Outstanding for the originality and suitability of the criteria utilised in complex situations.
	Analysing the different components of a complex situation	Makes an incomplete or mistaken situation analysis.	Distinguishes the different components of a complex situation.	Establishes relationships between the different components of the situation.	Discovers the model, pattern, system or principles regulating relationships between components.	Proposes a novel or original model, pattern, system or principles for the context.
	Constructing a complex proposal based on own deliberative process	Formulates an incomplete or unsupported proposal.	Devises a superficial proposal during deliberative process.	Devises a complex, well-founded proposal during deliberative process.	Constructs an effective proposal based on solid arguments.	Systematises own proposal closely considering the pros and cons.

COMPETENCE: TEAM THINKING

Description

Team thinking is a way of working with other people to arrive at shared views. This calls for bringing together and incorporating into one process different ways of thinking. The construction of team thinking is manifested at two levels:

—First, the individual level. Each person incorporates and integrates into his/her own thought processes a number of diverse elements and ways of thinking that would not have been generated otherwise. That is, the person builds, through interaction and dialogue with others, a negotiated knowledge which is subsequently interiorised as that person's own.

—Secondly, at the social level, team thinking enables various people to employ different modes of thinking which, through meetings and dialogue, they negotiate, build and reconstruct into a joint, shared knowledge, thereby creating a community of thought.

Consequently, development of this competence is extremely important so that people can contribute to the building of knowledge in whatever groups, organisations and communities to which they belong. This is particularly so in the construction of learning communities where professional and scientific knowledge is generated and shared.

The indicators for assessing team thinking provide content dimensions that help to examine its development: 1) the recognition of team thinking and its manifestations in diverse situations; 2) evaluation of its contribution to the development of knowledge and therefore to the development of individuals, groups, organisations and communities; 3) building team thinking by expressing one's own thoughts, analysing and understanding others' thoughts, and synthesising and integrating individual contributions into shared common thinking; and 4) the application of strategies, techniques and resources that facilitate knowledge management.

Interaction with other competences, attitudes, interests and values

Mastery of this competence is closely related, first, to the competences of teamwork, problem-solving and negotiation; and, secondly, to other types of thinking competences, since it requires a combination of different ways of thinking.

Development of this competence involves acquiring conceptual, procedural and attitudinal components: 1) recognising the manifestations of team thinking, distinguishing it from particular thinking and one's own thinking; 2) having something to say and believing that it is worth sharing; 3) skills for conjugating modes of thought; 4) interpersonal skills that make possible the joint construction of knowledge (of communication, interpersonal relations, teamwork and negotiation); and 5) the systemic skills (project management, quality and achievement orientation, innovation and enterprising spirit) needed to apply the knowledge generated for the improvement of groups, institutions and contexts where team thinking takes place.

Importance of this competence for academic and professional life

The competence of team thinking is one of the essential pillars of knowledge management and the formation of scientific or professional communities. Therefore, compared to other learning opportunities and scenarios encountered throughout life, universities and the educational period that they represent constitute a privileged space and time for sharing, creating and recreating team thinking and knowledge. A university is a meeting place designed specifically to generate and share professional and scientific knowledge within a professional and learning community. One of the specific goals of universities is to teach students to think and to think together, through dialogue and the systematic methods devised by scientific and professional communities to produce accepted knowledge.

This shared learning experience should serve as a reference throughout students' subsequent professional lives, as a learned model for the management of team thinking and knowledge to be applied to the improvement and development of the organisations and institutions in which they work, live or participate.

How to incorporate it into the academic curriculum

The best situations for developing this competence are basically of three types, which also constitute its levels:

—First, fairly simple, familiar situations, where students work on some aspect or component of this competence. These might in-

clude: a) identifying manifestations of team thinking in certain situations and cases (their own or others', real or hypothetical), where they can analyse and appreciate how team thinking helps to improve the situation, so as to better understand the competence and its value; b) situations where students gain practice in some procedural aspect of the competence (expressing, analysing and integrating different types of thinking; c) participating in debates and controversies; interpersonal skills of communication, teamwork and negotiation).

—At the second level, students confront situations where they have to use all the components of the competence to undertake a task or project in groups. Development of the competence is especially facilitated when the conditions and structure of the task require co-operative learning, to experience the positive interdependence between members of the group and to develop all kinds of co-operative skills conducive to true team outcomes.

—Finally, a third level of complexity is fostered by situations where students working in groups must address a complex project or problem in their field of knowledge. The situation may be real or simulated, but close to their real work. Moreover, the team outcome of the process must constitute a true contribution to the development of knowledge and professional practice in that field, meaning that the situation must match a systematic work and/or research process based on the proven methods and tools of the scientific and professional community in question. Work that involves applying a research process provides an ideal occasion for developing this competence and experiencing peer group agreement as the basis of scientific knowledge.

These situations enable the lecturer to apply the assessment indicators to the performance of the students participating in the joint thinking of each team. Moreover, by analysing the work they produce, the lecturer can assess whether it is a true team outcome, or merely the sum of particular thoughts. Finally, the reflections and reports of the students themselves on the process followed enable them to become aware of, and explain, the conditions and difficulties encountered, and the strategies used to progress from private thoughts to their integration in team thinking. Formative assessment, self-assessment and assessment by others are essential for fostering progress in this process.

COMPETENCE: TEAM THINKING

Definition: **This is the mental behaviour that is constructed together with other people in a group, where everyone considers input from all the group's members in order to respond to a situation with commitment and solidarity.**

Mastery of this competence is closely related: **to the competences of teamwork, problem-solving and negotiation; and also to competences involving other types of thought, since it requires a combination of different ways of thinking.**

Levels:

1. Identifying and evaluating the manifestations of team thinking in everyday situations, developing attitudes and skills that facilitate its construction
2. Developing systematic strategies that will generate team thinking in any working groups in which one is a member
3. Actively promoting the construction of professional team thinking as the expression of shared analysis of a situation and the search for solutions and projects that will help to improve it

Indicators:

1. Recognising team thinking (as distinguished from one's own private thoughts)
2. Constructing team thinking: Expression of one's own thoughts
3. Constructing team thinking: Contrast with others' thinking
4. Constructing team thinking: Search for synthesis and integration
5. Evaluation of team thinking and its potential for change

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Identifying and evaluating the manifestations of team thinking in everyday situations, developing attitudes and skills that facilitate its construction***	Identifying elements and expressions of team thinking in own thoughts	Confuses own thinking with others' thoughts.	Distinguishes with difficulty manifestations of team thinking in own thoughts.	Identifies some frequent elements and expressions of team thinking in own thoughts.	Identifies with precision elements and expressions of team thinking in own thoughts.	Recognises the manifestations of team thinking shaping own mentality.
	Recognising manifestations of team thinking in everyday situations	Doesn't distinguish private and team ways of thinking or elements in familiar situations.	Identifies some clear manifestations and customs of team thinking in normal situations.	Recognises manifestations of team thinking in normal situations.	Accurately distinguishes forms and manifestations of private and team thinking in normal situations.	Recognises the manifestations of team thinking present in the opinions of other persons and groups.
	Expressing and defending own thinking with clarity and assertiveness	Avoids expressing own position and thoughts.	Has difficulty in expressing opinions and thoughts with clarity and assertiveness.	Clearly expresses own opinions and thoughts.	Manifests own opinions and thoughts with clarity and assertiveness.	Manifests own positions with assertiveness and defends them with good arguments.
	Contrasting own thoughts with those of others	Avoids contrasting own opinions and positions with those of others.	Has difficulty in understanding the opinions and positions of others.	Compares and contrasts own thoughts with those of others.	Questions others to learn and understand their thinking and contrast it with own.	Listens to and considers the positions of others to generate co-operation.
	Seeking and integrating diverse contributions	Accepts or rejects without good criteria thoughts expressed by others.	Seeks points of encounter between opinions and positions expressed.	Identifies similarities and differences in opinions and positions expressed.	Analyses with good criteria the importance of and arguments (facts, proof) behind opinions and positions expressed.	Synthesises and integrates the best contributions of each one into a collective opinion or position.
	Evaluating the results of team thinking to respond to everyday situations	Maintains own position without entering into controversy with others.	Doesn't give reasons for evaluating team vs. personal results for addressing everyday situations.	Gives positive evaluation of the results of team thinking for everyday situations.	Defends the value of the contribution of others to achieve a better-developed result for dealing with everyday situations.	Gives well-structured argument for how team thinking enriches both group outcome and personal development.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Developing systematic strategies that will generate team thinking in any working groups in which one is a member***	Recognising the manifestations of team thinking in the approach and undertaking of group work	Confuses own thinking with that of others in group-work situations.	Only recognises some evident manifestations of team thinking in group-work situations.	Identifies team thinking in group work.	Identifies the presence and lack of team thinking in group work.	Accepts the results of the group's team thinking.
	Helping to construct team thinking and work, making important and relevant contributions	Gives opinion regardless of its relevance to the group task.	Makes contributions that are only slightly relevant to the group task.	Contributes pertinent opinions and proposals well suited to the group task.	Makes valuable personal contributions that significantly enrich the group project.	Contributes significantly, using the contributions of others.
	Listening to and considering the thoughts of other members of group	Not interested in the positions and motives of other members of group.	Doesn't listen with attention to the opinions of other members of the group.	Asks and listens to learn and understand the thoughts and positions of fellow group members.	Asks seriously for the thoughts of others in order to collaborate.	Promotes an atmosphere of trust and support where all can express themselves and be heard.
	Seeking consensus and agreement in situations of controversy and discrepancy	Avoids controversy and ratifies own positions.	Seeks agreement with other members of the group, but has difficulty in finding points of encounter between controversial, conflicting positions.	Utilises the convergence of interests and criteria between conflicting opinions and positions.	Analyses discrepancies to construct shared thought.	Explores and integrates confluence and discrepancies between members of the group until a common position can be reached.
	Valuing team thinking as an instrument that transforms the thought and actions of the group	Considers team thinking as an imposed imperative.	Willingly accepts with good attitude the task of thinking together.	Gives well-justified evaluation of how team thinking contributes to group action.	Modifies personal positions and projects in accordance with the thinking generated by the group.	Accepts and promotes a commitment to team thinking and action.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Actively promoting the construction of professional team thinking as the expression of shared analysis of a situation and the search for solutions and projects that will help to improve it***	Identifying the manifestations of team thinking in professional thinking	Fails to recognise team thinking in the construction of professional knowledge.	Recognises only some manifestations of team thinking in own professional field.	Recognises manifestations of team thinking in own professional field.	Recognises and values team thinking as essential to the course of professional work.	Promotes team thinking style as to the course of professional work and to career development .
	Participating actively in the analysis of situations linked to own professional field	Is inhibited in discussing analyses of situations related to own professional field.	Discusses analyses of situations related to own professional field.	Participates constructively in the analysis of situations related to own professional field.	Contributes analyses based on supporting hypotheses, facts or evidence that contribute to the comprehension of situations in own professional field.	Contrasts the diverse perspectives that analyse and contribute to the comprehension of professional situations.
	Conjoining the different ways of thinking existing in the group to resolve professional tasks and problems	Becomes radical about own professional action proposals.	Contributes own professional action proposals without considering those of other members of the group.	Takes into account the ways of thinking existent in the group to find a solution to a problem.	Proposes strategies to integrate different ways of thinking to resolve the problem in hand.	Constructs a solution that integrates the different ways of thinking of the group.
	Proposing strategies and resources for knowledge management in the groups to which one belongs	Sees knowledge as an exclusive resource of each individual.	Recognises tacit knowledge as a resource pertaining to the group.	Promotes the generation of explicit knowledge as a strategy for developing co-operation.	Proposes strategies for diffusing explicit knowledge and promoting co-operation.	Designs network structures to share knowledge and generate co-operation.
	Appreciating the contributions of team thinking to the development of scientific knowledge	Does without team thinking.	Makes apparent superficial use of team thinking.	Uses team thinking to generate knowledge.	Appropriately uses strategies of team thinking to develop knowledge.	Creates original team thinking strategies to generate knowledge.

COMPETENCE: TIME MANAGEMENT

Description

In the western world as we know it today, more and more people are finding that their scarcest resource is not money, as used to be thought in economic analyses, but time. High ranking among the diseases typical of the developed world are stress-related disorders. The emotional, affective, social etc. consequences of the lack of time to attend to family, work, friends, oneself, etc., appear constantly in the news. People are required to undertake more and more activities, and since they cannot perform all of them, it is almost inevitable that they become overwhelmed, live in a constant state of tension and fall prey to illness.

Being able to organise and distribute available time correctly has become a requirement not only for one's own effectiveness, but also and more importantly, for one's physical and mental health. Managing time means distributing it according to priorities. If we do not become personally involved in organising our time, it will inevitably be others and external circumstances in general who will do so, increasing demands and conditioning what we do and when we do it, with the well-known result that what is urgent will take priority over what is important.

The aim, therefore, is to be able to establish clear priorities for the short-, medium- and long-term, both at work and in one's personal and social life. We must decide what we are going to do and what we will not, planning how much time we are going to devote to each activity, and endeavouring to fulfil these plans.

Undoubtedly, we are not entirely free to decide how we will spend our time. There are very powerful external constraints that limit our decision-making capacity. But it is also true that if we stop to analyse how we spend our available time, we find that we waste much of it. We actually throw away part of our scarcest resource due to lack of organisation and discipline, devoting more time than necessary to some areas to the detriment of others. What is worse, we have a negative influence on others' distribution of time.

Interaction with other competences, attitudes, interests, values

Time management requires capacity for analysis and planning, and therefore a certain prior mastery of the competences of analytical thinking, practical thinking and planning.

Because it is important to manage not only one's own private time, but also and above all the time we spend on work and interacting with other persons, this competence has very much to do with adaptability, teamwork and negotiation.

Because of its negative consequences, poor time management affects the image that we have of ourselves, and gives us the feeling that we are totally dominated and conditioned by circumstances. Sometimes we may even feel incapable of controlling our own lives. As we learn to manage time, these negative sensations begin to disappear. We spend more time and effort on what we consider important, thanks to which we feel better about ourselves. We discover that we are more effective, that we can accomplish more in areas that interest us but which we had neglected (health, social relations, etc.), all of which relates time management to self-motivation and self-esteem.

Importance of this competence for academic and professional life

As far as this competence is concerned, students and professionals differ only in terms of age and type of work. In both cases, it is necessary to distribute time between work, family, social relations, hobbies, participation in community and leisure activities, etc., and in both cases work tends to take the lion's share of one's time.

Striving for success and the competitiveness that this entails are dominant values in today's society, and this conditions how we actually distribute our time. Students have to decide how much time they are going to spend attending class, studying, doing group work and assigned work, and how much they will spend on their family and social relations, sports, entertainment, volunteer work and on themselves. When internal and external pressures increase to spend time on student activities (writing long, complex essays, studying for exams, etc.), students are obliged to lessen the time spent on personal activities, to the detriment of their emotional and social development. When personal life is what dominates (hobbies, sports, affective relationships), study performance declines.

For workers, particularly those in positions of responsibility, the situation is the same if not worse, because their standard of living depends on keeping a job and getting promoted, meaning that it is usually personal time that gives way under the demands of work. In both cases, the ability to stop and analyse what we are doing with our time – i.e. with our life – and the capacity to set our own priorities and explicitly plan

how time is to be distributed is essential for effectiveness and for freeing ourselves from stress.

How to incorporate it into the academic curriculum

In the first place, it is important for students to be aware of the importance of managing their time. They must be helped to learn techniques for analysing their use of time, for identifying who and what steals time from them, and for planning time use over the short-, medium- and long-terms. This planning should be revised by lecturers or tutors.

Secondly, academic pressure must stay within the limits established by society. Specifically, academic planning in terms of European credits is a key reference, and establishes that approximately 1600 hours per year is the total time that students should devote to the set of tasks related to the educational process. This calls for good co-ordination among lecturers to ensure that total programmed activities do not exceed this limit, and to plan these activities week by week.

COMPETENCE: TIME MANAGEMENT

Definition: **Distributing time wisely according to priorities, taking into account short-, medium- and long-term personal objectives and the areas of personal and professional life that one spends most time on.**

Mastery of this competence is closely related to: **Self-esteem, self-control, control, discipline, respect for rights, rationality, adaptability, effectiveness in planning, decision-making, initiative, etc.**

Levels of mastery:

1. Establishing objectives and priorities, planning for the short term and sticking to the plan (every day, each week)
2. Defining and ranking objectives and planning individual medium- and long-term activity (from a few weeks to a semester)
3. Establishing objectives and priorities, planning for time with others, and fulfilling this plan

Indicators:

1. Defining objectives
2. Setting priorities
3. Planning
4. Fulfilment.
5. Order/Preparation

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Establishing objectives and priorities, planning for the short term and sticking to the plan (every day, each week)***	Clearly defining the activities to be accomplished in the short term	Has no explicit short-term objectives.	His/her activities merely comply with what is externally required.	Makes weekly or daily list of the activities that he/she is going to perform.	Combines studies or work with personal life (leisure, family, relationships).	Regularly records degree of accomplishment of activities.
	Setting priorities among the tasks to be performed each day	Confuses priorities with desires (puts what is easy before what is important).	Has difficulty in distinguishing degrees of importance or of urgency.	Clearly distinguishes what is important from what is accessory.	Ranks tasks both by urgency and by importance.	Focuses on important tasks, leaving others to be done according to established priorities.
	Planning own daily activities assigning time to each one	Doesn't plan. Addresses tasks as they come up.	Sets daily goals way above capacity to meet them. Lives under stress.	Devotes time each day to planning the tasks to be done, assigning realistic durations.	Planning includes time for rest, travel and contingencies.	Records daily fulfilment of and deviations from planned schedule.
	Habitually sticking to plan	Often puts off tasks that should be done.	Confuses activity with results. Keeps busy but does not finish work.	Generally completes tasks programmed daily and weekly.	Work time does not increase at the expense of personal time.	Fulfils plan, valuing the time invested.
	Maintaining own papers and materials in order	Is disorderly. Wastes a lot of time looking for papers or materials.	Classifies and puts things in order but with poor criteria.	Classifies and puts papers and materials in order with useful criteria.	At the end of each task picks up and puts away all materials used.	Maintains and updates a location index on all important documents.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Defining and ranking objectives and planning individual medium- and long-term activity (from a few weeks to a semester)***	Clearly defining own medium- and long-term objectives	Lives in the short term; doesn't have explicit medium- or long-term objectives.	Simply accepts the objectives set by others.	Enumerates and describes own medium- and long-term objectives.	His/her objectives include, in addition to work, own personal and family life.	Regularly revises objectives and degree of achievement in the different areas.
	Ranking objectives according to criteria	The easiest objectives to accomplish come first.	Confuses priorities or utilises only external criteria to establish them.	Establishes clear order of priorities for own medium- and long-term objectives.	Sets own criteria for ranking objectives.	His/her important long-term objectives orient medium- and short-term priorities.
	Planning for long-term, assigning deadlines for completing each objective	Doesn't plan. Does things on urgency basis.	Planning too general. Is too optimistic about deadlines.	Has a written plan with beginning and ending dates for each block of activities.	Groups blocks of activities to save time.	His/her planning includes alternatives and possible responses to contingencies.
	Fulfilling plans	Often falls behind or doesn't achieve objectives.	Meets deadlines but at the expense of the quality of work or infringing on own personal time.	Achieves the objectives set with sufficient quality and within the established deadlines.	Combines work times and rest times to increase productivity.	Finds ways of organising life that save time, always accomplishing things with the quality required.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Establishing objectives and priorities, planning for time with others, and fulfilling this plan***	Clearly defining objectives to be reached during collective time (working groups, meetings, interviews, etc.)	Considers that attending meetings is an objective in its own right.	Participates in meetings to which called but without specific personal objectives.	Sets clear personal and group objectives for meetings.	Clarifies or requests clarification on the concrete objectives to be met in meetings.	Clearly differentiates the objectives to be met individually and those that require collective time.
	Establishing priorities among objectives, integrating collective and individual objectives	His/her individual objectives always take priority over collective objectives.	Collective objectives always take priority over individual ones.	Integrates collective and individual objectives using good criteria.	Shares criteria for ranking collective and individual objectives.	Agrees the criteria for rating collective and individual objectives.
	Planning collective time	His/her meetings have a starting time but their duration is left undecided.	Times assigned to collective tasks not realistic.	His/her meetings meet pre-established starting and ending times.	Assigns and/or agrees with others the amount of time to be devoted to each matter or task.	Proposes improvements (other ways of organising, changes in the order of tasks, etc.) to be more efficient.
	Fulfilling plan	Utilises meetings as a rest from work and doesn't care how much time they take.	Wastes time or allows it to be wasted on matters not on meeting agenda.	Makes sure that the business and objectives of meetings are accomplished.	Impedes useless digressions and works actively to meet objectives and deadlines.	Saves time by facilitating agreement or resolving difficulties.
	Making adequate preparations so that collective time is used properly	Attends meetings without any prior preparation.	Prepares little and expects others to make up for own deficiencies.	Fulfils prior individual preparation. Contributes the results of own work.	Makes sure everyone has beforehand all the information they will need at the meeting.	Presents specific proposals that are well argued and documented.

Description

We speak of the existence of problems when we appreciate differences between the situation as it is now and as we feel it should be, when there is a discrepancy between the current state of affairs and the objectives to be reached, when there is some dysfunction or disorder in what we are dealing with.

In order to address problems adequately, we first must identify them as such, be aware of the dysfunction, discrepancy or difference. This means drawing on diverse knowledge and skills, relating knowledge from different fields, and updating our view of relations between past situations.

The problem-solving process is based on logic and on the utilisation of a number of properly organised techniques or tools. These techniques do not serve to resolve conflicts. Conflicts are not problems. Likewise, problem-solving techniques do not solve physical or mathematical problems, which must be taken care of by algorithms.

Therefore, a problem is a question that doesn't have a predefined solution. Moreover, problems must be interesting matters that make one want to solve them, tasks on which one is willing to spend time and effort. Once resolved, it gives a considerable sensation of pleasure to have accomplished the solution. In the very process of searching for solutions and making progress, there are pleasurable components.

In the *continuum* of developing this competence, we can distinguish three levels of complexity: a first level of proficiency is solving problems by applying knowledge and methods learned in class or in books. Students who, through reflection and experience, develop their own criteria for solving problems reach a second level of proficiency. A more advanced level is reached when individuals are able to propose and develop solutions for unusual problems in matters with which they are not familiar.

The criteria for assessing progress in this competence are indicated by the ability to identify problems, to define them, to gather necessary information, to follow a methodology, to develop different alternative solutions and to devise and follow an action plan.

Interaction with other competences, attitudes, interests, values

People working on their problem-solving ability exercise different types of thinking, including analytical, systemic and creative thinking.

Since problem-solving is often done in groups, the competence of teamwork is also exercised. Problem-solving helps to take a proactive attitude toward life and to experience success- and achievement-orientation.

Competence in problem-solving helps to improve self-esteem and is related to values such as giving meaning to life, research and the development of wisdom and knowledge.

To paraphrase Polya (1945), in all problem-solving there is a bit of discovery.

Importance of this competence for academic and professional life

Problems of greater or lesser importance crop up constantly in the lives of students. Having good criteria for addressing and solving them facilitates personal growth, self-confidence and control no matter what the circumstances.

Situations exist in reality; problems are creations. Situations become problems when we take them on as a personal challenge and decide to devote time and effort to resolving them.

Solving a problem adds something to what we already knew. It provides new relations between what we already knew or provides us with other points of view concerning familiar situations. Problem-solving helps to spark creativity.

In professional life as well, numerous problems arise and put one's professionalism and mastery of the field to the test. In positions of responsibility, problem-solving ability is especially important due to the effects on staff of one's way of dealing with problems. Becoming inhibited or addressing problems unsatisfactorily has important repercussions.

The quality of a good professional is to a large extent measured by his/her capacity to handle complex problems and provide alternatives, the basis for good decision-making. Individual training and proficiency in this competence facilitates a group's ability to address and solve problems.

How to incorporate it into the academic curriculum

Problem-solving ability can be developed in academic work, either through the handling of specific problem situations linked to topics being covered, or through the teaching strategy known as problem-based learning.

To paraphrase Polya (1945) again, by solving problems, the experience acquired as a student may determine one's taste for intellectual work and make a life-long impression on one's spirit and character.

COMPETENCE: PROBLEM-SOLVING

Definition: **Identifying, analysing and defining the significant elements constituting a problem in order to solve it effectively and with good criteria.**

Mastery of this competence is closely related to: **Vision and outlook on the future, questioning of one's own paradigms, achievement orientation, analytical and systemic thinking, proactive attitude, rationality, competence, research, discernment, knowledge, wisdom, etc.**

Levels of mastery:

1. Identifying and analysing a problem to generate alternative solutions, applying methods learned
2. Using own experience and criteria to analyse the causes of a problem and construct a more efficient, effective solution
3. In teams, proposing and constructing solutions to problems in different fields, with an overall view

Indicators:

1. Identification
2. Definition
3. Information gathering
4. Methodology
5. Alternatives
6. Action plan

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Identifying and analysing a problem to generate alternative solutions, applying methods learned***	Identifying what is and is not a problem, taking the decision to address it	Doesn't properly distinguish problem of conflict from algorithm.	Has difficulty in differentiating between problem, conflict and algorithm.	Correctly identifies problems, differentiating them from other situations.	Outstanding ability to easily identify where a problem lies.	Identifies problems with ease and is able to say why or how he/she does it.
	Reading and/or listening actively. Asking questions to define the problem in hand	Doesn't respond to the problem.	Asks some appropriate questions to define the problem.	Asks appropriate questions to define the problem.	Is quick to ask questions to define a problem.	Formulates key questions to define the problem and evaluate its importance.
	Gathering significant information to resolve problems using facts and not only subjective opinions, following a logical method of information analysis	Doesn't gather information or the information gathered is not significant.	Gathers significant information, but sometimes incomplete, and doesn't always follow a method of analysis.	Gathers the information needed and analyses it correctly.	Accurately selects valuable information and analyses it systematically.	Efficiently gathers significant information and analyses it with a good method, contributing thoughts.
	Following a logical method to identify the causes of a problem rather than just the symptoms	Fails to identify the causes of the problem. Confuses causes with symptoms.	Identifies some causes, in others only the symptoms.	Identifies the causes of a problem, following a logical method.	Identifies and ranks the causes of a problem.	Follows a logical process to identify causes, integrating them into a model.
	Presenting different options for alternative solutions to a single problem, and evaluating the possible risks and advantages of each	Doesn't present alternatives.	Occasionally presents alternatives.	Presents some alternatives and some pros and cons.	Presents a good analysis of available alternative solutions.	Chooses the best alternative, based on analysis of the different options.
	Designing a plan of action for applying the chosen solution	Doesn't choose a solution or proposes one that is illogical.	Chooses a solution but doesn't plan application.	Specifies the steps to take in applying the solution that he/she has chosen.	Chooses a good solution and designs the plan of action for applying it.	Outstanding for choice of solution and for the design of the plan of action.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Using own experience and criteria to analyse the causes of a problem and construct a more efficient, effective solution***	Recognising a complex problem and being able to break it down into manageable parts	Is unable to handle complex problems.	Has difficulty in seeing and analysing the complexity of a problem, doesn't manage to break it down into manageable parts.	Identifies complex problems, analyses them and subdivides them into manageable parts.	Makes a good analysis that includes priorities and breaks down the problem into manageable parts.	Has comprehensive view, brilliantly recognises the parts of the problem and how they are related.
	Contrasting sources of information and handling facts rigorously	Doesn't worry about the rigorousness of information.	Needs help in checking reliability of sources of information and strength of facts.	The facts he/she uses are rigorous and come from trustworthy sources.	Handles hard facts and knows how to manage conflicting information from different sources.	Provides noteworthy analysis of conflicting information drawn from different sources, and even contributes new sources.
	Having a method of analysis for identifying elusive underlying causes and evaluating their impact on problems	Makes deficient analyses of causes.	Identifies causes, but still doesn't evaluate their impact on problems.	Correctly follows a method to identify causes and evaluate their impact.	Provides a good method of analysis for identifying causes.	In addition to providing a good method of analysis for identifying causes, evaluates their impact with comprehensive view.
	Presenting solution options that are most often effective for resolving problems.	Doesn't present any solutions.	Presents solutions, but they are not effective.	Presents more than one effective alternative solution.	Presents array of options with effective solutions.	The options proposed feature diversity, rigor and internal logic.
	Having good criteria for choosing between alternative solutions	Lacks criteria. Doesn't know how to justify his/her decision.	Utilises criteria inappropriately.	Correctly utilises the criteria offered for choosing a solution.	Applies the most appropriate criteria for weighing options and choosing the right solution.	Develops own criteria that lead to selecting the best of alternative solutions.
	Devising a realistic plan of action and follow-up for applying the solution	Doesn't devise a realistic plan of action.	His/her plan of action is realistic but lacks a follow-up plan.	His/her plan of action is realistic and includes a follow-up plan.	His/her plan of action and follow-up plan noteworthy for their quality.	Noteworthy for the quality of his/her plan of action and follow-up plan. Foresees contingency plans.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***In teams, proposing and constructing solutions to problems in different fields, with comprehensive view***	Foreseeing problems before their effects become evident	Lacks foresight in identifying problems.	Has difficulty in foreseeing problems if their effect is not evident.	Foresees the possible existence of problems.	Identifies problems ahead of time, analysing and prioritising them.	Heads off problems by identifying them ahead of time.
	Analysing problems and their causes through an overall, medium- and long-term approach	Confronts problems without an approach.	Approach is partial or for the short term only.	Has an overall medium- and long-term view of the problem.	Focuses on the solution of problems foreseeing their consequences.	Noteworthy for excellent analysis of the problem and its solution.
	Directing the systematic process of working toward decision-making in the group	The working processes followed are not systematic or adequate for group decision-making.	Follows but does not direct the process.	Directs in organised way the approach and problem-solving process in the group.	Takes the initiative in directing the approach and problem-solving process in the group.	Creatively directs, with the consent and trust of fellow members, the approach and problem-solving process in the group.
	Transferring learning from classroom exercises and cases to real situations in other fields	Sticks to specifics, to the "here and now".	Needs guidance to transfer learning to other fields.	Transfers the approach learned to situations in other fields of action.	Confronts real situations in other fields utilising prior learning which he/she generalises and interrelates.	Outstanding for ability to deal easily with real situations in all fields, creatively utilising prior learning.
	Obtaining the necessary support of others to back actions and have sufficient allies for the success of his/her decisions	Doesn't make allies.	Obtains support but it is insufficient to carry decisions.	Obtains the support of members of the group to carry out the plans of action designed for problem-solving.	Obtains support of allies outside the group to ensure success of the decisions taken.	Is recognised for his/her ability to organise and manage things at the intergroup level to ensure success of the decisions taken by the group.

COMPETENCE: DECISION-MAKING

Description

All students and professionals need to take decisions. However, what generally characterises people at the highest levels of a job or profession is the nature and importance of the decisions they must take. Society expects university graduates to be able to take appropriate decisions in the most complex and important contexts and fields, in full awareness of and attention to the scope and consequences of their decisions.

The competence of decision-making consists, basically, in being able to choose the best course of action. Development of this competence leads to taking quality decisions systematically, making good use of the potential offered by technology, and standing behind decisions once taken, with commitment.

Interaction with other competences, attitudes, interests, values

This competence is related to numerous educational factors. Many facets of the individual are marshalled in taking decisions, and therefore are conditioning factors. That is, the competences of analytical, systemic and critical thinking, and the ability to solve problems form a first basis for good decision-making. Oral and written communication skills are also important for conveying accurately and without mistaken interpretations the decision adopted. Moreover, the best decisions are adopted by people who have good capacities for innovation, objectives-based management, leadership, self-motivation and self-esteem. Finally, the competence of decision-making will fail if it is not accompanied by ethical commitment. Therefore, decision-making is based on a combination of knowledge, techniques and procedures, as well as complementary attitudes and values.

Importance of this competence for academic and professional life

Taking decisions is present everywhere in people's lives. From a very early age we begin to take decisions and never stop doing so throughout our lives. It is a capacity that we develop with more or less success. In the academic and professional worlds, people must also take decisions very frequently.

Many academic specialisations offer guidance on how to take decisions in certain very specific types of situations in order to deal with well-defined problems. This happens for example in medicine, engineering, education, psychology, law, etc. However, a course of studies frequently lacks training focused on the general, core competence of decision-making that cuts across fields and is transferable to unforeseen situations. Sometimes university graduates are well prepared to take decisions in certain types of specific situations on the job, but they feel disoriented or insecure when they must take a decision in a new, unforeseen context or when unfamiliar complexity arises.

All fields of work are full of this type of unexpected situation. Because of ongoing scientific, technological, cultural and social progress, university graduates will have to confront situations in their professional life that were not covered or even imagined during their studies. The overworked phrase, "They never taught me this at university" comes to graduates' minds when they have to take a decision outside what they were led to expect in class. Therefore, together with training in decision-making in well-defined situations that are specific and proper to the field, students must spend time on generic training in decision-making. The idea is for them to become able to utilise this competence particularly in unforeseen situations before graduating.

Both in academic and professional settings, decisions are frequently taken with excessive impulsiveness, on unsolid grounds based mostly on intuitions, rumour, prejudice, unfounded suppositions, etc. A good number of such decisions – those that are taken without luck on their side – will very likely have negative consequences. Therefore, time and effort spent on this competence is well justified.

How to incorporate it into the academic curriculum

The three levels of indicators correspond to three types of graded situations: everyday individual decision-making, decision-making in collaboration with others, and more difficult decision-making. To apply this therefore, we must identify or promote situations where students will have to take individual, shared or more difficult decisions.

At the first level, the focus will be on the quality of the individual decision, meaning how systematic and based on facts and information it is, with what assurance it is adopted, and the use of computer skills in taking the decision. At the second level the indicators focus on the ability to adopt group decisions, standing by the decision and contributing

to the systematicity and grounds for decisions taken collectively. At the third level, attention is paid to students' capacity to make good decisions even in difficult situations, where the decision might have important consequences. The indicators focus on the assurance, logic and systematicity with which decisions are taken, and, where applicable, the good use made of computer skills and technology for this type of challenge.

COMPETENCE: DECISION-MAKING

Definition: **Choosing the best course of action, following a systematic process and assuming responsibility for the scope and consequences of the option taken.**

Mastery of this competence is closely related to: **Analytical thinking, critical thinking, systemic thought, problem-solving ability, oral and written communication, ethical commitment, objectives-based management, innovation, leadership, self-motivation, self-esteem, self-fulfilment.**

Levels of mastery:

1. Applying systematic methods to take good personal decisions with logic and assurance
2. Collaborating with others in taking group decisions of quality
3. Showing assurance and initiative in taking good responsible decisions in difficult situations

Indicators:

1. Quality
2. Systematicity
3. Incorporation of technology
4. Commitment
5. Logic

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Applying systematic methods to take good personal decisions with logic and assurance***	Taking good decisions based on facts	Takes poor decisions.	Doesn't take the best decisions.	Takes good decisions.	Quickly takes good decisions.	Noteworthy for taking good decisions in own daily conduct.
	Taking decisions with assurance	Gets blocked in decision-making.	Is insecure about taking decisions.	Takes decisions with assurance.	Takes decisions and knows how to justify them.	Noteworthy for the assurance that he/she has and conveys in taking decisions.
	Making logical decisions in own daily life	Uses poor logic in taking decisions.	Sometimes lacks logic in taking decisions.	Is logical in decision-making in normal daily life.	In difficult situations shows logic in decision-making.	Shows outstanding logic in taking decisions.
	Showing method and systematicity when taking decisions	Not very organised when taking decisions.	Organises decision-making, but without finding a good method for doing so.	Method and systematicity apparent when taking decisions.	Puts into practice own systems that facilitate decision-making.	Applies innovative methodologies or systems that facilitate decision-making.
	Applying computer skills to decision-making	Doesn't know how to use technical or technological resources in the decision-making process.	Uses computer in own decision-making when obliged to.	Utilises computers on own initiative for decision-making.	Integrates the use of various computer resources in decision-making.	Is very ingenious in incorporating computer programmes and resources in own decision-making.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Collaborating with others in taking group decisions of quality*	Taking good decisions when working with others	Takes decisions behind the group.	Is passive in group decision-making.	Takes good decisions when working with others.	Shares with others concern for taking quality decisions.	Takes the initiative in achieving team decision-making.
	Showing assurance in group decision-making	Blocks the group with insecurity in group decision-making.	Is indecisive when having to take group decisions.	Shows assurance in group decision-making.	Contributes with own analysis to taking a decision that is consistent with the thinking of the group.	Enthuses others with own assurance when taking decisions in group.
	Being logical when taking decisions in a group	Induces the group to take illogical decisions.	Scarcely contributes to logic in decision-making.	Supports logical decision-making in the group.	Own proposals help to ensure the logic of the decisions taken by his/her team.	Helps the group to closely analyse the logic in group decision-making.
	Following a decision-making system when working in a group	Encourages the group to take decisions in a haphazard way.	Doesn't participate in the systematics of decision-making characterising the group.	Follows the systematics of decision-making when working in group.	Takes the initiative and convinces others with the systematics employed in decision-making.	Is creative in introducing and developing new methodologies of team decision-making.
	Incorporating organised programmes for taking group decisions	Is against using technical resources in taking group decisions.	Simply accepts the application of technological resources to group decision-making.	Participates in the incorporation of programmes designed to facilitate decision-making.	Co-ordinates the action of the group when incorporating technologies into decision-making.	Takes the initiative in innovation applied to group decision-making.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Showing assurance and initiative in taking good, responsible decisions in difficult situations***	Taking decisions of quality in difficult situations	Takes poor decisions in difficult situations.	His/her decisions are not the best in difficult situations.	Takes good decisions, even when delicate.	Keeps calm when making hard decisions and bases them on available facts.	Is highly effective taking good decisions in difficult situations.
	Showing assurance in taking difficult decisions	Reluctant to take delicate decisions.	Is insecure when taking delicate decisions.	Shows assurance in taking difficult decisions.	Is able to take delicate decisions with a natural manner, conveying assurance to others.	Shows and inspires great assurance in taking delicate decisions, explaining inherent limitations.
	Showing logic in taking decisions that require commitment	Takes illogical decisions in difficult situations.	Takes fairly illogical decisions in delicate situations.	Takes delicate decisions with logic.	Justifies the logic of his/her decisions in difficult situations.	Takes delicate decisions with logic, explaining and admitting inherent limitations.
	Being systematic when taking delicate decisions	Lacks method for taking delicate decisions.	Sometimes is disorderly when taking decisions that require commitment.	Is systematic in way of taking delicate decisions.	Organisation in taking difficult decisions quite noteworthy.	Takes the initiative and knows how to convince others to follow systematic method in taking difficult decisions.
	Finding ways to apply technology when taking decisions requiring high degree of commitment	Is against using technical resources in taking difficult decisions.	Only accepts the application of technological resources to decision-making that requires commitment.	Finds ways of applying technology when having to take decisions that require commitment.	Integrates the use of various computer resources in taking difficult decisions.	Is innovative in applying technology to the taking of difficult decisions, using various computer programmes and tools.

COMPETENCE: LEARNING ORIENTATION

Description

The convergence and creation of a European Higher Education Area is much more than a formal process; it involves a major transformation of the current teaching-learning model. Because of rapid changes in employment, academic syllabuses in every field must be a means by which other things can be taught and learned so that students can function effectively in today's knowledge society. With the increasing importance of lifelong learning, universities must offer their students an education that will ensure their ability to function effectively as citizens and workers in society.

> A 'knowledge-based society' is also a 'learning society'. This idea is closely linked to a view where all education is seen in a broader context – i.e. lifelong continuous learning, where individuals must be able to handle knowledge, update it, select what is appropriate for a specific context, learn permanently, and understand what is learned, so that they can adapt it to new, rapidly changing situations. (Villa 2003: 4)

We say that students have developed competence in learning orientation when they show that they can use learning strategically and flexibly according to the objective pursued, based on recognition of the learning system and awareness of learning itself. The UD considers that these new aims and context call for a special approach that will promote learning orientation in all students.

This approach starts with a constructivist view in which learning is seen as a progressive process of growth, development and adaptation, occurring as a result of the active building that people do in their interactions with their surroundings. That is, learning does not arise spontaneously as the result of growing older or maturing, nor is it passively absorbed from the environment. Instead, two basic and complementary processes are emphasised so that learning can take place – the active and significant construction of knowledge by the person who is learning, and his/her interaction with the environment that fosters and makes it possible. Learning at university is moreover intentional learning.

Interaction with other competences, attitudes, interests, values

This is an instrumental competence, since it is basic to the acquisition and development of other competences and learning. However, apart from its overlap with other instrumental skills (types of thinking and

methodologies for developing quality strategies and learning), mastery of this competence is also related to attitudes, values and interpersonal competences, fundamentally individual, but also social: self-assurance and maturity, capacity for self-criticism, frustration tolerance, flexibility, adapting to changing situations. Life-long orientation to learning overlaps very well with the competences of self-motivation and adaptability; and, from a more systemic point of view, with the competences of enterprise (creativity, innovation and enterprising spirit).

Importance of this competence for academic and professional life

It used to be thought that higher education at a university was the final training period before immediate incorporation into the world of work, with guaranteed accreditation as a highly qualified professional. However, today's context of change, both in society in general and in the workplace in particular, is bringing about a radical change in social structures and community services, with new paradigms that are influencing the change from the industrial era to the era of knowledge.

According to Villa (2003), current social demands on universities require that they not only prepare students adequately, but that they prepare them for life as good citizens of democratic societies. The new factors to which higher education must respond (globalisation, the influence of information and computer technologies, knowledge management, the need to promote and manage diversity, among others) are producing a change in the teaching/learning paradigm, shifting the focus from the centre to students and their learning process.

How to incorporate it into the academic curriculum

The predominant teaching model in higher education used to be based on a range of contents contained in a programme of studies, which would shape students' learning in terms of knowledge. However, the new approach requires significant learning on the part of students, who give meaning to the learning material by internalising it (UD, 2001). The idea is to modify, flexibly and critically, previous mindsets based on the continuous incorporation of new information, which is utilised to comprehend and transform situations.

In the university context, the change in model does not mean that new situations must be created to develop this competence. Instead, ad-

vantage must be taken of learning situations where we can focus on how students integrate and balance the active role of the two agents in the process of building knowledge – i.e., the student as the main protagonist, and others with whom students interact in given environments, in this case, in an environment designed specifically so that learning will take place. Lecturers' facilitation strategies are aimed precisely at encouraging this new awareness, responsibility, interaction and strategic contextualisation in the building and application of knowledge. As is logical, the year the student is in is of maximum importance, since competences are worked on in a progressive manner so that students' responsibility and autonomy grow continuously throughout the process. Therefore:

- At the first level, the focus is on how students develop a positive, responsible attitude, in incorporating the learning proposed by the lecturer, actively endeavouring to understand and assimilate what is taught.
- At the second level, students are expected to show greater assurance and initiative so that, in addition to knowing and understanding the theoretical models of a discipline, they are able to question them and further explore new areas of information and study.
- Finally, at the third level, students' more advanced knowledge and greater degree of autonomy should enable them to integrate different models and theories in a personal, creative synthesis adapted to the requirements of the field or profession.

The assessment indicators proposed are guides for working and observing progress in developing this competence in different components:

- With respect to the learning *strategies and techniques* employed, the first aim is for students to practice, in a disciplined way, the methods and experiments proposed by the lecturer. Later, they must make a reasoned choice between various procedures proposed. Finally, they are expected to be able to independently adopt and adapt learning strategies in each situation.
- Regarding the *aim and regulation of the learning process*, students start by accepting the learning objectives proposed, then begin to adapt and reformulate them, and finally achieve self-regulation where they are able to define their own objectives.
- Regarding student *attitudes* of curiosity and initiative toward learning, initially they should become interested and ask ques-

tions to learn more and clarify doubts, later daring to raise intelligent points to question and broaden what has been learned, and finally making relevant, significant personal contributions or innovations.

—Students' orientation to learning should also enable them to progressively broaden their *vision and field of study*. Initially, this is mostly limited to understanding the fundamentals of a discipline, but later they are able to relate these elements and gain a vision of the whole. Finally, they relate and transfer knowledge and paradigms between disciplines.

—A fundamental component for the developing the competence is being *open to change*. This means being open to other outlooks different from one's own, wanting to get to know them, to test them against one's own ideas in order to question them and to learn. Finally, it means building shared knowledge.

Conveying to students what the assessment indicators are, monitoring and assessing their personal and academic progress, showing them their evaluations and talking to them about this, and even the mere fact that lecturers publish and share with students their projects (objectives, strategies and assessment criteria) as clearly as possible, help the student to become aware of their own learning and take responsibility for it. To the extent that lecturers also negotiate this project with their students, there will be a shift in control that will favour the development of mutual trust and progressive self-regulation on the part of students. This extends both to learning strategies and to assessment and results. This capacity for reflection, dialogue and regulation can be expressed and encouraged in learning contracts between lecturers and students, both as individuals and as groups.

COMPETENCE: LEARNING ORIENTATION

Definition: **Strategically and flexibly utilising learning in accordance with objectives, based on recognition of how one learns and on awareness of learning per se (relating new information to previous mental schema and utilising the new schema generated).**

Mastery of this competence is closely related to: **Maturity and self-assurance, capacity for self-criticism, tolerance of frustration, flexibility, adapting to changing situations. It involves values such as curiosity, control, order, self-esteem, education, competence, acceptance of one's own limitations, personal development, investigation, etc.**

Levels of mastery:

1. Incorporating and showing active attitude toward the learning proposed by experts
2. Understanding and questioning the theoretical models of a discipline and exploring new fields of knowledge
3. Integrating diverse theories or models making a personal, creative synthesis suited to one's own professional requirements

Indicators:

1. Learning strategies and techniques
2. Regulating one's own goals and learning
3. Attitude of curiosity and initiative
4. Vision and field of study
5. Openness to change

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Learning what is proposed by experts, showing active willingness to assimilate it***	Putting into practice in a disciplined manner the approaches, methods and experiences proposed by the lecturer	Doesn't know or ignores lecturer's proposals.	Wrongly interprets or applies lecturer's proposals.	Adequately follows lecturer's proposals in own learning process.	Argues the appropriateness of the strategies proposed for the objective of learning.	Gives priority to the lecturer's proposals that best suit the learning objectives.
	Sharing and assuming the learning objectives proposed by the lecturer	Ignores the learning objectives proposed by the lecturer.	Misinterprets the learning objectives.	Identifies with the learning objectives proposed by the lecturer.	Prioritises with good judgement the learning objectives proposed by the lecturer.	Makes excellent personal changes to learning objectives.
	Asking in order to learn and endeavouring to clarify doubts	Information received raises no doubts or questions in his/her mind.	Only asks when called on by lecturer or to solve specific problems.	Raises doubts and questions about information received, to better understand the subject.	His/her doubts and questions seek to complete the information received in order to learn.	Raises questions and/ or doubts that show good questioning of what has been learned.
	Understanding the fundamentals of a discipline	Repeats without understanding or with difficulty, aspects of the discipline worked on. Makes mistakes.	Knows superficially (identifies, recognises, reproduces) aspects of the discipline worked on.	Clearly presents and explains the content studied.	Applies content learned to new situations.	Seeks relations between content worked on in the discipline to better understand the subject.
	Recognising the importance of others' mental schema	Always sees things from own perspective. Defends own positions, refuting those of others.	Shows little interest in sharing own ideas with others.	Listens with interest to the ideas proposed by classmates and by the lecturer.	Asks for the perspectives and opinions of others, concerning matters being studied.	Promotes the exchange and argumentation of opinions, to enrich and further learning.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Understanding and questioning the theoretical models of a discipline and exploring new fields of knowledge***	Selecting procedures among those proposed by the lecturer	Doesn't rank the procedures proposed by the lecturer in order of priority.	Chooses some of the procedures proposed by the lecturer, but without good criteria.	Uses the most appropriate procedure among those proposed by the lecturer.	Reasons about whether the most appropriate procedure suits the learning objectives.	Incorporates own procedures suited to the learning objectives.
	Reformulating and adapting the learning objectives proposed by the lecturer	Doesn't think about learning objectives.	Superficially accepts the lecturer's objectives, but could have questioned them.	Reformulates in own terms the learning objectives proposed by the lecturer.	Introduces innovative changes regarding learning objectives.	Noteworthy for the novelty and appropriateness of the changes proposed for own learning objectives.
	Asking intelligent questions that question what is being learned	Only asks comprehension questions.	Asks questions that show a certain questioning of what has been learned.	Asks questions that question and expand what has been learned.	His/her questions and contributions cause others to question what has been learned.	His/her questions broaden the analytical perspective of the information presented.
	Showing initiative in the search for information	Doesn't utilise the minimum references required.	Only utilises the minimum references required.	Extends information beyond the minimum references required.	Looks up and uses information from different sources.	Has developed the habit of reading and finding background documents, using the information appropriately.
	Gaining a comprehensive view of the different theories or methodologies of a subject	Studies the different parts of a subject without seeing the relations and logical connections between them.	Sees partial relationships between different aspects of the subject, but doesn't manage to gain an overall view.	Relates knowledge gained from the subject and is able to see the whole.	Correctly estimates and infers causes, consequences, implications, relationships.	Is able to formulate and create "mini theories" based on elements.
	Contrasting one's own ideas with those of others, using this as a learning opportunity	Doesn't question own ideas. Doesn't accept criticism. Always follows the same patterns and guidelines.	Accepts criticism and corrections from others.	Questions own ideas and guidelines, based on the contributions of others.	Contrasts own pre-conceived ideas and guidelines with those of others, and is able to modify them.	Values the exchange of ideas as an opportunity that motivates new learning and personal development.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Integrating diverse theories or models into a personal, creative synthesis suited to one's own professional requirements***	Independently adapting one's learning strategies to each situation	Always uses the same learning strategies.	Has very little variety in learning strategies.	Uses different learning strategies according to each situation.	Reasons well about how to adapt own strategies to each situation.	His/her learning strategies are excellent and characterised by their flexibility, suitability and creativity.
	Establishing own learning objectives	Lacks real learning objectives.	Formulates own learning objectives by repeating the ones proposed by the lecturer.	Has own learning objectives.	Sees relationships between own learning objectives for different subjects.	Integrates learning objectives for the subject with his/her overall education objectives.
	Making significant contributions or certain innovations	Doesn't make personal contributions, or they are not significant.	Makes personal contributions of little importance.	Makes significant contributions to the subject in hand.	His/her contributions integrate different knowledge, theories or models.	His/her contributions outstanding for their validity and creativity.
	Being able to draw on paradigms from other disciplines and/or fields of knowledge close to own	Doesn't transfer what has been learned in one discipline to other disciplines or fields of knowledge.	Applies with difficulty what has been learned in one discipline to other disciplines and fields of knowledge.	Is able to see relationships between knowledge acquired in different disciplines.	Quickly and easily applies and generalises knowledge between disciplines.	Works simultaneously with various paradigms of knowledge and research.
	Building shared knowledge, learning and facilitating the joint construction of learning	Avoids dialogue and encounters for learning. Prefers to work alone.	Participates by contributing to dialogue and shared work.	Actively takes part in dialogue to share perspectives and reach agreement.	Seeks points of encounter and promotes the convergence of different perspectives expressed.	Facilitates the joint construction of new perspectives, ideas and theories, based on the integration of all contributions.

COMPETENCE: PLANNING

Description

This competence concerns the ability to devise a general plan to obtain an objective. Such a plan must be well thought out, detailed and based on a certain logic.

This process helps to minimise or eliminate possible obstacles or risks that might arise when we decide to undertake a task, and it also serves to develop, supervise and direct completion of the task.

Consequently, people plan effectively when they have good reasons for deciding how to undertake a task. That is, when they can indicate beforehand the objectives, priority actions and the procedure for carrying out the task, as well as the controls that will ensure fulfilment of the plan. Moreover, the different activities included in the plan must be organised with explicit means and within specific deadlines.

Planning, in short, is a guide that makes it easier to match resources and effort to certain specific ends. This enables us to adapt our decisions to concrete actions, because we have a prior plan whose logic co-ordinates activity and enables us to supervise their outcome.

The first level of mastery enables us to see, through students' personal planning, whether they are able to devise a well-reasoned plan to undertake and accomplish their work.

The capacity for group organisation and team planning constitutes the second level of mastery. At this level, the focus is on seeing whether students are able to plan for themselves and how they contribute to the planning of the group or team to which they belong.

The third level of mastery seeks to measure how well students plan a major project, showcasing their specific knowledge and ability to use it conscientiously to devise a plan for undertaking the project.

The indicators that measure this competence focus on the student's capacity to organise, how well the student applies good procedures to each task, the logical sense of the plan, the effectiveness and pragmatism shown in planning, and how well the utilisation of time and resources is foreseen.

Interaction with other competences, attitudes, interests, values

Closely linked to this competence are the competences of critical thinking, decision-making, time management and project management.

This competence helps to enhance motivation and self-confidence, when work is accomplished according to the preconceived plan. It also entails taking responsibility for deciding how to use resources, persons and time, and accepting the decisions that are taken. Finally, it serves to develop a certain orientation toward knowledge.

Importance of this competence for academic and professional life

It is important for each student to learn how to plan his/her own university work. Moreover, this competence helps students to learn how to match effort and means to the ends proposed by the students themselves. When setting goals, planning can channel desires using a tool that makes it possible to achieve such ends.

As far as the workplace is concerned, a good capacity for planning helps people to do their job effectively. Moreover, it enables them to plan how best to combine work and their personal life.

How to incorporate it into the academic curriculum

Students need to be told that their work inside and outside the classroom requires a basic level of planning.

It is also important to employ learning strategies that call for undertaking medium- and long-term tasks, as this will require the devising of appropriate work plans.

Learning strategies based on the undertaking of projects are a good way of taking advantage of this competence. The portfolio strategy is also a good resource for furthering this competence.

COMPETENCE: PLANNING

Definition: **Deciding effectively the objectives, priorities, methods and controls for work to be done, by organising tasks within deadlines and available means**

Mastery of this competence is closely related to: **Analytical and critical thinking, decision-making, problem-solving, time management, project management, rationality, etc.**

Levels of mastery:

1. Methodically organising one's work, resources and time, depending on available possibilities and priorities
2. Taking part and getting involved in the organised undertaking of group work, foreseeing the tasks, times and resources needed to achieve desired results
3. Methodically and successfully planning the undertaking of a complex project (for example: Final Project)

Indicators:

1. Organisation
2. Method
3. Logic
4. Pragmatism
5. Results

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Methodically organising one's work, resources and time, depending on available possibilities and priorities***	Organising adequate processes and procedures for own activities	Own disorganisation hinders performance.	Establishes an order for carrying out tasks.	Organises tasks time-wise.	Devises effective work plan for all own activities.	Plans activities effectively to make best use of own means and availability.
	Designing how to accommodate processes and procedures to available means, foreseeing how long they will last	Improvises own activities without logic.	Enumerates the tasks to be done, without systematising them.	Utilises some planning procedures that are right for the context.	Dynamically and flexibly adapts planning methods to own activities.	Planning is one of his/her usual methods of work. Is reasonably methodical.
	Planning with good criteria how to accommodate available means and time to priorities	Does things haphazardly, without taking priorities into account.	Sets poor priorities regarding needs and activities.	Sets appropriate priorities for undertaking tasks.	Plans own activities taking into account possibilities, means and priorities.	Acts in consequence with own planning of priorities.
	Being aware of own means and availability for undertaking activities	Undertakes activities without thinking about own means and requirements.	Has difficulty in adjusting means and activities.	Plans with mind on feasibility.	Adapts plans to own real possibilities.	Demonstrates the feasibility of own plans by fulfilling them.
	Planning with achievement in mind	Acts without planning or foreseeing results.	Organises own plans without supervision.	Regularly checks to see whether activities match achievements foreseen.	Foresees how to control possible deviations in activities and achievements.	Identifies, evaluates and draws conclusions from the plan's results.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Taking part and getting involved in the organised undertaking of group work, foreseeing the tasks, times and resources needed to achieve desired results***	Taking part in the organisation of group processes and procedures	Doesn't get involved in group organisation of tasks.	Takes passive role in planning activities.	Participates in organising group planning activities.	Shows initiative in group planning activities.	Promotes planning tasks by distributing tasks and functions.
	Planning group activity methodically	Not interested in collaboration.	Simply abides by the decisions of the group.	Uses good planning methods and techniques for group work.	Contributes to group planning with methodical work.	Turns the methodical planning of group work into a strength.
	Planning task distribution	Interrupts group planning, giving priority only to own interests.	Questions and criticises the planning of group work without proposing alternatives.	Collaborates in the distribution of tasks among group members.	Assumes shared responsibility in the distribution of work.	Makes of the distribution of tasks a strength of the group.
	Planning with clear awareness of the group's available means and times	Not interested in the planning of the group's resources.	Argues over the availability of means and times, without contributing solutions.	Adapts own time and resources to the plan of the group.	Participates in the planning of a strategy incorporating the interests, resources and time of the group.	Strategically utilises means and times of the group as the basis for planning.
	Planning supervision of the group's activities to achieve results	Considers group task supervision as an intromission.	Fails to complete tasks planned collectively.	Participates in the collective monitoring of plan to control results.	Supervises planning with relation to the achievements of the group.	Contributes with continuous monitoring to improvement of the group plan.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Methodically and successfully planning the undertaking of a complex project (e.g.: Final Project)***	Organising adequate processes and procedures for the project	Project lacks organisation.	Only defines the project objectives.	Defines the structure of the project with objectives, the sequence and duration of activities.	Builds the structure of the project on the basis of objectives set.	Devises projects with outstanding alignment of projected objectives, means and structure.
	Planning methodically	Doesn't use methodological criteria in planning the project.	Only plans the time variable.	Draws up the plan with a method appropriate to the work in mind.	The method selected correctly integrates the means and duration of the project.	The project brilliantly incorporates methods and techniques that guarantee its accomplishment.
	Developing projects with logic appropriate to the tasks in hand	The project lacks internal logic.	Generates work plans without proper articulation between their parts.	The projected work plan is logical in the articulation of its contents.	The project is well argued and structured within a logical work plan.	The project approach shows excellent alignment of the different parts of the project.
	Planning with clear awareness of the means and times available	Plans out of context, without identifying means and times.	Plans without managing to adjust the means and times available.	Plans with the resources and times actually available.	The project suits activities to means and times available for each.	The project shows perfect adaptation of each foreseen activity to the means and times available.
	Planning supervision of activities to achieve results	Considers it unnecessary to plan to achieve control over the results of own work.	Plans without considering the obtention of results as a planning variable.	Project provides for monitoring activities and results.	Devises project with a flexible, dynamic order to monitor activities and results.	Draws up different contingency plans to control hypothetical scenarios and results.

COMPETENCE: COMPUTER SKILLS

Description

This competence is related to information and communication management and is based on the ample technologies to which computers give access. Personal computers provide an infinite array of working tools and environments: graphic design, database management, applications for experimentation, mathematical analysis, leisure time applications, and many others in an ever-growing list.

Computer skills include matters concerned with file management and security, desktop publishing, e-mail, browsing in Internet, spell checkers, preventive security measures, report presentation software, and the use of electronic spreadsheets. These components of the competence are progressively distributed throughout the three levels of mastery.

The over all aim is to enable people to handle personal computers easily and well, at least with regard to the applications and tasks used most widely in the majority of fields.

Interaction with other competences, attitudes, interests, values

The computer skills competence requires adaptability. This is particularly essential when one is first interacting with a computer, but it remains necessary thereafter since computer tools, applications and environments are constantly evolving. Today, personal computers are found everywhere in education and at work. All students and professionals find themselves having to adapt to this new factor in the environment, and to whatever the future may bring in this regard.

Furthermore, if students wish to achieve a high level of proficiency as computer users, they will also need to be competent in innovation and learning orientation. To achieve a certain effectiveness and efficiency, it is not sufficient merely to use computers at a very basic or beginning level. Competence in innovation should lead to new ways of using the computer to enhance, or at least facilitate, academic and professional performance.

Writing skills are also involved. Computer users are continually showing their degree of competence in written communication, so that good technical proficiency combined with poor communicative capacity results in poor use of this resource.

Importance of this competence for academic and professional life

One of the most radical changes to have occurred in recent years in professional and academic life has to do with this competence. Only a few decades ago, computers were practically unknown in the workplace and centres of learning. In a relatively short time, we now find ourselves in the opposite situation. Today it is difficult to find an academic or professional setting where there are no PCs. Generally speaking, far from being a mere decoration, computers now form the hub of multitudinous procedures carried out in the course of professional and academic work.

When professionals and students first come into contact with personal computers, they spend a great deal of time and effort mastering this tool. However, its use becomes steadily easier with time, so that finally, in endless academic and professional situations, users are able to devote most of their attention and energy to the task itself, and take the computer for granted as a familiar tool.

The fact is that it is becoming harder and harder to be a good student or professional without a certain proficiency in this competence. A limited ability to use a PC as a working tool can seriously hinder academic or professional performance.

How to incorporate it into the academic curriculum

Occasionally there may be courses or modules devoted specifically to learning computer skills. In such cases, activities or situations can be prepared where students must perform routine office tasks which will make it possible to apply the indicators listed below.

However, there will be many more situations where the indicators of this competence will have to be assessed transversally, within the framework of other kinds of academic subjects. Most of the indicators can be checked in this type of situation. Any academic task that leads to an outcome such as a report, essay, analysis, etc. will make it possible to check fairly clearly most of the indicators specified. Activities can be called for that involve more or less advanced text processing, the use of Internet and e-mail, the creation of presentations, web pages, spreadsheets, etc.

COMPETENCE: COMPUTER SKILLS

Definition: **Utilising computer skills or Information and Communication Techniques (ICTs) as tools for expression and communication, for accessing information sources, for data and document filing, for presentation tasks, for learning, research and co-operative work.**

Mastery of this competence is closely related to: **Planning and organisation, reflective thinking, writing skills, adaptability, innovation, etc.**

Levels of mastery:

1. Properly managing files, generating documents with a text processor, browsing Internet and using e-mail correctly
2. Editing documents of certain complexity, creating slide presentations and simple web pages
3. Editing complex text documents, even utilising macros, and managing spreadsheets through functions and references

Indicators:

1. File and programme management
2. Safeguarding information
3. Text editing
4. Spreadsheets
5. Internet and e-mail
6. Presentations

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Properly managing files, generating documents with a text processor, browsing Internet and using e-mail correctly***	Correctly managing files	Has difficulty in managing files (loses them, accidentally changes extensions, has problems with strange characters in names, etc.).	Shows clear lack of organisation in management of files.	Correctly creates, modifies, copies, changes name and relocates files.	Correctly names, orders and classifies files.	Noteworthy for ease and accuracy in the management of files and directories.
	Configuring and personalising the computer desktop	Doesn't introduce any adaptations or changes in desktop configuration.	Creates unnecessary, accidental or unconstrained direct accesses.	Creates direct accesses for the applications that he/she uses most.	Keeps in good order the direct accesses to applications that he/she uses most.	Keeps direct accesses clear and in good order, with the most usual ones close to hand and others at a second level of access.
	Utilising page headers and footers in documents	Doesn't number pages.	Pages are numbered but without headers or footers.	Pages have headers or footers, and are numbered.	Makes different headers and footers for odd and even pages.	Generates the content of headers or footers using cross references or fields.
	Giving proper format to documents, paragraphs and characters	Page, paragraph and character formats are beyond his/her control.	Uses irregular or incorrect page, paragraph and character formats.	Correctly and uniformly uses the formats of pages, paragraphs and sources.	Appropriately varies utilisation of page, paragraph and character formats (e.g., margins, indenting subsections, quotes in italics, lists, etc.).	Outstanding clarity and appropriateness of page, character and paragraph formats.
	Reading and filing e-mail messages	Can't access messages received some time ago.	Accesses past messages that have accumulated in the Inbox.	Reads and saves incoming messages in more than one folder.	Organises correspondence folders well.	Uses filters to automatically classify certain messages.
	Carefully safeguarding files	Is not concerned with making backup copies.	Makes occasional copies of own documents.	Makes regular backup copies.	Makes regular backup copies in more than one support or location.	Makes backup copies in a physical location away from the computer.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Properly managing files, generating documents with a text processor, browsing Internet and using e-mail correctly*	**Utilising the Help tools of the most usual applications**	Doesn't know how to use programme Help tools when they could be of use.	Manages to obtain only part of the important information available in Help tools.	Finds needed information in Help tools.	Manages to resolve problems thanks to utilisation of Help tools.	Noteworthy for speed and ease with which finds help in problematic situations.
	Sending e-mail messages correctly	Sends messages that are incomplete or have evident format or legibility errors.	Sends messages that infringe basic guidelines or etiquette (text in capitals, omits greeting, incomplete signature, poor alignment, etc.).	Sends messages in correct format.	Sends messages in proper format, using group mail when appropriate.	Sends messages in proper format, utilising as appropriate group mail and available options (urgency, not showing certain parameters in the message, etc.).
	Looking up necessary information in the Web	Overlooks clear opportunities to obtain available information from the Web.	Makes searches that are too broad or incomplete (doesn't use good criteria).	Finds the information that he/she needs.	Makes good, well-focused searches.	Noteworthy for speed and ease in formulating search criteria.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Editing documents of certain complexity, creating slide presentations and simple web pages*	Correctly managing sections in text processor	Ignores the existence of sections in text processor and how they can improve documents.	Utilises sections but makes mistakes in their configuration.	Utilises section breaks without making obvious mistakes.	Correctly changes page formats in sections (e.g., portrait – landscape, headers and footers, etc.).	Correctly uses section breaks even to create different numbers of columns on the same page.
	Creating tables	Instead of using tables, lines up items that should be separated by tabs in tables.	Tables have defects of alignment, text styles, etc.	Tables are correctly made (dimensions, horizontal alignment, text styles).	Correctly utilises vertical alignment and the horizontal location of the table itself in a text.	Combines cells and selectively uses borders to good effect.
	Inserting images	Can't insert images when the task calls for it.	Inserts images with poor alignment or wrong sizing.	Inserts images that are well aligned and sized for the context.	Inserts images correctly and carefully utilises image insertion by linking the file.	Correctly inserts linked images and titles all of them utilising the title insertion feature of text processor.
	Spell checker and language selection	Forgets to use the spell checker.	Uses the spell checker incorrectly (e.g., doesn't correctly define the language, only uses it sometimes).	Uses the spell checker well, specifying the language of the document.	Uses the spell checker well, specifying various languages in different stretches of the document.	Uses the spell checker well, specifying various languages in different stretches of the document and personalising dictionaries.
	Preventing security problems	Forgets to update the antivirus or to look for system updates.	Occasionally updates the antivirus and finds system updates.	Regularly updates the antivirus and finds system updates.	Regularly updates the antivirus and system, and uses a firewall.	Has programmed antivirus and system updates, and uses a firewall.
	Creating slides	Can't create slides.	Creates slides with format errors (excessive or illegible text, inappropriate colours and tones, poor alignment of objects, etc.).	Creates slides without evident format errors.	His/her slides have good format and include dynamic elements.	His/her slides noteworthy for simplicity, completeness, format and use of dynamic elements.
	Creating web pages, blogs or wikis	Can't create web pages or participate correctly in blogs or wikis.	Creates web pages or participate in blogs or wikis with clear errors (inappropriate or irregular format, non-functioning hyperlinks, etc.).	Correctly creates simple web pages or participate in blogs or wikis.	Creates web pages of certain complexity (regarding images, hyperlinks, formats, dynamic objects, etc.) or manage simple blogs or wikis.	Creates complex web pages that include access to databases or manage complex blogs or wikis.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Editing complex text documents, even using macros, and managing spreadsheets through functions and references***	Using the styles feature in text processor	His/her documents are irregular in format because doesn't use styles.	Utilises text processor styles committing some format errors (e.g., accidentally modifying paragraph or character formats).	Utilises predefined styles in text processor but is unable to adapt them to own requirements.	Utilises and adapts text processor styles carefully and correctly.	Noteworthy for creating own styles that enhance the clarity of documents.
	Generating tables of contents automatically	Ignores the possibility of utilising tables of contents.	Makes mistakes in the automatic creation of tables of contents (lack of updating, alignment errors, reference to items that no longer exist, etc.).	Correctly generates tables of contents based on the use of title styles.	Utilises tables of contents of section titles and of various types of items (figures, tables, etc.).	Utilises tables of contents and cross references with accuracy and ease.
	Combining templates with lists of records	Ignores the existence of combining correspondence data when this would prove useful.	Utilises the tool of combining correspondence data with obvious limitations or errors.	Correctly utilises the tool of combining correspondence data to distribute messages or generate document lists.	Correctly utilises the tool of combining correspondence data appropriately filtering records.	Utilises the tool of combining correspondence data, personalising messages or files using conditional clauses.
	Using text processor macros	Ignores the existence of macros in text processor when they would prove useful.	Makes mistakes in the utilisation of text processor macros.	Records and executes text processor macros, without modifying them.	Records text processor macros, editing and modifying them for own use.	Has a battery of personalised macros to speed up repetitive, frequently-used tasks.
	Personalising text processor menus and icons	Ignores the possibility of personalising menus and icons.	Personalises menus and icons but in disorganised or inefficient manner.	Correctly personalises text processor menus and icons.	Correctly personalises text processor menus and icons, as well as keyboard commands for the functions that he/she uses most.	Personalises text processor menus, icons, keyboard commands and templates.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Editing complex text documents, even using macros, and managing spreadsheets through functions and references*	Configuring the format of spreadsheets	His/her spreadsheets have an irregular or incorrect look that greatly hinders reading.	Makes certain errors in formatting spreadsheets.	His/her spreadsheets have correct format (utilisation of several sheets, sources, borders, cell widths and heights, etc.).	His/her spreadsheets have correct format and include images, buttons or hyperlinks.	Noteworthy for the functionality, correction and clarity of his/her spreadsheets.
	Using references in spreadsheets	Forgets to use references in spreadsheets even when necessary.	Makes mistakes in the utilisation of references in spreadsheets.	Utilises references within a single spreadsheet.	Utilises references between different sheets of the same book or utilises names.	Consults or exchanges external data in spreadsheets.
	Using functions in spreadsheets	Calculates manually or with a calculator rather than using spreadsheet calculation functions.	Does simple calculation operations using mathematical symbols, without actually using functions.	Correctly utilises simple functions in spreadsheets.	Correctly utilises functions of certain complexity in spreadsheets.	Correctly utilises complex and conditional or nested functions in spreadsheets.

COMPETENCE: DATABASE MANAGEMENT

Description

Competence in database management means taking full advantage of the possibilities offered by computer programs to structure, gather and process information, and obtain results. Three roles are usually distinguished in the database field: end users, database managers, and applications programmers. This competence synthesises and ranks, approximately in the sequence in which the roles were listed, some of the most important aspects for each.

—At a first level of mastery, indicators are provided for profiling an end user, who is able to carry out basic operations such as simple designs, sorting or creating sort orders, searches for records, filters, forms and reports.
—At the second level, students are expected to go beyond the user level and design more complex databases, establishing relations between sets of entities, transforming the conceptual schema into a relational model, and in general quickly understanding the keys to a situation or to the client's requirements; and making sure that the design answers these needs.
—At the third level, the user works with SQL commands, linking them to other applications and normalising database outlines.

Interaction with other competences, attitudes, interests, values

In the first place, database management is closely related to basic computer skills. One needs a certain level of basic user competence to begin database management. At the same time, database management is one of the basic uses of PCs.

Secondly, database management is particularly related to analytical and systemic thought. Database design requires good analytical thinking, with a correct understanding of processes, how one works with series of data, identifying main elements and significant relationships, and also identifying information gaps.

Database management also requires a certain competence in systemic thought, to understand the complexity of a situation, its levels, and the interdependency relations between elements, so as to design databases that are comprehensive, stable and free of redundancies.

Importance of this competence for academic and professional life

The daily life of any professional or student is always related to databases. Every time someone uses a credit card or library loan service, checks stock in a warehouse, looks up academic grades, or manages lists, they are accessing one of the millions of databases at work today.

At first, or in the most widely used databases, interaction with them is usually at the user level. Normally it is sufficient if we know how to look up information from the bank or library, without having to understand in detail how the database works internally.

However, in professional fields where university graduates work, they frequently have intense contact with certain databases. In some cases they may be involved in designing and developing a database used in their organisation. Also, it is often necessary to create, organise and use small-scale databases to manage smaller amounts of more specific data or information that is limited to a single context.

In any case, a certain level of competence in database management adds to users' proficiency, making them more effective and efficient in their interaction with databases and able to achieve more with less time and effort.

How to incorporate it into the academic curriculum

Assessing the first level of proficiency in this competence can be done in various contexts and need not be confined to a specific subject. Any task will suffice where students have to design, create, feed and utilise a simple database. The database management level is essentially that of a basic computer user. Therefore, we can check the indicators in situations where students must exercise this basic level of database user know-how, no matter what the subject.

At the second and third levels of mastery, however, students are expected to show deeper knowledge and greater proficiency in the use of databases, which will possibly require a more specific context. The second level corresponds to a user that is able to design complex databases, and the third to users that perform SQL operations and normalise databases. Accordingly, these require more advanced levels of training similar to diplomas or courses in computer science, although this knowledge is used to undertake work or projects in widely different fields.

COMPETENCE: DATABASE MANAGEMENT

Definition: **Effectively organising (structuring, gathering, processing and obtaining results from) information in a situation or phenomenon, and making best use of the possibilities afforded by computer systems for database management.**

Mastery of this competence is closely related to: **Computer skills, analytical thinking, systemic thought.**

Levels: (basic user – advanced user – administrator)

1. Demonstrating basic understanding of databases and correctly using a computer application to create and edit tables, relations between tables, data searches and simple forms and reports
2. Designing complex databases
3. Programming in SQL and normalising database design

Indicators:

1. Database design
2. Designing and using search, form and report layouts
3. Establishing relations between entities
4. Using searches, filters and sort orders
5. Performing SQL operations.
6. Normalising databases

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Demonstrating basic understanding of databases and correctly using a computer application to create and edit tables, relations between tables, data searches and simple forms and reports***	Designing and creating simple tables	Fails to use databases where to do so would be clearly advantageous, or key fields missing in a given context.	Makes important mistakes in setting up fields (e.g., omissions, reiterations, etc.)	Sets up adequate and appropriate fields.	Appropriately establishes fields and some properties (e.g., predetermined value, validation rule, etc.)	Appropriately establishes fields and configures almost all properties.
	Establishing a primary key	Fails to establish primary keys where necessary.	Establishes a primary key in a field where repeated values must later be used.	Establishes a correct primary key.	Establishes a correct primary key that is easy to use and fairly extended.	Establishes a stable and reliable primary key (containing an automatic error detection mechanism).
	Ordering, searching and filtering records	Makes serious mistakes or fails to perform basic sort, search and filtering operations.	Performs search or filtering operations with slight errors.	Orders, searches and filters correctly in a table.	Correctly utilises simple searches to order, find and filter records.	Devises complex searches to order, find and filter records (e.g., including different types of relations, calculated fields, etc.)
	Designing simple forms	Designs clearly incorrect or incomplete forms.	Designs forms that are disorganised or have slight errors.	Creates simple forms that are correct and ordered in a single table.	Creates forms that are correct and ordered and have a certain degree of elaboration.	Creates correct forms integrating information from several tables.
	Designing simple reports	Fails to design report layouts that are necessary.	Designs report layouts with errors or inadequacies for the task in hand.	Correctly generates simple report suited to the task in hand.	Creates simple, correct reports that meet and go beyond requirements, adding sensible information not specifically called for in the assignment.	Creates complex, correct reports that fully respond to specified and unforeseen information requirements.
	Establishing relationships between tables	Still has separate tables that need to be linked.	Makes mistakes in establishing relations between tables.	Correctly establishes simple relations between two tables through primary keys.	Correctly establishes relations between more than two tables.	Correctly establishes complex relations between 5 or more tables.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Designing complex databases*	Formulating the conceptual schema of a database design	Confuses internal and external levels in designing a database.	Makes some mistakes in formulating a conceptual schema.	Correctly devises a simple conceptual schema.	Correctly devises a conceptual schema of certain complexity.	External level and conceptual schema elements established correctly, completely and in detail.
	Establishing various types of relations between sets of entities	Makes mistakes in selecting the type of relation or establishing keys.	Only uses the most simple types of relation.	Correctly utilises various types of relations between sets of entities (e.g.; one-to-one, 1-N, degree 1).	Appropriately uses various types of relations between sets of entities, including some fairly complex types.	Makes correct alternative proposals for more complex types of relation (e.g., N-M, ternary)
	Transforming conceptual schema into a relational model	Makes mistakes with serious consequences in transforming a conceptual schema into a relational model.	Makes mistakes with slight consequences in transforming a conceptual schema into a relational model.	Correctly transforms a simple conceptual schema into a relational model.	Correctly transforms a complex conceptual schema into a relational model.	Correctly transforms complex conceptual schema into a relational model; and correctly formulates the strong and weak points of the schema.
	Formulating identity rules for external keys in creating relational models	Forgets to formulate rules of integrity for external keys.	Makes some mistakes in formulating rules of integrity for external keys.	Correctly formulates rules of integrity for external keys.	Provides tips for users in case of conflict with a given rule of integrity.	Formulates procedures to help users to deal constructively with several possible incidents involving integrity.
	Quickly understanding the keys to the situation or to the client's needs	Overlooks key aspects of the context or needs specified by the client when designing conceptual schema.	Designs conceptual schemata that capture most of the needs specified by the client or context.	Designs conceptual schemata that capture the needs specified by the client or context.	Helps the client or the person analysing the situation to formulate requirements with better foresight, anticipating unforeseen needs.	Makes provision for needs not foreseen by the client or included in the available description of the situation.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Programming in SQL and normalising database design*	Performing updating and SQL data selection operations	Makes mistakes with serious consequences when performing updating and SQL data selection operations.	Makes mistakes with slight consequences when performing updating and SQL data selection operations.	Correctly performs simple updating and SQL data selection operations.	Correctly performs fairly complex SQL operations (e.g., many fields, with more than one table involved).	Correctly performs complex SQL operations (e.g., several tables involved, complex constraints, loops of various levels, etc.).
	Utilising standard SQL functions (column and scale functions)	Fails to see clear errors in the use of SQL column and scale functions.	Makes one or more mistakes in using column and scale functions and identifies them.	Correctly utilises standard SQL functions for simple data selection.	Correctly utilises fairly complex standard functions and establishes procedures for the systematic validation of the final result.	Makes complex data selections combining column and scale functions and establishing procedures for systematic validation of the final result.
	Performing subqueries on the results of another subquery	Fails to perform subqueries when they are needed.	Makes some mistakes in performing a subquery.	Correctly performs a simple subquery on the results of another subquery.	Performs various fairly complex subqueries.	Performs various complex subqueries.
	Establishing links between SQL and another application (text processor, spreadsheet, specific application, etc.)	Reconstructs in parallel and individually the databases in two unconnected applications.	Makes mistakes in establishing links between SQL and other applications.	Correctly establishes links between SQL and another application.	Establishes links of certain complexity between SQL and several applications (e.g., text processors, spreadsheets, specific applications, etc.)	Designs macros in other applications to manage links with SQL.
	Normalising database schema	His/her design presents problems (can't store certain facts, redundancies, ambiguities, etc.) that could have been avoided through normalisation.	Applies normalisation excessively, insufficiently or with errors.	Applies normalisation appropriately and correctly.	Applies normalisation appropriately and correctly, explaining the reasons behind these decisions.	Normalisation applied brilliantly, in terms of quality, complexity, and consideration of the points of view of the programmer, administrator and user of the database.

COMPETENCE: ORAL COMMUNICATION

Description

We all learned to talk as children and tend to think that we do it well, communicating effectively with others. But not much analysis is needed to dispel this common misconception. Breakdowns in communication are continuous. We think that we are saying what we mean to say and that the other person has understood us, but daily experience shows that both at home and at work, there is often a huge gap between what we were trying to convey and what has been understood.

Proficiency in oral communication means being effective in conveying ideas, knowledge and feelings through words, both in conversation and in group activities such as talks before audiences of different sizes.

The lower end of the range is occupied by those few people who always remain quiet, even in situations that require their active participation. The causes of such behaviour must be sought in psychological factors, such as extreme shyness or a total lack of self-confidence. Much more frequent are problems associated with rambling, unclear expression that hinders and even impedes comprehension on the part of others. In such speech there may be a lack of logical structure, contradictions between what is expressed in words and conveyed through body language, or the use of poor examples and other means of support that are inappropriate for what one is trying to say or the characteristics of the audience.

At the top end are the people who have mastered this competence, people who speak clearly and effectively, with well-structured discourse suited to the audience, body language that matches and corroborates what is being said, good tone of voice and means of support, and a general capacity to communicate effectively what one wishes to convey.

When mastery of this competence is combined with good discourse content and personal charisma, the speaker can have a decisive influence on others' ways of thinking and acting, and therefore the social consequences of good oral communication skills are potentially very important.

Interaction with other competences, attitudes, interests, values

Competence in oral communication is inseparable from the competences of interpersonal communication, because in order to establish

positive relations with others it is essential to share ideas, information and feelings.

To master this competence, people need to have sufficient degrees of self-confidence and self-esteem, but these two attributes can be enhanced precisely through practice in oral communication and perceived results.

The effectiveness of communication depends to a large extent on one's capacity to think reflectively, and it is fundamental for developing team thinking. It is also a requirement for mastery of the competences of negotiation, teamwork, conflict management and leadership.

Because speech is not effective if it is not suited to the audience, oral communication skills are related to adaptability. And because of the influence that oral communication has on the formation of others' attitudes and behaviours, this skill is related to ethical competence.

Importance of this competence for academic and professional life

Students must communicate with their classmates, particularly when they have to undertake group activities or projects, participate in class either asking questions to clarify doubts or during class discussions. Moreover, students are increasingly being required to present talks on outside work before the rest of the class. How do students perform in such situations?

Not all behave in the same way. Some (generally few in our context) participate easily, expressing their doubts and opinions without apparent effort. Most, however, find that speaking in public is a challenge still to be mastered. When called on by lecturers, some students even prefer to remain quiet, accepting the possible negative consequences that this will have on their grade, or answer with monosyllables out of embarrassment at having to speak up so others can hear them. In the case of talks before the class, their nervousness is visible and sometimes leads to mental blocks and forgetting everything they were going to say in public.

The consequences are negative for themselves, in lowering their grade, and for others who miss out on opinions or points of view that could help them in their thinking and learning. When students speak but do so in a confusing, disorderly or unconvincing way, the results are practically the same. A good part of students' academic work would improve if they could gain proficiency in oral communication.

In professional life, except in cases where people work alone apart from colleagues and third persons (suppliers, clients, etc.), the consequences of lack of good communication are reflected in loss of time, effectiveness and, from the individual point of view, opportunities for promotion.

How to incorporate it into the academic curriculum

Becoming a good speaker is not easy, but with relatively simple instructions and through practice to overcome shyness and personal limitations, it is possible to help most students to improve substantially their ability to express themselves correctly and to speak before an audience.

Practicing debates, direct questioning, incentives in the form of "additional points" for participation, and the inclusion of student talks may be sufficient to help a majority to achieve an acceptable degree of proficiency in this competence over the course of their university studies.

COMPETENCE: ORAL COMMUNICATION

Definition: **Expressing clearly and opportunely one's ideas, knowledge and feelings in speech, adapting to the audience and situation to ensure good comprehension and attention**

Mastery of this competence is closely related to: **Reflective thinking, deliberative thinking, team thinking, self-motivation, interpersonal communication, foreign language proficiency, teamwork, negotiation, leadership, self-esteem, self-image, self-confidence, etc.**

Levels of mastery:

1. Expressing own ideas in a structured, intelligible way, participating opportunely and significantly in informal, formal and structured conversations and discussions
2. Taking the floor in groups with ease; conveying conviction and assurance, and adapting discourse to suit formal requirements
3. Easily managing to capture and persuade audiences, adapting the means and the message to the situation and the audience.

Indicators:

1. Initiative, opportunity
2. Content
3. Self-control
4. Structure
5. Visual aids
6. Fielding questions

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Expressing own ideas in a structured, intelligible way, participating opportunely and significantly in informal, formal and structured conversations and discussions***	Taking part in speech situations	Doesn't speak even when called on.	Barely speaks when called on.	Speaks at length when called on.	Speaks on own initiative.	Noteworthy for appropriate contributions made on own initiative.
	Conveying important information	Expresses self poorly or confusedly.	Presents some ideas.	Expresses well-reasoned ideas.	Conveys reasoning and/or values/ attitudes.	Noteworthy for the clarity in speech of reasoning and/or feelings.
	Controlling nerves sufficiently to express self in public	Can't speak due to nerves; gets blocked.	Speaks but is noticeably nervous and ill at ease.	Expresses self with a certain tranquillity.	Expresses self with assurance.	Expresses self with ease and noteworthy proficiency.
	Delivering structured talks meeting any specified requirements that may exist	His/her talks lack intelligible structure.	Structure of talk not effective or fails to meet stipulated requirements.	Talks are structured, meeting stipulated requirements, if any.	Links ideas and arguments with ease.	Gives effective, well-organised talk.
	Using visual aids in giving talks	Doesn't use the visual aids required or reasonably necessary.	The visual aids utilised are not appropriate for the talk.	Utilises required or reasonably necessary visual aids.	Utilisation of visual aids helps the audience to follow the talk.	Uses visual aids effectively to emphasise key points of talk.
	Fielding questions	Doesn't know how to respond to the questions that he/she is asked.	Responds to the questions that he/she is asked without actually answering them.	Knows how to respond to the questions that he/she is asked.	Responds well to the questions that he/she is asked.	Responds well and easily to the questions that he/she is asked.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Speaking before groups with ease; conveying convictiaon and assurance, and adapting discourse to suit formal requirements***	Delivering interesting, convincing talks	Doesn't manage to capture attention.	Intermittently manages to capture attention.	Manages to capture and maintain attention.	Is convincing.	Noteworthy for power of conviction.
	Voluntarily giving opportune talks in public	Never volunteers to deliver talk.	Volunteers, but does so inopportunely.	Makes voluntary opportune talks in public.	His/her voluntary talks foster the participation of others.	His/her voluntary contributions inject added value at key moments in the process.
	Matching speech and body language	Body language contradicts and distracts from oral discourse.	Speech and body language sometimes contradict each other.	Body language is appropriate to oral discourse.	Modulates body language to emphasise the keys to his/her discourse.	Body language is natural and appropriate for the audience.
	His/her talks are duly prepared	Talk not structured.	Talk not fluid.	The talk shows structure and rigour.	The audience clearly grasps content structure.	The structure and talk are appropriate for the type of audience.
	Helping audience to follow ideas through visual aids	Uses required or reasonably necessary visual aids.	Visual aids help the audience to follow the talk.	Keys to the talk emphasised through visual aids.	Audience grasps keys more easily thanks to visual aids.	The visual aids used help the audience to assimilate content.
	Responding to questions easily and well	Only responds.	His/her answers support talk.	Utilises questions to respond and to develop the talk.	Utilises questions to stimulate audience interest.	His/her responses generate new observations and questions.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Easily managing to capture and persuade audiences, adapting the message and the means employed to the characteristics of the situation and audience***	Influencing the audience in an ethical manner	Doesn't influence the audience. Shows dubious ethics.	Makes impact on the audience at some points of his/her talk, without manipulation.	Gets the audience to see things in another way, without manipulation.	Gets the audience to question their own points of view.	Noteworthy for influence on others acting in an ethical manner.
	Appropriately illustrating ideas with examples, analogies, metaphors and other resources	Only presents information.	Illustrative devices help to highlight keys.	The audience understands content thanks to the integration of illustrative devices in the talk.	Integration of illustrative devices is appropriate for the context.	Illustrative devices help the audience to question own ideas.
	Suiting argumentation to different groups and/or pre-established situations	Argumentation is structured and rigorous.	The audience clearly grasps the argument.	The argument and presentation are consistent with the type of audience and situation foreseen.	Knows how to modify argument depending on the audience and the real situation.	Adapts argumentation with creativity to real situations and audiences.
	Encouraging audience participation and asking of constructive questions to promote dialogue	Utilises questions to respond and to develop the presentation.	Utilises questions to spark audience interest.	His/her responses generate new observations and questions.	Encourages questions to elicit participation.	Generates dialogue with the audience.
	Adapting the form of a message to diverse situations	Form of expression doesn't take into account the situation and the audience.	Form of expression partially suited to the situation and the audience.	Suits way of speaking to the situation and the audience.	Noteworthy for spontaneity and adaptation of way of speaking.	Modifies way of speaking spontaneously depending on audience response.

Description

"Spoken words are borne away on the wind, written words remain."

A piece of writing, whether a simple letter or formal document, conveys not only its content but also an image of the author. If the text is well organised, clear, grammatically correct and contains examples or graphics, it produces an agreeable impression on the reader. It is read with pleasure and meets the objective of establishing an effective relation between the author and the reader. If it lacks these characteristics, it will be unenjoyable, incite boredom and fail to fulfil its communicative function.

The capacity to convey ideas, information and feelings through writing and graphic support is not innate. It is developed through practice, following instructions or imitating models to which we have access through reading. It requires orderly exposition and clarity in vocabulary, sentence construction and the use of punctuation. Tables, figures or images will complement a text and summarise things that might be too complex or difficult to convey simply through words.

Although the correctness of certain formal aspects of a piece of writing (styles, fonts, margins, etc.) can be achieved with relative ease thanks to everyday text processing programs, good written communication requires something more.

The structure of the text, for example, is fundamental for facilitating legibility and comprehension. In long works, clear headings that inform the reader of subsequent content, do not confuse, and appear in an ordered sequence are an essential requirement. The inclusion of clear introductions at the beginning of complex works or sections, as well as conclusions or final summaries that appropriately synthesise the main text enhance comprehension and subsequent recall of the document.

The right choice of words, avoiding imprecision and ambiguities; conciseness, avoiding useless repetitions and wordy phrasing; and the use of examples or illustrations that clarify the most complicated aspects of the work will improve communication and make reading it more enjoyable. In addition, as noted above, such devices convey a better image of the author to whom we mentally attribute the qualities that we observe in the text.

Interaction with other competences, attitudes, interests, values

Writing skill is closely related to the competence of interpersonal communication, which is achieved only partially through oral communication skills.

Skill in writing helps to order ideas, and therefore is related to different ways of thinking. Indeed, some people use writing to organise their ideas, not only to convey them.

Proficiency in this competence facilitates teamwork, conflict management (the writing of agreements in precise terms not subject to interpretations can be a useful tool for overcoming conflictive situations) and negotiation.

Competence in writing is related to the systemic competences of organisation, facilitating objectives-based management (where objectives must be defined with precision and mean the same to all actors involved), project management and quality orientation.

Moreover, the positive results obtained thanks to proficiency in writing skills reinforces self-esteem.

Importance of this competence for academic and professional life

Writing up summaries and original papers forms part of the methodology in a high percentage of university subjects. Almost all work done for assessment involves written answers to open questions, which enable students to write their answers in their own style. This means that at least part of the total assessment that professors make is based on written work done or handed in by students. In many cases, this is the only item assessed.

Students who express themselves unclearly and hand in a wordy, rambling exam paper will give the lecturer the impression that they have not understood the subject sufficiently and will therefore earn a low grade. Their error may lie in their incapacity to convey their knowledge adequately in writing, but the consequence will appear on their academic transcript.

For professional effectiveness, mastery of this competence can become even more important than proficiency in oral communication. In the latter, people tend to tolerate with relative ease redundancy and backtracking to fill in gaps, but in written communication such defects prove distracting, require additional effort on the part of the reader and

lead to failure to communicate. When a paper or document is aimed at many people, the effect on the author's or company's image can have serious consequences.

How to incorporate it into the academic curriculum

While it is supposed that students arrive at the university with sufficient mastery of spelling and syntax, the truth is that in many cases this assumption is false. Even if it were true, it is not sufficient to ensure good written communication. Students need clear instructions on how to write, including how to organise and present documents. Such basic information must be provided regardless of the type of studies they are enrolled in.

Lecturers should also evaluate written work not only for its content with regard to the subject in hand, but also for the way in which it is presented, giving points for good organisation and presentation, and pointing out errors of whatever type that students make.

Naturally, in order to ensure that students write well, it is very important that their recommended and assigned reading will serve as a model of good rhetorical strategies and devices.

COMPETENCE: WRITING SKILLS

Definition: **Relating effectively to other persons through clear written expression of what one thinks and/or feels, using graphic support as necessary**

Mastery of this competence is closely related to: **Self-esteem, interpersonal communication, quality orientation, etc.**

Levels of mastery:

1. Correctly and clearly communicating in short essays what one thinks or feels using appropriate devices
2. Communicating with ease in medium-length essays, structuring the contents of the text and support graphics to facilitate the reader's understanding and interest
3. Writing long, complex essays convincingly, demonstrating own style in organisation and expression

Indicators:

1. Contents
2. Clarity
3. Proficiency
4. Suiting style to reader
5. Using effective devices

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Correctly and clearly communicating in short essays what one thinks or feels using effective devices***	Dealing with one specific topic, without straying into another	Mixes various topics without clarifying which is the main one.	Lengthens essay with unnecessary repetitions or rambling.	Focuses on topic without digressions.	Covers all aspects of the topic according to instructions.	Deals with the topic in depth, beyond what was required.
	Clearly expressing ideas, knowledge or feelings	Uses confused, hazy expressions. Very difficult to follow.	Expression can be understood but the essay is disorganised.	Presents the different aspects of the topic in logical order.	Includes an introduction, development and a conclusion.	Organises the essay sections and paragraphs.
	Writing well grammatically	Omits subjects or verbs. Uses wrong mood, tense or persons in verbs.	Makes spelling mistakes.	The essay is correct as far as spelling and syntax are concerned.	The essay is correct as far as spelling and syntax are concerned, and is punctuated properly.	Utilises prepositions and conjunctions well.
	Using appropriate language for the type of document and reader	Uses own abbreviations or jargon.	Uses the terminology of the subject incorrectly.	Suits language to the type of document and reader.	Correctly uses the proper technical terminology for the subject.	Uses synonyms to clarify ambiguous or equivocal terms.
	Using appropriate devices to facilitate reading and comprehension of the essay	Doesn't use typographic devices (font, paragraph, style formats, etc.). Doesn't number pages.	Overuses formatting devices, hindering comprehension.	Appropriately uses typographic devices (font, paragraph, style formats, etc.).	Uses footnotes or endnotes for references, comments, etc.	Clearly identifies the essay and its key elements.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Communicating with ease in medium-length essays, structuring contents and graphic material to facilitate the reader's understanding and interest***	Relating various elements (facts, opinions, etc.) to arrive at conclusions	Mixes facts, opinions, arguments and conclusions without apparent order.	Draws conclusions not based on the points made in the essay.	Draws conclusions based on the points made in the essay.	Identifies possible reservations concerning conclusions or gaps in information.	Based on conclusions, sees or proposes possible relations with other topics or disciplines.
	Structuring essay to aid comprehension	Goes from one topic to another without using headings.	Uses confusing, ambiguous or overly long headings.	Headings are brief and explicit (identifying well the following content).	Taken together, the headings cover the full content and are mutually exclusive.	The sequence of headings follows an order that aids comprehension.
	Using appropriate language to convey contents	Uses words or expressions with wrong meaning.	Uses rambling expressions.	Utilises words and expressions accurately with precise meaning.	Is concise. Uses clear, comprehensible sentences (doesn't ramble).	Is concise and illustrates with examples points that could prove misleading.
	Capturing reader's interest	Uses inappropriate style that causes rejection.	The essay is boring.	Uses introduction or other devices to spark interest.	Way of approaching subject captures reader's interest.	Maintains interest till end, managing to surprise the reader.
	Including tables and graphs suited to the contents and reader	Doesn't use tables or graphics, only text.	Uses poorly labelled, inappropriate or poorly located tables and graphs.	Tables and graphs are adequate and are correctly located.	Tables and graphs are self-explanatory without need of reading the text.	Utilises tables and graphs with added value that are well integrated into the text.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Writing long, complex essays convincingly, demonstrating own style in organisation and expression***	Developing subject originally and completely	Uses others' paragraphs without citing the source (plagiarism, «copy and paste») or is not complete.	Is complete, but without personal development.	Develops topic in own words and way: original and complete.	Development of the topic incorporates quotes from other authors that strengthen argument.	Development of the topic incorporates quotes from other authors that put own argument to the test.
	Utilising numerations that help to relate different parts	Fails to identify with clarity subdivisions, lists, annexes, etc.	Uses different types of numeration inappropriately.	Internal references are clear thanks to proper use of numerations (headings, lists, annexes, etc.).	Facilitates comprehension combining numeration and subheadings.	Indicates hierarchy of paragraphs also using indenting.
	Demonstrating originality and proficiency in use of language	Overuses passive voice and impersonal phrases.	Uses trite expressions or is redundant.	Expresses self in active voice and with own constructions.	Uses synonyms to avoid repetition.	Livens the essay with good use of various devices (questions, exclamations, etc.).
	Writing essays that are pertinent for the reader and objectives	Includes information, examples, digressions, etc. that are not pertinent.	The contents suit topic but not the objectives.	The contents are pertinent. (Doesn't use «padding», focuses on objectives).	In the introduction, specifies the scope and limits of the essay.	Each section includes a brief introduction and a final summary.
	Enhancing comprehension and enjoyment of reading through use of examples, metaphors, etc.	Doesn't use examples, metaphors, comparisons, etc. Only describes and argues.	Uses examples or metaphors that are inappropriate or hard to understand.	Uses examples, metaphors, comparisons, etc. that facilitate comprehension.	Uses a stylistic device that enhances points throughout the essay.	Example and metaphors interwoven in the structure of the essay (titles, headings, etc.).

COMPETENCE: FOREIGN LANGUAGE PROFICIENCY

Description

Today it is hardly necessary to emphasise the importance of being able to speak a foreign language. Modern life makes it increasingly obvious that people need to be proficient in several languages to get along in society.

Because of the proliferation of information sources and spread of knowledge, the capacity to communicate in one or more foreign languages is a very important skill. This is all the more so in the case of students pursuing university degrees in Europe.

For university students, foreign language proficiency means the capacity to communicate orally and in writing using one or more non-native languages.

It is true that the students arriving at universities today already have some training in these capacities, but once enrolled, university students must consider the possibility of developing this competence to increase their training in their chosen field of study, thereby furthering their language skills.

The first level of mastery of this competence consists in the ability to use the foreign language with ease. That is, students must be able to exchange information reliably, read and write without difficulty, including university texts.

Improving written and oral communication skills in the foreign language constitutes the second level of mastery. At this level, assessment verifies the level of skill and ease with which students handle daily and academic conversations and texts.

The third level of mastery measures fluency in the use of the foreign language both in social and academic contexts.

The indicators that make it possible to evaluate proficiency in a foreign language assess how well students can exchange information, understand written and spoken discourse and conversations, produce oral and written discourse, and their proficiency in each situation.

Interaction with other competences, attitudes, interests, values

This competence is closely related to oral and written communication skills. It also plays a crucial role in interpersonal communication in

international contexts. Moreover, it is the ideal vehicle for developing the competence of diversity and interculturality, in social situations where people from different cultures and language communities live or work together.

Foreign language communication favours the development of solidarity and interaction with persons from other cultures. It also contributes to self-esteem, self-confidence and the self-fulfilment of people enjoying the capacity to relate to others in a language or languages different from their own.

Importance of this competence for academic and professional life

Mastery of one or more foreign languages enables students to broaden their possibilities of learning and social relations. It also provides them with the capacity to undertake a wider range of professional projects.

How to incorporate it into the academic curriculum

Students studying foreign languages at the university should utilise these languages not only to perfect them, but also to learn different subjects in a course. By doing so, students will broaden their possibilities for learning and education.

In the first case (i.e., when working on perfecting the language itself), work should focus on conversation, essay writing and audiovisual aids that will strengthen use of the foreign language according to relevant European standards. Another possibility would be to foster group work and interaction in the foreign language in question.

In the second case (i.e. when using the foreign language as a vehicle of communication within a subject in the syllabus), it is important to consider the level of proficiency to be used and how learning of the subject is to be completed – for example, access to information sources and writing of reports or essays.

COMPETENCE: FOREIGN LANGUAGE PROFICIENCY

Definition: **Understanding and making oneself understood orally and in writing using a language different from one's own (especially important in the process of European Convergence due to the expansion of international degrees)**

Mastery of this competence is closely related to: **Oral and written communication, diversity and interculturality, interpersonal communication, orientation toward others, solidarity, etc.**

Levels of mastery:

1. Communicating correctly orally and in writing in a second language in daily exchanges and simple texts
2. Fluently writing reasoned essays in another language in texts of certain complexity
3. Maintaining relations of exchange and collaboration in a foreign language in various situations, contexts and fields

Indicators:

1. Exchanging information
2. Written comprehension
3. Listening.
4. Writing
5. Mastery of rhetorical devices

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Communicating correctly orally and in writing in a second language in daily exchanges and simple texts*	Exchanging information about self and others	Is unable to ask for and give information about self and others.	Has difficulty in asking for and giving information about self and others.	Exchanges simple information about self and others.	Describes aspects of own past and of most immediate requirements.	Explains with fluency aspects of own past and most immediate requirements.
	Clearly understanding texts	Doesn't understand brief and simple texts closely related to context.	Has difficulty in clearly understanding brief and simple texts closely related to context.	Understands brief and simple texts closely related to context.	Easily understands main information in speech and writing in simple contexts.	Clearly understands main information in basic speech and writing about academic and professional field.
	Understanding and utilising common daily expressions	Doesn't understand common daily expressions.	Has difficulty in understanding common daily expressions.	Understands common daily expressions.	Understands and uses everyday language in conversational contexts.	Is able to understand and make self understood in different academic and/or professional contexts.
	Writing simple texts	Is unable to produce with correction simple pieces of writing.	Has difficulty in producing with correction simple pieces of writing.	Produces simple pieces of writing.	Produces with correction pieces of writing (notices, informal or formal letters, etc.).	Produce with ease pieces of writing (notices, informal or formal letters, etc.).
	Utilising basic language structures (phonic, grammatical, lexical and written)	Uses basic language structures with serious mistakes (phonic, grammatical, lexical and written).	Uses basic language structures (phonic, grammatical, lexical and written) inappropriately.	Uses basic language structures (phonic, grammatical, lexical and written) acceptably.	Correctly uses language structures (phonic, grammatical, lexical and written) called for at this first level of mastery.	Outstanding in utilisation of the language structures (phonic, grammatical, lexical and written) called for at this first level of mastery.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Fluently writing reasonably complex essays in another language***	Describing events and desires, justifying opinions or explaining plans	Is unable to describe experiences, events, desires, or to justify opinions and explain plans.	Has difficulty in describing experiences, events, desires and in justifying opinions and explaining plans.	Describes experiences, events, desires and justifies opinions or explains plans.	Has facility for describing and reasoning in everyday contexts.	Is able to describe and reason in any context (personal, academic and/or professional life).
	Understanding complex pieces of writing	Can't understand written works of certain complexity.	Understands with difficulty written works of certain complexity.	Understands written works of certain complexity.	Has facility for understanding complex written works on personal, academic or professional topics.	Noteworthy for comprehension of complex written works on different topics (personal, academic and professional).
	Understanding complex speech	Is unable to understand fairly complex speech.	Understands with difficulty fairly complex speech.	Understands fairly complex speech.	Has facility for understanding complex oral discourse on personal, academic or professional topics.	Noteworthy for comprehension of complex oral discourse on different topics (personal, academic and professional).
	Communicating fluently	Cannot get by in normal situations (personal, academic, professional).	Has difficulty in communicating with ease.	Communicates with certain ease.	Gets along easily in the interactions of ordinary life.	Gets along effectively (purpose/discourse/ time) in all types of interactions.
	Correctly writing pieces of certain complexity	Is unable to produce correctly written work of certain complexity.	Has difficulty in producing correctly written work of certain complexity.	Produces correctly written work of certain complexity.	Has facility for correctly producing complex written work on personal, academic and/or professional topics.	Outstanding in the production of written work of certain complexity on personal, academic and/or professional topics.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Maintaining relations of exchange and collaboration in a foreign language in various situations, contexts and fields*	Exchanging information, reasoning points of view	Uses language ineffectively for social, academic and professional purposes.	Has difficulty in using the foreign language effectively for social, academic and professional purposes.	Uses language effectively for social, academic and professional purposes.	Uses foreign language with ease in almost all situations.	Is able to use foreign language with ease in all situations.
	Understanding and producing complex pieces of writing on range of topics	Is unable to produce and clearly understand long, complex texts.	Has difficulty clearly understanding and producing long, complex works.	Fairly clearly understands and produces long, complex pieces of writing.	Clearly understands and produces almost all types of writing.	Understands and produces with total clarity all types of writing.
	Communicating in any circumstances, suiting language register to context	Can't produce varied types of messages in different communicative contexts.	Has difficulty in understanding and producing varied types of message in different communicative contexts.	Understands varied types of message in different communicative contexts.	Understands and produces any type of message in any communicative context.	Understands and produces any type of message in any communicative context
	Communicating in a foreign language, using different aids and supports	Only uses one type of communicative aid.	Has limitations in using varied supports.	Tries to adapt message to appropriate support.	Knows how to use the best support for the message.	Uses the best support for the message and for the communicative context.
	Becoming sufficiently proficient to relate and collaborate fully with others in the foreign language.	Produces misunderstandings that hinder communication.	Has limited ability to express self fully.	Knows how to place self in the language context in question.	Gets along well in the language in any context.	Fits in and collaborates without language difficulties.

Chapter 3

Interpersonal Generic Competences

Interpersonal generic competences are different capacities that enable people to interact well with others. They are highly valued by companies and university graduates, who usually rank them among the five most important competences. University professors and lecturers cling to more traditional criteria and still rank other competences ahead of interpersonal skills, perhaps because until now the latter were not worked on at universities. Now, however, these competences are being increasingly introduced and form an important part of the new academic curriculum in the world's universities.

In our model, they are subdivided into two types: individual and social interpersonal competences. Individual interpersonal competences are *self-motivation*, a very necessary competence for students in a teaching-learning model based on independent work and autonomy; *perseverance and adaptability*, which involve positive strategies for overcoming resistance and obstacles, and for dealing with the stress that almost everyone encounters in today's increasingly fast, competitive, high-pressured environment.

One of the two competences completing this section is *diversity and interculturality*, which seeks to develop a positive view of the diversity and heterogeneity of cultures, languages, races – in short, of different ways of seeing, feeling and being. Such a view enriches, rather than detracting from our lives, but it is difficult to attain. The other remaining competence is the *ethical sense* that should underlie students' personalities and impregnate all the actions that they undertake, guiding their personal, social and professional conduct.

Social interpersonal skills comprise four competences. The first two, which are at the heart of human relationships, are *interpersonal com-*

munication and *teamwork*. Interpersonal communication is an absolutely crucial competence for all persons and is a two-way process. Training in this competence seeks to develop in students the capacity to listen (reception) and to know how to communicate (communicative openness), skills that are part of the same process. Teamwork is a competence that has been incorporated by all universities as a fundamental strategy for fitting in with any human group, particularly in the workplace. Professional work increasingly requires the contributions of different specialists who complement each other and work together on the same projects. Being able to fit in and make partial contributions to the group is essential in today's world.

The other two competences completing this section are *conflict management* and *negotiation*. These two interpersonal competences are also very important in any organisation. Conflicts can and do arise in any human group over legitimate interests that individuals or groups may have. Such conflicts should be treated as such and not as personal confrontations, which do not lead anywhere. Acquiring and developing competence for dealing with conflicts is a highly valued skill in today's world. The final competence in this section is negotiation. In a democratic world, where organisations are more and more participative, people and organisations must be proficient negotiators. This competence is required in all human fields, from the closest (family life) to social and institutional spheres. Parents must learn to *negotiate* with their children; workers and management must both learn to negotiate with each other; and, as noted before, the same thing can be said of many fields and spheres of human life.

COMPETENCE: SELF-MOTIVATION

Description

Motivation is the mental effort prior to an action to encourage someone (motivation) or oneself (in this case, self-motivation) to perform it with interest and diligence. To motivate is to dispose someone toward doing something in a certain way.

Therefore, if we have an action to undertake or a job to perform, there is one way to do it – with interest, care, speed and promptness.

Self-motivated people who are aware of their own capacities and limitations have the willingness of spirit to undertake the tasks entrusted to them, endeavouring to develop their capacities and overcome their limitations.

Self-motivated people, in addition to analysing themselves correctly, objectively and realistically, also see their surrounding situations with the same characteristics of objectivity and realism. This enables them to know exactly where they stand. Aware of their resources and difficulties, they address tasks by setting reasonable objectives, suited to their possibilities. Their self-motivation makes them persevere and be constant, even when nobody else encourages them to do so, and they recognise their own successes and failures.

Thanks to this awareness of their own personal traits and self-motivation, they are able to devise improvement plans for overcoming their own limitations and developing their personal and professional capacities. They are not discouraged by difficulties. Achievement of these objectives produces feelings of satisfaction because of growth, which they know how to celebrate and share with others.

The competence of self-motivation enables people to go beyond their own limits and consider the team in the first person. So they are able to make a self-analysis of the group, convey their own motivation and enthusiasm and motivate the team with their vision of the future, sharing the achievements and successes of the team, involving others in celebrating them.

Interaction with other competences, interests, attitudes, values

To be a self-motivated person, it is necessary to know oneself well and to have developed self-esteem. Knowing oneself and having self-esteem also involve recognition of others. This awareness of one's own

and others' true nature, together with a self-motivating spirit, are essential for being able to adapt to surroundings and successfully overcome difficulties, contingencies and frustrations.

Decision-making is important for devising and undertaking plans of personal and professional development, considering both capacities and limitations.

Only with proper perception of one's own nature and circumstances is it possible to interact maturely with others, and therefore develop social interpersonal competences such as interpersonal communication, teamwork, conflict management and negotiating ability.

Importance of this competence for academic and professional life

During the course of their studies, students encounter difficult learning situations and experiences where they see themselves as different from others due to their different capacities, learning styles and results. To undertake the task of their own learning realistically and efficiently, they need to have the skills that will enable them to realise how things stand and what their personal situation is. They need to be able to set attainable goals and devise realistic plans of action leading to the accomplishment of these objectives, where they are the ones who decide and encourage themselves to do so, without waiting for or expecting a boost from someone else.

In professional life as well, it is necessary to be realistic about recognising the strengths and weaknesses of oneself and the team, and to be able to lay out plans of work and development that are achievable within the time available. Achievements attained should be celebrated and shared maturely and serenely. At moments of discouragement and difficulty, or of failure and limitations, we must be able to look ahead and confront such experiences with a positive outlook.

In the specific case of teamwork, recognition of one's own capacities and limitations, and the capacity to dispose oneself toward achieving agreed objectives is of particular importance, since fewer and fewer tasks are undertaken entirely individually.

How to incorporate it into the academic curriculum

The competence of self-motivation can be developed through strategies of formative assessment and self-assessment, including the design and monitoring of personal improvement plans.

Teaching strategies can also be used that enable students to select the goals they wish to achieve (including assigned contents or activities and outside work – even various levels of extra work). It is then a question of checking with them the objectives they have set as well as the degree to which they have achieved them, and their attitudes during the process and in view of actual outcomes.

COMPETENCE: SELF-MOTIVATION

Definition: **Recognising one's own capacities and limitations, striving to develop and overcome them to concentrate with interest and care on the tasks to be performed**

Mastery of this competence is closely related to: **Adaptability, self-esteem, self-fulfilment, interpersonal communication, collaboration, solidarity, etc.**

Levels of mastery:

1. Being aware of one's resources and limitations (personal, situation, etc.), using them to advantage in successfully completing assigned work
2. Developing personal resources to improve one's performance in action
3. Transmitting own motivation to working team by contaging enthusiasm and constancy

Indicators:

1. Self-analysis.
2. Objectivity. Realism.
3. Constancy. Perseverance.
4. Forward-looking.
5. Celebration of achievements.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Being aware of ones resources and limitations (personal, situation, etc.), using them to advantage in successfully completing assigned work***	Recognising achievements and mistakes in one's own performance	Fails to recognise own mistakes.	Has difficulty in recognising own mistakes. Needs someone to point them out.	Recognises own flaws and achievements.	Recognises potential flaws and tries to avoid them through alternative action.	Noteworthy for analysis of own achievements and mistakes, drawing conclusions for improvement.
	Making evaluations consistent with available evidence	Own observations about self far removed from evidence (own output, others' evaluations, etc.).	Falls into generalisations (clichés, stereotypes, etc.) when talking about self.	Own observations about self match evidence.	Reasons and justifies observations about self.	Analyses self in depth, drawing conclusions to develop own potential.
	Being constant and perseverant in work undertaken	Is not constant and gets discouraged easily.	Needs someone to encourage him/her to complete tasks.	Perseveres in whatever he/she proposes.	Noteworthy for tenacity and constancy in work.	Addresses all tasks with enthusiasm from beginning to end.
	Having a forward outlook that motivates action	Doesn't think about own future.	Has difficulty in relating present actions to the future.	Has a forward outlook that provides motivation.	Visualises the future and plans ahead according to own possibilities.	Shows confidence in the consequences of own actions.
	Identifying the right time to celebrate achievements	Doesn't contemplate the possibility of celebrating own achievements.	Only celebrates own achievements when prodded by others.	Identifies possible moments for celebrating achievements.	Thinks about how to get others to celebrate achievements.	Celebrates and shares own achievements with others.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Developing personal resources to improve one's performance in action*	Analysing own limitations and possibilities for personal and professional development	Doesn't show interest in analysing own limitations and possibilities.	Shows poor capacity for self-criticism.	Shows interest in analysing own limitations and possibilities for personal and professional development.	Makes good personal analyses leading to personal or professional improvement.	Makes very good personal analyses to improve personally and professionally.
	Setting goals suited to own possibilities	Shows little realism about setting goals for self.	Is irregular about realistically gauging own strengths.	Sets goals matching own possibilities.	When setting goals for improvement, takes own past experience specially into account.	Noteworthy for realism and daring in setting goals for personal improvement.
	Showing constancy in the development of own personal resources to improve	Doesn't make plans to develop self personally.	Lacks perseverance in carrying out personal improvement plans.	Shows constancy in applying plans to develop personal resources.	Overcomes difficulties encountered without losing sight of plans.	Very tenacious in putting into practice plans of personal development.
	Developing own potential with forward outlook	Lacks expectations regarding own improvement.	Occasionally fails to see what needs to be done to develop self.	Trusts own potential for dealing with the future.	Makes self-improvement plans for the medium term regarding personal and professional development.	Has clear goals and itinerary to follow to become more effective and stay that way.
	Recognising own achievements and celebrating them specially	Doesn't express satisfaction at own achievements.	Recognises and celebrates own successes only at the bidding of others.	Shows satisfaction over own achievements.	Takes the initiative in celebrating the achievements attained.	Seizes the occasion to motivate self and get others to participate in the the success of his/her achievements.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Transmitting own motivation to working team by contaging enthusiasm and constancy***	Making important contributions to team's self-analysis	Hinders or avoids team self-analysis or self-criticism.	Doesn't make relevant contributions to the self-analysis of the team.	Participates with relevant contributions to the self-analysis of the team.	Promotes self-analysis of the team to motivate group work.	Integrates and systematises different contributions to the analysis of the team.
	Combining enthusiasm and realism when conveying own motivation	Doesn't show confidence in the possibilities of the team.	Is unable to effectively convey own motivation to convince others.	Combines enthusiasm and realism when conveying own motivation.	Contages own motivation thanks to energy and drive.	Instils self-motivation in the group.
	Being constant and enthusiastic when conveying own motivation about a subject	Undermines the group's morale and motivation.	Is irregular in contributions and sometimes seems unmotivated.	Is constant when conveying own motivation.	His/her exemplary constancy helps others to stay motivated.	Prepares team to stay motivated over the medium term.
	Using forward outlook in conveying enthusiasm for a subject	Doesn't show motivation about the team's forward-looking project.	Easily gets discouraged over difficulties hindering plans for the future.	Enthusiastically conveys forward outlook to the team.	His/her forward outlook motivates the team to action.	Helps own team to be the one to build its project of future.
	Transmitting own enthusiasm when celebrating achievements	Is cold or indifferent to the achievements of the team.	Sometimes shares the achievements accomplished by the team.	Shows satisfaction at the achievements of the team.	Shares with the team the achievements accomplished.	Involves everyone in the achievement of the team and in own celebration.

Description

Diversity identifies the cultural differences and inequalities at work in today's societies the world over. Interculturality refers to communication and interaction between different social groups and cultures.

We live in complex, dynamic, contradictory societies that are interrelated internally and externally. They are made up of different human groups comprising a world built on diverse, dissimilar cultures whose connections with each other are increasingly fluid.

The effects of such connections, in their different manifestations, should enable us to comprehend trans-cultural relations and recognise the importance of each culture. Today it is not sufficient to acknowledge "diversity"; we need to think about how we can "coexist in diversity". To do so, we must accept that cultural differences are complementary, and discover, without losing our differences, what we have in common with other cultures. By seeking what is common to all, we will gain in communication and interrelations between persons of different cultures.

The competence of diversity and interculturality must be addressed and developed in terms of the capacity to comprehend and accept cultural diversity as something that enriches us personally and collectively. This will enable us to coexist without incurring in distinctions of sex, age, religion, social, political or ethnic condition. But this must be done in a temperate way, without being overly relativistic or taking a Eurocentric view of diversity.

This competence is developed at three levels of proficiency aimed at making students consciously aware of contemporary intercultural realities so that they will act in consequence. To this end, the first level of mastery outlines how we should accept diversity as an exclusively social phenomenon. The idea is to enable students to see cultural differences and inequalities as a product of social behaviour.

The second level traces the process whereby one can reason the causes of cultural and/or social differences and inequalities among human beings. Finally, the third level focuses on how to practice intercultural coexistence.

The development of this competence in students is measured by how well they recognise and explain diversity and interculturality, how they internalise their capacity for interrelationships, how well they cease to discriminate persons on the basis of sex, age, religion or origin, and to what extent they try to learn about cultural differences and similarities.

In addition to learning the meaning of cultural ethnocentricity, they must also distinguish excesses of cultural relativism.

Interaction with other competences, attitudes, interests, values

This competence is closely linked to interpersonal communication, analogical thinking and systemic thought. It is also linked to the competence of communication in a foreign language.

It helps to develop a critical sense of the evolution of social behaviour and an interest in knowing and understanding the social and cultural differences of humanity.

As for attitudes and values, this competence contributes to the development of social justice, shared values, respect for human dignity and a better comprehension of the social significance of human relations.

Importance of this competence for academic and professional life

Today we can see, through the news media and daily life, the manifest effects of transcultural relations. To deal with this phenomenon, we as citizens must develop solid, rigorous criteria to discern the social nature of human situations and interactions.

In the workplace as well, there is more and more mingling of people from different cultures, social conditions and ways of life. The situations that generate this coexistence require sound capacitation in order for people to get along.

How to incorporate it into the academic curriculum

This competence can be developed through learning strategies that confront students with real or simulated cases of intercultural behaviour. It is important to pay attention to the students' own background, since today, in everyday situations, we are seeing more and more problems and conflicts arising over transcultural relations.

The most appropriate learning strategies for this competence are: problem-based learning, case studies and the project method. Moreover, it furthers students' ability to handle sources of information and different techniques for data processing and interpretation. It is also useful for dealing with simulations or field work.

COMPETENCE: DIVERSITY AND INTERCULTURALITY

Definition: **Understanding and accepting social and cultural diversity as something that is personally and collectively enriching, furthering coexistence between people without incurring in discrimination of sex (gender), age, religion, social, political, and/or ethnic background.**

Mastery of this competence is closely related to: **Communication and information. shared values, search for meaning, social justice, responsibility, human dignity, global justice**

Levels of mastery:

1. Understanding cultural and social diversity as a human phenomenon and interacting respectfully with different persons
2. Accepting and understanding cultural and/or social traits as structural, voluntary and reasonable aspects of humanity
3. Showing conviction that awareness of cultural diversity, an essential ingredient of human coexistence, generates social cohesion and inclusion

Indicators:

1. Accepting diversity
2. Interacting
3. Personal enrichment
4. Non-discrimination
5. Cultural enrichment

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Understanding cultural and social diversity as a human phenomenon and interacting respectfully with different persons***	Accepting diversity as part of the human condition	Considers diversity as a natural frontier.	Treats people according to their social or cultural background.	Relations not limited by social and cultural differences.	Establishes relations without social or cultural distinctions.	Defends interaction between persons who are different.
	Relating to people without distinction of social and cultural background	Manifests aversion to persons of diverse social or cultural background.	Is distrustful of persons of different social or cultural origin.	Tends to interact with persons who are different.	In his/her relations disregards differences.	Likes people for their personal qualities.
	Utilising relations with different persons for own development	Doesn't relate to people who are different due to prejudice.	Assumes that differences determine the scope of human relations.	Is interested in relating to people who are different.	Promotes interaction between diverse persons.	Tries to enrich experience through relationships with persons who are different.
	Not discriminating people for reasons of social or cultural difference	Looks down on persons that he/she considers different.	Discounts others' social practices as asocial.	Respects the cultural origin and practices of other persons.	Recognises different social qualities in others' social practices.	Tries to learn the reasons behind the social customs and behaviours of different persons.
	Seeing coexistence as the product of interactions between people who are different	Understands cultural diversity as a justification for social differences.	Considers own social and cultural values as the only valid ones on which to base relations.	Respectfully interprets other social and cultural values.	Seeks balance between own social practices and those that he/she knows of other cultures.	Tries to assimilate and integrate into own development experience gained from relations with persons of other cultures and social background.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Accepting and understanding cultural and/or social traits as structural, voluntary and reasonable aspects of humanity***	Analysing cultural and social diversity as a result of human interaction	Disregards other cultures as inferior.	Considers it useless to establish relations with other cultures or persons of different social origin.	Thinks it possible to understand other cultures and social situations.	Knows how to discern the conditions of life that generate different patterns of relationship.	Is interested in how to reconcile different social customs and practices.
	Trying to learn the reasons for the social customs and behaviours of different persons	Believes that *other* cultures or social situations are insignificant.	Gives opinion on cultural and social diversity without rigour.	Is interested in learning and reasoning about different cultures and societies.	Understands the formation and development of different cultures and societies.	Tries to give meaning and human significance to cultural and social diversity.
	Understanding relations with persons of other cultures and social origins as personally enriching	Believes that cultural and social diversity is a threat to own way of life.	Perceives cultural and social diversity as an inevitable distinction.	Associates diversity with the idiosyncracy of the human condition.	Sees cultural and social diversity as a complementary human reality.	Sees intercultural relations as an open process.
	Reasoning that social and cultural realities are created by people	Considers that there should be only one model of culture and social practices.	Considers diversity as a mere catalogue of life styles without value.	Perceives cultural diversity as the result of human coexistence.	Understands that societies and human relations are transformable sets.	Understands that diversity is the result of the interaction and transformation of human groups.
	Understanding that diversity is an essential trait of the human species	Believes that diversity is the result of a process of social "selection".	Considers intercultural or intersocial relationships degrading.	Sees diversity as an enriching aspect of the human condition.	Understands that it is possible to reconcile different ways of life.	Considers that the social future entails transcultural relations.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Showing conviction that awareness of cultural diversity, an essential ingredient of human coexistence, generates social cohesion and inclusion***	Understanding that human coexistence supports social and/ or cultural integration	Sees diversity as a result of selective social evolution.	Rejects integration as a formula for social interaction.	Sees diversity as a result of human history.	Understands that interaction between persons can diminish differences.	Sees integration as a means of improvement social.
	Understanding that own social and cultural context is part of transcultural relations	Denies the human value of other cultures and societies.	Discards integration and cultural plurality.	Sees own social and cultural circumstances in consonance with the intercultural context.	Considers that own culture and social context enrich and are enriched by intercultural relations.	Stands for social integration and inclusion policies.
	Seeking ways of generating transcultural relations.	Gives priority to own social precepts and values as the only form of relating to other cultures or societies.	Ranks and accepts/ rejects other cultures and societies according to a hierarchy.	Develops an open, plural view of interculturality.	Sees human relations in terms of equality.	Promotes integration and transculturality as a way of coping with diversity.
	Utilising relativism in a tempered way	Judges other cultures ethnocentrically and acritically.	Only considers own social or cultural origin valid.	Tries to find points of encounter in social and cultural differences.	Tries to respect and and demand respect for others' cultures as well as own.	Understands own society and culture in the human social context.
	Facilitating relational contexts that will include persons who are different	Openly manifests segregationist and xenophobic attitudes.	Marginalises persons that he/she considers different.	Tries to foster understanding between different persons.	Uses dialogue to foment integration.	Acts as an intercultural agent.

Description

This competence combines the ability to retain (hang on to) a sufficient state of well-being to continue to perform effectively, with the skill of adapting to new circumstances and maintaining a state of equilibrium in the new context when surrounding conditions become adverse.

People develop this competence through a continuous process in which three levels of mastery are distinguished. At the first level, individuals are able to keep up their energy when pressured by time, disagreements, opposition and other adverse conditions. Moderate frustrations are a challenge to be addressed and improve. People at this level are able to keep constant the time and effort they devote to a task, and in addition they know how to set priorities and not get blocked when they have several jobs to do at the same time. People at the next level of competency are able to set themselves higher objectives and stricter deadlines than those demanded from outside. They receive criticism well and analyse it to learn from their own mistakes. They do not give up in the face of frustration, but are motivated to find alternative routes to achieve the same objectives. They not only set themselves deadlines and priorities for completing their work, but also are concerned for its quality. People at the third level take the initiative in requesting criticism in order to improve. They are stimulated by the challenge of difficult or novel situations. They plan and distribute their time well and aim their efforts at what is most important. When they are confronted with various complex tasks, they design mechanisms that enable them to monitor their progress.

Interaction with other competences, interests, attitudes, values

Proficiency in endurance and adaptability requires the development of other competences such as self-motivation, which gives people the drive they need to undertake necessary actions, together with a good level of self-awareness. It is also necessary to know how to handle internal states, and to know and control one's own resources. Moreover, in order to persevere in contexts where there are adverse conditions, people must be able to express their own emotions properly and understand the emotions of others. This competence is related to other generic skills, particularly the interpersonal ones of interpersonal communication,

teamwork and conflict management and negotiation. It is related as well to attitudes and values of self-esteem, self-assurance and self-control, and to respect for others.

Importance of this competence for academic and professional life

In any moment and field of life, there are events that alter our circumstances and place us in contexts where we experience difficulty, adversity and time pressures. This generates anxiety, which we will handle well or not depending on the level to which we have developed this competence and our level of maturity.

Student life is full of situations where work and deadlines come together, such as at the ends of semesters or during exam time, when students must be able to set priorities and devise plans to accomplish their objectives despite adversity, without letting other people or tasks distract them. There are also times when unsuccessful (and perhaps unexpected) final assessment results place students under a great deal of pressure and anguish, where they need to overcome frustration and make improvement plans featuring alternative routes to accomplish their objectives.

In professional life, and in any aspect of personal life, there are also moments such as project deadlines and year-ends when various jobs have to be done effectively under time pressure. Moreover, one's work is occasionally criticised and new versions or re-workings are required by the client or superiors, for which there is little time. In such situations, one's personal maturity and professionalism make it possible to overcome the difficulty with success, without allowing emotions to hinder self-control.

We all experience difficulty and frustration at some point in our lives. The difference is in how we cope with it and the attitudes that it generates in us – all of which will depend on how well we have developed personal competences.

How to incorporate it into the academic curriculum

In exceptional personal situations, keeping a good balance between demands, reliability and flexibility generates an atmosphere that favours personal development and maturity, as well as enhanced adaptability. If

students are set clear deadlines, rules, requirements about quality of work and assessment criteria, it will help them to see exactly how they stand. Making them assume commitments (with strategies like keeping a journal for noting down specific analyses and thoughts) is a path toward personal development that favours mastery of this competence. The role of the tutor in interpersonal relations can also be an especially important tool in this process.

Development of this competence will be stimulated by proposing tasks for which students have to devise a work plan, and record whether or not they complete their work within the stipulated deadlines. Fulfilment of the plan is discussed with the lecturer and presented together with the essay or project.

Various assessment strategies, including formative assessment, peer assessment and auto-assessment, mean that students must face criticism, analyse it and identify mistakes and places for improvement. Assessment should be both quantitative and qualitative and involve reflection on what has been learned. This fosters self-awareness, knowledge of surrounding circumstances and sufficient self-motivation to develop strategies for change and success, including adapting to adversity and difficulties beyond one's control.

COMPETENCE: ADAPTABILITY

Definition: **Handling critical psychosocial situations smoothly and effectively, preserving physical and mental equilibrium**

Mastery of this competence is closely related to: **Self-awareness, capacity for keeping emotions, impulses and unproductive reactions under control, comprehension of others' emotions, self-motivation, appropriate expression of own emotions; including values of self-control, assurance, self-esteem and personal balance, beliefs, etc.**

Levels of mastery:

1. Maintaining drive and energy to perform well under pressures of time, disagreement and hardship
2. Effectively meeting objectives under pressures of time, disagreement, opposition and adversity
3. Meeting difficult challenges in new and changing situations without drop in high level of effectiveness

Indicators:

1. Adaptation
2. Critical sense.
3. Overcoming frustration
4. Controlling time
5. Self-management

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Maintaining drive and energy to perform well under pressures of time, disagreement and hardship***	Handing in work to lecturer within deadline despite external difficulties	Doesn't hand in assigned work on time.	Sometimes doesn't hand in work on time or does so without having finished.	Hands in work on time.	Finishes work in time to revise and deal with contingencies.	Always finishes work ahead of time, and so can respond appropriately, even in extreme situations.
	Reacting positively to differences of opinion and criticism by lecturer or other classmates	Can't handle suggestions from the lecturer or classmates. Reacts negatively.	The opinion of the lecturer or of classmates displeases and discourages him/her.	Accepts criticisms from the lecturer or classmates.	Incorporates suggestions and criticisms from the lecturer or classmates into way of proceeding, evaluating them very positively.	Asks for comments and critical opinions from the lecturer or classmates.
	Being stimulated by moderate frustrations (bad grades, repetition of work, search for new material and other difficulties), confronting them and doing better as a result	Can't handle frustration over moderate difficulties.	Sometimes gets discouraged and has difficulty in coping with moderate failures.	Reacts positively to moderate frustrations, learning from mistakes.	In cases of poor grades, repetition of work, etc., takes a proactive attitude and tries to improve.	Reflects and grows with adversity and learns from mistakes.
	Being able to devote continuous time and effort to a single task	Is very inconstant.	Devotes time and effort to own activities, but sometimes runs out of steam.	Is constant and steady in own activity.	Perseveres until a positive result is reached.	Finishes activities with the same spirit in which he/she started, even after long time and effort.
	Handling many tasks at the same time, setting priorities, assigning time to each one and not getting blocked	Never has time for anything. Always feels under pressure.	Sometimes doesn't calculate well the time needed for certain work, or doesn't take into account its size.	Organises time according to priorities and to own real possibilities.	Foresees what can be done within time available, programming own activities according to importance and urgency.	Organises time and activities, and follows plan rigorously and flexibly, using a systematic method.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Effectively meeting objectives under pressures of time, disagreement, opposition and adversity***	Working at a higher standard and within a shorter time than demanded by lecturer or team	Doesn't usually follow guidelines for completing and handing in work.	Sometimes fails to meet deadlines or guidelines for assigned work.	Does what needs to be done to complete work on time and according to guidelines.	Partially improves on the standards proposed for work and tasks.	Makes overall proposals that improve the guidelines and deadlines for completing work or tasks.
	Learning from own mistakes, analysing criticisms to improve in future	Doesn't accept own mistakes.	Shows a passive attitude to own mistakes, and doesn't learn from them.	Accepts critical observations made, learning from own mistakes.	Habitually asks for critical opinions on own work as way of improving performance.	Critically analyses self and finds alternatives to overcome the mistakes detected by self or by others
	Not giving in to frustration, identifying and creating alternative ways to achieve objectives	Gets easily discouraged, remaining passive and with no action response.	Tends to get discouraged by heavy frustrations.	Doesn't give in to frustration, but seeks alternative ways to accomplish objectives.	Is stimulated by frustrations to improve usual results.	Grows when faced with difficulties and sees frustrations as new challenges.
	Distributing time well and organising own agenda, without letting persons or situations distract from priorities	Doesn't appear to have organised own time and activities in the least.	Plans spending of time, but easily alters plan if interrupted.	Plans time according to the importance of activities.	Plans time according to the importance of activities and manages interruptions well.	Proposes measures to avoid interruptions. Foresees how to handle contingencies, while conveying a sense of calm and confidence.
	Setting objectives and timetables for completing work, defining priorities, controlling work quality and performing planned actions effectively.	Doesn't define way of organising work.	Fails to set objectives or deadlines, to complete planned actions, or to monitor and evaluate quality of own work.	Sets objectives and deadlines. Prioritises activities and monitors quality of own work.	Monitors accomplishment of own objectives.	Spontaneously subjects all work and projects to process of planning, executing, monitoring and improving.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Meeting difficult challenges in new and changing situations without a drop in high level of effectiveness***	Acting with diligence, quickly confronting obstacles standing in the way of objectives	Is slow in reacting to unforeseen obstacles and therefore in accomplishing objectives (deadlines, standards, etc.).	Has difficulty in responding to and overcoming obstacles standing in way of objectives.	Is quick in responding to and overcoming obstacles perceived to be standing in way of objectives.	Analyses obstacles and plans how to overcome them to accomplish objectives.	Foresees and avoids obstacles standing in way of quality and time objectives proposed.
	Being strong in the face of criticism, and searching for ways to use it to improve	Has difficulty in handling criticism. Usually looks for and makes excuses.	Gets easily discouraged by criticism and is incapable of reacting.	Responds calmly to criticism and uses it to improve.	Values the critical observations of others as an opportunity for improvement.	Requests criticisms of own performance from people who can provide ideas. Finds new ways to improve.
	Being stimulated by difficult or novel situations, staying strong and constant and dealing with them as a challenge	Gets blocked in difficult or novel situations.	Copes with difficult or novel situations, but lacks perseverance if they persist.	Is stimulated by complicated or novel situations.	Does very well in difficult or changing situations and doesn't get discouraged.	Looks for difficult or novel challenges, confronting them without building up tension.
	Planning and managing time under pressure, focusing on what is most important	Doesn't know how to administer time well, gets flustered and deals with matters as they come up.	Sometimes succumbs to pressure, setting aside something important to resolve what seems urgent.	Manages time effectively when under pressure.	Sticks to essentials when under pressure, using time efficiently. Knows how to say no when necessary.	Noteworthy for effectiveness under pressure, and for calmly taking best advantage of time.
	Being able to handle various complex tasks simultaneously, establishing mechanisms for controlling their progress	Can't handle and resolve more than one thing at a time.	Has difficulty in handling several complex things at a time, gets flustered or fails to monitor progress.	Handles and resolves more than one complex task at a time, monitoring their progress.	Shows ease in managing various projects at a time, following procedures learned.	Manages different complex projects, establishing own mechanisms to monitor their progress.

COMPETENCE: ETHICAL SENSE

Description

When people must take action or decisions with ethical implications, their capacity to adapt, to get involved and let themselves be guided by their moral existence is what we call their ethical sense (Cobo, 1993). This ethical sense takes shape in people's lives through processes of building moral character, and concerns their positive inclination toward the moral good of oneself or of others – that is, toward everything that is good or tends toward the wholesomeness or realisation of the individual – and perseverance in pursuing that moral goodness (Cobo, 1993). Therefore, we can say that the ethical sense is the ability to think and act according to universal principles based on the value of human beings and oriented toward their full development.

Learning to build an ethical sense takes place primarily within the sphere of people's daily lives, where they must find reasons for their moral convictions. Education of this sphere of daily living should be geared toward offering students essential frameworks of reference both for building their own personal lives and for their lives as citizens who must get along with others. The ethical sense competence is designed to fulfil certain functions, including: 1) promoting a reflective, critical attitude, getting students used to not accepting any ideas, acts or values that have not been carefully analysed and thought about; 2) strengthening their capacity to think logically, using reason as an instrument of dialogue; 3) learning to think independently, adopting their own stand on issues; 4) integrating into their vision of the whole a diversity of knowledge, beliefs and values; and 5) evaluating the normative capacity of ethics as an instrument for transformation and change.

To fulfil these functions, the competence has been organised into three levels: the first is *the moral personality and ethical principles*. Its objective is to provide foundational ethical knowledge that will enable students to know and assimilate its most basic categories and acquire the main tools for beginning moral reasoning. At this first level, therefore, students are expected to be able to reflect, reason and make judgements about whether or not certain moral behaviours are correct. The second level, *ethical values and moral sensibility*, focuses primarily on the key factor in the moral life of people: ethical values, attitudes and habits. Students at the third level, *the meaning of life and the principles of justice*, are aware of the need to let their own lives be guided by ethical principles. Fundamental objectives of this level are the acceptance of

commitment and responsibility, enhancement of personal autonomy and freedom of conscience, and the development of sensibility and commitment to the underprivileged.

The indicators proposed for assessing students' level of progress at each of the three levels reflect a training process divided into five stations:

1. Moral adequacy
2. Reflectiveness (aimed at values such as authenticity, self-fulfilment, logic, striving for excellence in the development of the most highly valued virtues, etc.)
3. Deliberation (aimed at values such as renouncing one's own interests and convictions, especially if these are erroneous or exaggerated; the recognition of others' points of view different from one's own; willingness to search for truth and agreement, mutual comprehension).
4. Virtuous behaviour (aimed at development of co-operative work that fills some need related to getting along, academic work, group life within a university context).
5. Acceptance of rules. Through the use (observance) of rules, recognition of rights and obligations, and through reflective and deliberative thinking on these types of rules. This refers to rules concerned with the organisation and course of university life in all its aspects (academic, living and working together, citizenship, etc.) and to rules related to other important practices: reflective and deliberative thinking, virtuous behaviour, etc.

Interaction with other competences, attitudes, interests, values

The ethical sense is or should be present in each and every one of the other competences. It is unquestionably transversal in nature, cutting across all competences. With regard to the ones explained here however, mastery of this competence is most closely related to: analytical thinking, systemic thinking, critical thinking, problem-solving, decision-making, oral and written communication skills, interpersonal communication, diversity and interculturality, adaptability, and the attitudes of responsibility, autonomy, justice, co-operation, etc.

Importance of this competence for academic and professional life

Having a highly developed sense of ethics is a practical competence willingly nourished in the moral life of individuals as persons, citizens and

professionals. It is therefore found in the personal, social and professional spheres of students. Consequently, the competence has been organised to focus not so much on specific knowledge as on enhancing the attitudes, values and competences related to the ethical sense and having the greatest effect on the personal, social and professional dimensions. Without distinguishing between them for the moment, we would stress as most fundamental those that strengthen values and attitudes such as autonomy, responsibility, co-operation, mutual respect, integrity, social awareness, etc.

In developing this competence, the student's future professional career must be seen as another prime element in his/her life project. The idea is for students to be able to integrate their chosen career into their life project and evaluate the ethical aspects that are helping to shape their own professional identity. However, this normative dimension should be seen within the broader framework of social justice. In any case, it must be recognised that generally speaking, university students already have, thanks to their age and the complex socialisation already received, a basic, stable system of moral options. Nevertheless, much work can be done through this competence to enhance 1) their critical discernment and the hierarchy, systematisation, foundations and scope of their moral schema; and (less often or easily), 2) a change in one of their basic convictions.

How to incorporate it into the academic curriculum

Teaching an "ethical sense" is not an easy task. It requires certain general, comprehensive conditions in all the subjects making up a degree course, and a classroom atmosphere that are hard to achieve. Therefore, if we want students to adopt a critical, reflective attitude, they must be equipped with criteria and the habit of requiring that theories and facts be based on adequate evidence or need. If students are to learn how to reason, they must have at least a practical knowledge of the main rules of rational argumentation. If they are to learn how to think independently, they must be taught to base what they say or write on evidence and facts. Finally, if ethical training is to help them to achieve an integrated view of reality, they must have a comprehensive vision of the role of different domains of knowledge and beliefs, as well as the systematic organisation of ethics.

COMPETENCE: ETHICAL SENSE

Definition: **Being positively inclined toward the moral good of oneself or of others (that is, toward everything that is good or tends toward the wholesomeness or realisation of the individual) and perseverance in that moral goodness.**

Mastery of this competence is closely related to: **analytical thinking, systemic thinking, critical thinking, problem-solving, decision-making, oral and written communication skills, interpersonal communication, diversity and interculturality, adaptability, responsibility, autonomy, justice, co-operation, etc.**

Levels of mastery:

1. Identifying, recognising and applying the moral personality and ethical principles
2. Identifying, recognising and applying ethical values and moral sensibility
3. Identifying, recognising and applying the meaning of the moral life and the principle of justice

Indicators:

1. Moral adequacy
2. Reflectiveness (enhancing values such as authenticity, self-fulfilment, logic, striving for excellence in the development of the most highly valued virtues, etc.)
3. Deliberation (enhancing values such as the renunciation of one's own interests and convictions, especially if these are erroneous or exaggerated; the recognition of others' points of view different from one's own; willingness to search for truth and agreement, mutual comprehension)
4. Virtuous behaviour (enhancing development of co-operative work, that fills some need related to getting along, academic work, group life within a university context)
5. Acceptance of rules. Through of the use (observance) of rules, recognition of rights and obligations, and through reflective and deliberative thinking on these types of rules. This refers to rules concerned with the organisation and course of university life in all its details (academic, living and working together, citizenship, etc.) and to rules related to other important practices: reflective and deliberative thinking, virtuous behaviour, etc.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Identifying, recognising and applying the moral personality and ethical principles*	Conduct governed by basic knowledge of ethics	Avoids deciding whether an action/ activity is morally right or wrong.	Doesn't question the reasons for the ethics behind some basic principles.	Expresses very basic moral opinions when a principle is applied to a specific situation.	Makes ethical judgements – i.e. expresses reasoned ideas based on a specific moral guideline concerning whether an action/activity is morally right or wrong.	Argues with well-reasoned ideas involving moral principles, opinions or judgements, leading to a moral conclusion.
	Seeking to affirm oneself through knowledge of the ethical world	Doesn't appear interested in the origin, internal structure or implications of basic ethical principles.	Has difficulty in steering and motivating own behaviour according to ethical principles.	Has vision of the ethical dimension of human beings.	Builds logical ethical arguments.	Expresses own idea of justice (in accordance with perception and development of moral awareness).
	Critically accepting new perspectives, even though they cast doubt on one's own	Doesn't address ethical issues in all their complexity (i.e., doesn't take into account the diverse implications, circumstances and consequences involved).	Only takes into consideration own perspective or that of the persons most directly involved in the course of an action, overlooking the point of view of others, especially of those also affected by the action (third parties).	Critically maintains stand on what is right in a discussion, using reasoned criteria.	In conversations and discussions, understands and is sensitive to the requirements and interests of others, their feelings, values, opinions and reasons.	Discusses things constructively: with the sincere desire to contribute to understanding and the resolution of problems addressed, while respecting and recognising the claims to validity of others' opinions.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Identifying, recognising and applying the moral personality and ethical principles*	**Using own axiological reality as sign of personality and identity before others**	Doesn't personally specify any values in own habitual way of thinking, reacting or acting.	Mentions values but without consciously and deliberately assuming them as own.	Manifests own personal values to others as part of own personal identity.	Ranks in importance or vital priority recognised personal values.	Recognises the role of ethical sense in the level of estimation of own personal values.
	Observing and putting into practice rules established by the group to which one belongs	Has difficulty in respecting all the rules set in the group of which he/she forms part.	Has difficulty in assimilating the rules set in the educational context of which he/she forms part.	Participates in the practices and activities of the group or context, abiding by their rules.	Strives to interpret and make sense of each of the normative elements in specific situations in the educational context.	Takes to conscience, through a process of reflection and deliberation, the normative aspects accompanying some situations and their role in providing a moral horizon.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Identifying, recognising and applying ethical values and moral sensibility*	Knowing how to get along in a plural, heterogeneous group	Undervalues the contributions of others.	Has difficulty in recognising others' contributions to group.	Critically examines own knowledge and stands, and those of others.	Explicitly recognises the rights of others to think and evaluate independently and individually, to express what they think and to freely act in consequence.	Shows independence in moral convictions, self-control and critical capacity, and so is able to respect and value others without being dominated by them.
	Incorporating the ethical sense into other areas and being guided by it	Lacks self mastery and control.	Needs greater moderation and/or serenity in situations of pressure, tension or conflict.	Reacts with prudence and/or maturity in difficult, novel situations.	Applies and soundly justifies moral principles to specific situations.	Addresses problems and actions with good sense, taking into account their complexity, integrating a critical perspective.
	Showing skill in dialogue	Doesn't listen attentively to what others say.	Has difficulty in making self understood when there are many ideas and people who see and value reality differently.	Draws from own and others' opinions what unifies, what adds, what distinguishes.	Accepts differences explicitly and with good reasoning.	Distinguishes between the private (object of respect and tolerance) and public (object of responsibility and fairness).
	Maintaining consistency between what one thinks and does	Lacks basic skills for dealing well with problems of moral conscience that could arise.	Doesn't question own actions critically (lacks motivation, has difficulty in accepting responsibilities).	Recognises conflicts of conscience and has basic skills for finding way out.	Resolves conflicts personally taking responsibility for own decisions.	Decides independently between actions perceived as feasible, taking into account all their implications.
	Recognising justice as a main, basic ethical principle	Remains oblivious to the most basic, proper sense of the word justice.	Identifies with difficulty the most basic, proper modalities of justice.	Relates justice to human rights, understood as concrete ethical obligations and rights.	Recognises and attributes what corresponds to self and others (when exercising justice in circumstances where required to do so).	Habitually acts with responsibility and respect, and is fair in actions with self and others, assuming responsibility for own acts.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Identifying, recognising and applying the meaning of the moral life and the principle of justice***	Appropriately handling situations that are morally significant, complex or conflictive	Avoids addressing moral requirements of specific practice within group. (Hardly participates in agreed events, has difficulty in respecting rules and agreements, and in shouldering some area of responsibility).	Doesn't get sufficiently involved in the group or accept a specific role in undertaking practices that simulate real or hypothetical situations.	Contributes and co-operates at group level in the resolution of morally significant, complex and/or conflictive situations.	Contributes ways of resolving morally difficult social or personal situations.	Shows virtuous behaviour (exemplary, excellent) in undertaking a practice that is morally significant, complex and/or conflictive.
	Knowing and taking care of oneself (feelings, opinions, beliefs)	Doesn't question self on important moral issues.	Makes little effort to discover own opinion, feelings or position on issues under discussion.	Acknowledges and expresses what he/she has detected in self (opinion, feelings or position on issues under discussion).	Contrasts and reaffirms or qualifies positions, arguments, reasons or opinions with others.	Acts truly and consistently with the values or virtues that he/she holds most highly.
	Using dialogue to further fairness and comprehension	Doesn't contribute arguments and reasons to support own views on what is right.	Has difficulty in linking own opinions with those of others when seeking to better understand the situation in hand.	Recognises and understands different opinions and points of views on issue in hand (capacity of listening to and recognising others' arguments, of comparing them with own, of sending clear, constructive messages).	Shows a positive attitude toward and evaluation of dialogue. Maintains bonds of affection and respect conducive to positive attitudes toward collaboration and dialogue.	Renounces own interests and convictions, especially if exaggerated or erroneous (recognises valid points of view of others; committed to the search for truth, fair agreements and better mutual comprehension).

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Identifying, recognising and applying the meaning of the moral life and the principle of justice*	**Satisfying, through co-operative work, needs linked to coexistence (in classroom, teamwork, group life)**	Shows little interest in getting other group members to participate in common activities.	Interested in getting other group members to participate in common activities.	Supports and defends the usefulness and importance of co-operative work as a positive means of furthering group life in the classroom.	Insists on the importance of co-operative work as a means of furthering group relations.	Convinces others that what they are doing will have effects on classroom relations, as well as on other groups.
	Being inclined toward good, a sense of justice and the feeling of duty	Shows inconsistencies in way of acting and expressing own ethical values and sense of justice.	Has difficulties in meeting obligations apart from personal interests.	Acts fairly regardless of personal interests and preferences: giving, attributing, recognising what corresponds to each.	Actively stands by others, sharing their needs, initiatives, concerns, problems.	Accepts group rules and how they are distributed, as a guarantee of the rights and obligations of all its components.

Description

Dialogue is the word we use for conversations between one or two people who alternatively express their ideas, thoughts and values. In the course of a conversation, differences of opinion and discussions may arise, but always in the spirit of seeking agreement between the parties. That, at least, is how it should be.

Interpersonal communication means positively interacting with other people through dialogue. That is, they each are empathetic when listening, and express themselves clearly and assertively, without hiding what they really think and feel.

Words are the important part of this communicative act, although how things are said and how they are heard is also essential. Therefore, both the verbal and non-verbal aspects of such interaction must be very much taken into account.

Development of this competence is linked to relationships between people in any context, and, of course, the capacity to interact well begins with a good predisposition toward dialogue. For this reason, the first level of proficiency concerns people's capacity to establish good dialogue relations with others.

The second level of mastery focuses on what students are able to do with dialogue and understanding – whether they are able to utilise them to generate closer, more fruitful and respectful relations between those involved; and whether they are able to produce collaboration as a product of interactions between people.

Fostering a constructive communicative context for interaction constitutes the third level of mastery, because it seeks to measure how students pay attention to others, how they incorporate their own ideas into discussion, how they stimulate honesty and sincerity in human interactions and how they help to build integrative consensus.

The indicators of this capacity measure knowing how to listen, sincerity and honesty, the capacity to encourage constructive dialogue and respectful interaction between people.

Interaction with other competences, attitudes, interests, values

This competence is directly involved with oral communication and with communication in a foreign language when people of international

origins interact. It also comes into play in teamwork, in conflict management and negotiation, and leadership.

Moreover, it is a competence that plays an important role in the values involved in personal and social development – that is, self-esteem, motivation and self-confidence are qualities that good intercommunication helps to develop. Furthermore, it develops orientation toward others and enhances one's capacity to consider and respect others' opinions.

Importance of this competence for academic and professional life

Universities are ideal settings for interpersonal communication. During their years at university, students can be prepared to develop their capacity to interact with others in different registers. First, in their relations with classmates in daily studies and learning. Second, in their relations with lecturers. Third, in the relationships they form with other university students, some of which may be long-lasting and very influential.

Universities are also of course the settings that prepare students for a career in the professional world. A world where interaction is essential to generate communication between people. Knowledge transfer, relations at work, job motivation and participation are just a few of the situations where interaction with others plays an important role.

How to incorporate it into the academic curriculum

This competence can be taught through case studies and problem-solving.

The idea is to generate situations between students that require interaction and co-operation between them, either through joint preparation of cases, or through activities that call for interaction between people and groups.

COMPETENCE: INTERPERSONAL COMMUNICATION

Definition: **Interacting positively with other persons through empathetic listening and through clear, assertive expression of what one thinks and/or feels, by verbal and non-verbal means**

Mastery of this competence is closely related to: **orientation toward others, support for others, self-esteem, respect, communication/information, competence/confidence, empathy, personal development, support, etc.**

Levels of mastery:

1. Establishing good dialogue with classmates and lecturers, listening and speaking clearly and assertively
2. Using dialogue and understanding to collaborate and generate relations
3. Fostering sincere empathetic communication aimed at constructive dialogue

Indicators:

1. Listening
2. Assertiveness
3. Feed-back
4. Atmosphere
5. Suitability

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Establishing good dialogue with classmates and lecturers, listening and speaking clearly and assertively***	Listening attentively	Doesn't listen. Wants to impose own ideas at all costs.	Gets distracted and doesn't capture entire message.	Listens attentively to others.	Listens closely to ensure full comprehension of others' ideas.	Pays sufficient time and attention to others to show they are being listened to.
	Saying what one thinks and feels on a subject	Is extremely quiet, so it's hard to know what he/she is thinking.	Doesn't take a stand and messages are ambiguous.	Expresses what he/she thinks and feels about the subject in hand.	States with clarity and assurance what he/she thinks and feels.	Is assertive. The other person always knows what his/her position and reactions are on the subject in hand.
	Talking about things in a way that doesn't put others on the defensive	Is constantly evaluating and judging what others say; is always on the defensive.	Speaks with excessive sense of assurance and superiority.	Avoids making value judgements or conveying sense of superiority when speaking. Does not put others on the defensive.	When communicating takes others into account and supports them.	His/her communication generates an atmosphere of understanding and dialogue.
	Asking questions to gain a better understanding	Doesn't ask questions and simply assumes that he/she has understood when others speak.	His/her questions are few, inopportune or poorly structured.	Asks open questions to understand others' ideas and positions better.	His/her questions are pertinent and enable the speaker to enlarge on what he/she is trying to convey.	His/her questions are intelligent and improve the atmosphere or help the dialogue to go forward.
	Expressing self clearly and accurately	His/her expression is poor and unclear.	Expresses self hesitantly and without managing to convey ideas well.	Conveys ideas concisely in familiar contexts.	Expresses ideas with ease and fluency.	Outstanding for facility of expression and communicative clarity.
	Developing good, consistent body language	His/her body language is inconsistent with verbal message and not appropriate for the communicative situation.	His/her body language doesn't reinforce verbal message.	With body and gestures conveys information that is consistent with verbal message and with the communicative situation.	His/her body language contributes valuable information and enriches verbal expressiveness.	His/her body language is highly expressive, consistent and suitable, enhancing communicative flow.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Using dialogue and understanding to generate relations of collaboration***	Listening to and understanding others' ideas even when opposite to own	Doesn't listen to others and only pays attention to what he/she is interested in.	Hinders flow of communication to stress own ideas.	Listens to everyone without criticising or judging their opinions.	Shows interest in others' ideas and discourse.	Shows comprehension toward all opinions.
	Criticising constructively; saying clearly what one thinks and feels without treading on feelings of others	Criticises destructively.	Always argues against.	Expresses self without disdain for others.	Argues point of view without making personal allusions.	Stresses the positive in others and reasons about the differences.
	Communicating spontaneously, creating an atmosphere of equality and collaboration	Speaks with superiority and distance. Fails to engage audience.	Utilises speech to distance self.	In own communication is relaxed and open.	Collaborates in building a relaxed, constructive atmosphere.	Generates confidence and openness in others.
	Respecting others in content (what is said) and in form (how it is said)	Intentionally generates tension for own benefit.	Imposes own ideas without respecting others.	Uses respect as a criterion for understanding and dialogue.	Uses understanding and dialogue to foment constructive attitudes.	Makes positive evaluations and respects others' opinions.
	Suiting speech and body language to the situation and to the needs of others	Resorts to non-verbal means to interfere and interrupt.	Doesn't take into account the contributions of others.	Suits speech and body language to each conversation and situation.	Pays attention and tries to integrate the contributions of others.	Is very flexible in own communication. Adapts to all types of people.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Fostering sincere empathetic communication aimed at constructive dialogue*	Being receptive to others' communicative proposals even if criticisms; Listening to enrich dialogue.	Doesn't tolerate questioning of his/her beliefs. Defends them very emotionally.	Expressly manifests disinterest for differing opinions.	Pays attention to everyone's opinions.	Manifests interest for differing opinions.	Actively elicits critical opinions.
	Proposing suggestions for quality communication aimed at constructive dialogue	Rambles on without clarity of ideas.	Doesn't incorporate others' ideas.	Makes suggestions on how to improve dialogue and manage communication better.	Furthers dialogue by objectively incorporating others' suggestions.	Outstanding for ability to integrate own and others' ideas.
	Creating communicative contexts based on honesty and sincerity of participants	Disdains from the outset any who disagree.	Systematically questions and opposes the opinions of others.	Expresses self with sincerity and respect.	Openly recognises own doubts and mistakes.	Stimulates honest, sincere and open communication on the part of others.
	Seeking shared meaning and negotiation of differences arising in communication	Focuses especially on differences.	Judges globally without detecting points of agreement.	First seeks points of agreement.	Stresses shared points and is willing to cede to others.	Takes the initiative in generating consensus.

Description

People are sociable by nature. The tendency to associate with others to obtain something, or to help to achieve goals that could not otherwise be attained individually is a trait that appears in childhood. It can be said to be genetic, as it is in certain animals that organise their habits and ways of life in groups: bees, ants, prairie dogs, etc.

However, the organisation of regulated activity such as work, studies, healthcare requires that we use this human trait following norms and rules that build on the importance of this natural phenomenon. People come together to play sports, organise parties and events, engage in research and discover new aspects of nature, of history, of art; to produce specialised goods and services, to defend themselves, etc.

There are aspects of group structure that determine their effectiveness and so should be taken into account. These include the number of members, proposed objectives, roles and assigned tasks of each member in working toward the common goal, rules to follow, etc. There are also specific group efforts on which will depend the group's progress (or decline) over time, such as decision-making, communication processes, conflict resolution, etc.

Both aspects of group functioning have an effect on the results achieved through group work. Teamwork cannot be improvised, but requires prior preparation and care in the details of its processes and structure.

Due to its complexity and importance, this competence has been divided into three levels of mastery. The first corresponds to members' responsibility to carry out tasks, meet deadlines, and give priority to common objectives over their own individual ones.

At a second level of proficiency, people participate and identify more with the effectiveness of the group. They not only participate formally by meeting minimum requirements, but work for harmony and understanding among group members, doing everything they can to see that people learn from and value each other.

Leadership of the group means organising, taking the initiative to motivate others, and having a positive influence on them. These are the features of the third level of proficiency in this competence.

To recognise and evaluate learning and progress at these three levels, the following indicators are used: tasks completed, participation, organisation and social value attached to work undertaken with others.

Interaction with other competences, attitudes, interests, values

Considered by many specialists as a core competence, teamwork involves thinking analytically and systemically, reflectively and critically, administering time and meetings, participating in decision-making and in management of objectives and projects.

It helps to improve interpersonal communication, conflict management and the exercise of leadership in small groups, but can be extended to more complex situations.

Teamwork is basic for developing values such as respect for human dignity, solidarity, global justice, etc.

Importance of this competence for academic and professional life

Students come to university to pursue a degree course. The degree accrediting these studies is obtained individually, but contrary to what some might think, the social aspect of students' academic and professional training has a great deal of weight in their overall education.

Students need to relate to lecturers and classmates in order to undertake work of various kinds, including study projects and research. Cultural and sports activities form part of their student life and participating in them provides perfect opportunities for exercising the competence of teamwork.

In professional life, competence in teamwork is required in two-thirds of employment offerings for positions of some responsibility. Employers seek people with good capacity for working in teams, for creating and directing teams, etc. In fact, selection processes devote part of their interview time to questioning candidates about this subject, or even include group interviews or group dynamics exercises in the selection process in order to observe how candidates perform in a group context.

Tasks that involve working with others, in teams, occur not only within departments (e.g. sales teams, accounting or production teams), but also between departments in multidisciplinary teams created specifically to undertake projects, resolve problems, draw up innovation or improvement proposals, etc.

How to incorporate it into the academic curriculum

One of the most popular recent methodologies is one known as "cooperative learning", where learning objectives are achieved by interac-

tion through teamwork activities. Clearly, the different techniques and activities incorporated in this methodology help to develop the competence of teamwork.

However, one should bear in mind that this competence is an attribute of each individual, along with his/her professional training and personal maturity. It must therefore be incorporated into the syllabus or course curriculum. It is a competence that must be assessed on the basis of behaviour showing progress in the specified indicators or criteria, including the techniques decided on for the assessment.

This is a competence where lecturers can use techniques of self- and peer-evaluation to supplement their own assessments. Lecturers can observe certain behaviours within the student group, but during part of the group activity time, it is the students themselves who best know how they and their classmates function as a team.

COMPETENCE: TEAMWORK

Definition: **Actively joining and participating in the attainment of shared objectives with other persons, departments and organisations**

Mastery of this competence is closely related to: **Good socialisation and interest in interaction. Strong social values conducive to a belief in integrity, honesty and competence of others. Capacity for interpersonal communication. Maturity to deal with differences of criteria. Conviction concerning the effectiveness of shared work. Desire and interest to freely share ideas and information. Values of collaboration, solidarity.**

Levels of mastery:

1. Actively participating and collaborating in team tasks and promoting confidence, cordiality and focus on shared work
2. Contributing to the consolidation and development of the team, fostering communication, balanced distribution of work, good team atmosphere and cohesion
3. Directing groups, ensuring member integration and high-performance orientation

Indicators:

1. Work
2. Participation
3. Organisation
4. Cohesion
5. Social value of activity

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Actively participating and collaborating in team tasks and promoting confidence, cordiality and focus on shared work***	Completing assigned tasks within deadline as group member	Doesn't complete assigned tasks.	Partially completes assigned tasks or does so with delays.	Reports before the deadline on the outcome of the assigned task.	Quality of work on the assigned task is a noteworthy contribution to the team.	In addition to completing assigned task well, his/her work orients and facilitates that of rest of team members .
	Participating actively in team meetings, sharing information, knowledge and experiences	Often absent from group work and his/her presence is irrelevant.	Takes little part, mostly at the request of others.	In general is active and participative in group encounters.	His/her work fosters participation and improved quality of team results.	His/her contributions are fundamental for the group process and for the quality of results.
	Collaborating in defining, organising and distributing group tasks	Manifests resistance to the organisation of work within the team.	Simply accepts the organisation of work proposed by other members of the team.	Participates in the planning, organisation and distribution of teamwork.	Is organised and distributes work with effectiveness.	Fosters organisation of work by taking best advantage of team member talents and know-how.
	Focusing on and being committed to agreement and shared objectives	Pursues own objectives.	Has difficulty in integrating personal and team objectives.	Accepts as own the objectives of the group.	Promotes a clear definition of objectives and the group's integration round them.	Motivates and marshals group round more demanding objectives. Groups where he/she participates noteworthy for performance and quality.
	Taking into account the points of view of others and giving constructive feedback	Doesn't listen to classmates and systematically disparages them, wanting to impose own opinions.	Listens little, asks no questions, does not want to know others' opinions. His/her contributions are redundant and not very suggestive.	Accepts the opinions of others and knows how to give own point of view constructively.	Promotes constructive dialogue and inspires quality participation from other group members.	Integrates others' opinions into a higher perspective, maintaining atmosphere of collaboration and support.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Contributing to the consolidation and development of the team, fostering communication, balanced distribution of work, good team atmosphere and cohesion***	Accepting and respecting group norms	Doesn't accept or respect group norms.	Questions group norms to suit them to own interests.	Accepts and respects group norms.	Participates in deciding group norms.	Proposes norms to improve the group's functioning and atmosphere. Helps to enforce norms and rules.
	Helping to decide and apply the team's work processes	Doesn't know or apply the methods and procedures agreed by the team.	Has difficulty in understanding and applying established work processes.	Applies good methods and procedures for effective undertaking of the team's work.	Participates actively in designing team's work processes.	Introduces changes in processes to improve quality of team's work.
	Acting constructively to resolve team conflicts	Provokes conflicts in group without contributing solutions.	Avoids addressing conflicts.	Acts positively to resolve conflicts that arise in group.	Sees first symptoms of conflict and acts quickly.	Own actions provide constructive ways out of conflicts, before they become prolonged or much worse.
	Helping to bring group together through way of communicating and interacting	Aggressively attacks or questions team's capacity to try to reach an agreement.	Is passive and interacts little with other group members.	Conveys clearly and directly own ideas and opinions to the other team members.	Interacts positively with other group members, supporting and encouraging them.	Proposes ways of getting together apart from formal meetings to improve group cohesion.
	Furthering the social importance of the activity undertaken by the group	Denies or questions utility or importance of team's task.	Is interested in getting members to participate in common activities.	Supports and defends utility and importance of team's task. Makes positive evaluations.	Insists on the importance of each team member's work to the final collective outcome.	Makes others see that what they are doing has repercussions on other groups.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Directing groups, ensuring member integration and high-performance orientation***	Collaborating actively in planning of teamwork, distribution of tasks and deadlines	Lets things go; acts without prior planning.	Improvises planning and leaves loose ends. Deadlines are not realistic.	Makes concrete proposals for the distribution of tasks and establishes reasonable deadlines.	Stimulates other members' participation, co-ordinating their contributions.	Distributes feasible tasks to members in a co-ordinated way with clear guidelines, even under time pressure and with diverse members.
	Directing meetings with effectiveness	Is unable to co-ordinate meetings, which get out of hand.	Tries to direct meetings but overlooks time, agenda or results.	Directs meetings with effectiveness and meets objectives.	Directs meetings with effectiveness, achieving balanced participation and the involvement of all present.	Achieves balanced participation and the commitment of all members of the group.
	Proposing clearly-defined, ambitious goals to the group	Doesn't know or is unable to formulate with clarity group objectives.	Proposes unclear objectives that confuse the group.	Proposes attractive objectives for the group defining them with clarity.	Stimulates team defining attainable, forward-looking goals.	Stimulates team formulating objectives that they accept as their own.
	Facilitating positive management of differences, disagreements and conflicts arising in team	Adds to conflict by exaggerating differences.	Gets lost in conflict and doesn't know how to reconcile or settle the differences expressed by others.	Addresses conflicts dealing with the contributions and differences expressed by the team.	Addresses conflicts balancing people's contributions and coming out of it well.	Makes team see that differences are enriching, achieving agreements accepted by all.
	Seeing that all members get involved with management and functioning of team	Doesn't manage individual commitment fostering team discouragement.	Hardly achieves basic commitment needed from members in order for team to function.	Obtains commitment of each member enabling the group to function as such.	Achieves personal and collective commitment of the team in all key aspects.	Gets members involved and committed. Members accept others' suggestions as their own proposals.

Description

The moment that two people meet to do something together, the possibility exists of different opinions arising and of each one defending his/her own as the best or more effective way of carrying out the task. This is where conflicts may arise.

Conflicts, like burns, come in different degrees. First degree burns are slight and heal easily. Third degree burns require intensive treatment, and a delay or failure to treat the burn properly can lead to a critical situation. Something similar can be said about conflicts. Some are slight and common, consisting mainly of differences of interests, and talking them over can usually set them straight.

However, when a conflict is allowed to fester due to delayed or inappropriate treatment, it can cause a rupture of relations or permanent confrontation, using up energy and resources unproductively and often quite destructively. There is only one treatment, one formula for facing and resolving conflicts – negotiation. This can come in the bland form of dialogue, communication, agreement or consensus, or the strong formula may be required, in which case formal negotiations are in order.

If the parties involved recognise their failure, they usually agree to some kind of mediation or arbitration. This may be an armistice that does not resolve the conflict, but instead leaves its treatment and definitive resolution until a later, better moment.

Mastery of this competence is analysed at three levels. The first is learning and mastering simple tactics such as listening to the other person's version and finding points in common with one's own stand, in order to advance from there.

The second, more complex level involves addressing conflictive situations between persons or groups, reflecting and skilfully getting the parties involved to reflect, employing simple strategies to reach agreements and constructive reconciliations.

The third level of proficiency in this competence deals with the capacity to handle confrontations with versatility, contributing either conflict negotiation tactics and strategies, or engaging in mediation and/or arbitration between the parties in conflict.

To assess students' levels of proficiency in the competence, we can use as progress indicators demonstrated control when something frustrating happens, or demonstrated understanding of situations with objectivity and impartiality. Assertiveness or skill in expressing one's own

thoughts and feelings with sufficient clarity and without offending, as well as active listening are also criteria for assessing conflict management competence.

A final indicator for evaluating this competence is the effort to find and propose alternatives in conflictive situations, as well as versatility and facility for getting others to accept them.

Interaction with other competences, attitudes, interests, values

As can be seen from the above description, this competence requires good oral and written communication, active listening, assertiveness, giving good feedback, capacity to see things objectively, and to distance oneself emotionally and rationally from the parties in conflict.

Teamwork is impossible if conflicts can't be managed adequately or if people lack flexibility in presenting their proposals and making them compatible with those of other members of the group. The competence of conflict management also requires flexibility, fairness and respect for rights of others, and, therefore, it is basic to values such as respect for human dignity, creation of a new order, global justice, etc.

Importance of this competence for academic and professional life

As we said in introducing this competence, there is no lack of situations where conflicts arise in ordinary life. A university setting is no different, and it is important to take advantage of such situations to further training in a competence that requires much practice. It is not easy to improvise.

Differences with classmates, with lecturers, other academic authorities, service personnel (bookshop, cafeteria, porters, etc.), provide occasions for practicing conflict management and negotiation techniques, tactics and strategies. Developing this competence in students contributes powerfully to a better classroom atmosphere, because conflicts are addressed naturally and with skill, since this is an important part of interpersonal relations.

In professional life, conflict management is a competence that is generally much in demand. In particular, it is required in sales positions where relations are based on people's confidence in the good that will come from the product or service offered and the return for the entity

which we represent. It is an important competence for executives and management, particularly in the areas of purchasing, labour relations, etc. Indeed, it is one of the specific competences for such positions.

How to incorporate it into the academic curriculum

Lecturers will find multiple occasions for practicing this competence if they assign co-operative work to be done in pairs or in groups.

Students' interest must be focused on identifying an emerging conflict, the roles and styles of confrontation involved, the phases through which the conflict passes, whether or not it is resolved, etc. Learning this competence is compatible with almost all academic subjects, since the work to be done can give rise to situations where the above behaviours can be practiced.

Especially recommendable for this competence are assessment techniques involving student participation through self- and peer-assessment or the evaluation of other classmates.

COMPETENCE: CONFLICT MANAGEMENT AND NEGOTIATION

DEFINITION: **Seeking to resolve differences that arise between persons and/or groups in any type of organisation**

Mastery of this competence is closely related to: **Communication, listening, feedback, objectivity, adaptability, flexibility, fairness, respect for own and others' rights, etc.**

Levels of mastery:

1. Expressing own positions and considering those of others, endeavouring to reach acceptable agreements in situations of conflict between self and other person or the group
2. Positively and constructively addressing conflict by reflecting on the situation, defending own positions with skill and strategy, and reconciling conflicting points of view
3. Dealing with situations of conflict with versatility, skill and ethical sense, and exercising functions of mediation between persons, groups and organisations

Indicators:

1. Coping with frustration
2. Comprehension
3. Assertiveness
4. Capacity for listening
5. Search for alternatives

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Expressing own positions and considering those of others, endeavouring to reach acceptable agreements in situations of conflict between self and the other person or group***	Tolerating and accepting vexations that arise in interactions with classmates	Is badly frustrated and vexed when interest or position collides with those of classmates.	Gets discouraged by discrepancies and conflicts of interest with classmates, running away from or avoiding such situations.	Tolerates and accepts vexations that arise in interactions with classmates.	Is accepting when classmates express differences and discrepancies with him/her.	Values positively expressions of differences between classmates, as an expression of their identity and confidence in others.
	Being able to analyse and understand conflicts, including awareness of own position and responsibility in such situations	Reacts impulsively when enters into conflict with classmates.	Has difficulty in reflecting in situations of conflict that cause him/her anxiety.	Reflects on the conflict, trying to understand what is happening in order to cope with it.	Analyses the causes of a conflict, trying to understand the positions of classmates in relation to own.	Responsibly accepts own emotions and actions in situations of conflict, and analyses those of classmates.
	Calmly and clearly expressing own positions when discrepancies and conflicts arise	When discrepancies and conflicts arise, defends own positions with aggressiveness.	Has difficulty in expressing own opinions and positions if they don't coincide with those of classmates.	Expresses own opinions and interests calmly, even though different from those of classmates.	Expresses own positions with clarity argues them when discrepancies arise.	Honestly expresses own positions and interests to classmates, remaining open to dialogue and the possibility of reconsidering stand.
	Listening and considering the positions of others in situations of conflict	Doesn't listen, refutes and disparages classmates when not in agreement with them.	Has difficulty in listening to and understanding divergent positions. Gets tense when differences are expressed.	Listens to the opinions and interests of classmates, trying to understand them.	Tries to understand the interests of classmates and takes them into consideration.	Promotes an atmosphere of respect and dialogue where everyone can speak freely and be listened to.
	Seeking acceptable alternatives and solutions for conflicts, facilitating and assuming commitments	Tries to impose own points of view. Doesn't know how to give in. Gets angry if doesn't get own way.	When differences arise, prefers to give in or leave in order to avoid conflict.	After listening, is clearly open to considering classmates' proposals and to conceding points in order to reach an agreement.	Contributes actively to dialogue with proposals to achieve agreements and commitments with classmates.	Tries to reconcile and integrate different postures to reach agreements satisfactory to everyone involved.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Positively and constructively addressing conflict by reflecting on situation, defending own positions with skill and strategy, and reconciling conflicting points of view***.	Addressing conflicts with sufficient emotional control to analyse the situation in which he/she is involved.	Reacts emotionally to conflict; gets upset and can't stand back to analyse and understand it.	Has difficulty in controlling anxiety in the face of conflict, confronting it with stress.	Addresses conflicts from sufficient distance to analyse the situation in which he/she is involved.	Is aware of own emotions in conflict situations and keeps them under control.	Understands and is aware of own and others' emotions when experiencing conflict.
	Finding the positive and constructive side of a conflict	Experiences conflict as something negative that thwarts and frustrates own interests.	Perceives conflict as a difficult/dysfunctional process jeopardising the cohesion and unity of the group as it works toward common objectives.	Accepts and addresses conflict as something natural that arises in all relationships.	Considers that positive consequences can be derived from conflicts if handled appropriately, although at great expense of energy.	Values the positive, transforming potential of conflict, and works to manage it constructively.
	Showing comprehension and consideration toward the requirements, interests and positions of others	Has difficulty in standing back from own perspective to understand that of others.	Tries to imagine self in others' shoes to understand their points, but has difficulty in differentiating them from own (often confuses them).	Promotes an atmosphere of respect and dialogue where everyone can speak and be heard.	Shows empathy in his/her comprehension and consideration of the positions of others.	Shows sincere, full consideration for the underlying needs and requirements of others.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Positively and constructively addressing conflict by reflecting on situation, defending own positions with skill and strategy, and reconciling conflicting points of view.*	**Showing assertiveness and strategy when proposing and defending own positions**	Expresses own positions with firmness and conviction, but has difficulty in varying perspective.	Is open to dialogue and expressing own opinions, but defence of own position weakens when a competitive atmosphere arises or the process takes an unexpected direction.	Expresses own position and interests with clarity and honesty, and knows how to defend them in an atmosphere of dialogue.	Knows how to present and defend own positions, planning a strategy and adapting it to the process with flexibility.	Analyses and plans the best strategies, responding quickly and with versatility in processes of negotiation.
	Reconciling differing points of view in search for satisfactory alternatives	Shows little flexibility in varying own perspective and considering new alternatives in a dispute.	Shows flexibility and willingness to cede points in own position to arrive at commitments between the parties.	Tries to reconcile and integrate different postures to arrive at agreements that satisfy the parties involved.	Is open and creative in generating positive solutions to settle disputes.	Promotes an atmosphere where everyone can contribute to building a consensus and negotiated way out of a conflict.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Dealing with situations of conflict with versatility, skill and ethical sense, and exercising functions of mediation between persons, groups and organisations***	Showing good emotional self-control and comprehension of others' emotions in stressful and/or threatening situations	Loses control over emotions and becomes defensive or aggressive when conflict seen as threatening.	When a conflict worsens, gets stressed and tense, and feels own position weakened.	Understands and is aware of own and others' emotions in experiencing conflict.	Withstands tension well in situations of conflict involving high degree of tension and threat.	In entrenched conflicts, facilitates and sustains atmosphere of dialogue, without attacking or feeling attacked.
	Appreciating the potential of conflict for driving change and innovation	Can't redirect conflict toward positive point of encounter for the persons, groups or organisations involved.	Takes positive stand that facilitates agreements and small positive achievements.	Values positive and transforming potential of conflict, and argues in favour of dealing with it constructively.	Moves conflict to positive terrain where dialogue, negotiation and commitment between parties can be facilitated.	Positive, co-operative attitude to conflict; promotes constructive integration between parties accomplishing clear improvements.
	Analysing and understanding conflict as a mechanism of negotiation for empowerment and participation	Perceives conflict of interest as tension and dysfunction, without capacity to look further into its causes.	Tries to analyse and address conflict in structural terms, clarifying responsibilities and communication channels.	Reflects on dynamics of power and participation in conflict, integrating this into own analysis and comprehension.	Grasps and skilfully analyses the dynamics of power and participation involved in the processes of conflict.	Skilfully manages political dynamics of conflict, mediating to restore balance of power and participation.
	Efficiently analysing the affective, cognitive and behavioural processes involved in conflicts	Acts too quickly looking for shortcuts to end conflict, without analysing the dimensions and processes involved.	Has difficulty analysing and understanding how conflicts develop, and the affective and cognitive dimensions involved.	Can analyse the different phases and sequences in the birth and development of conflict.	Analyses conflict processes taking into account emotions, representations and behaviour involved.	Analyses and understands in depth how the parties involved in conflict feel, think and act.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Dealing with situations of conflict with versatility, skill and ethical sense, and exercising functions of mediation between persons, groups and organisations*	Showing flexibility and versatility in attitudes, and in the strategies and tactics employed in managing conflict	Rigid and lacks foresight in attitudes and strategies when dealing with conflict and the process of negotiation.	Plans strategies and tactics for dealing with conflict, but shows little versatility in attitudes and tactics during negotiation.	Analyses and plans best strategies for dealing with conflict, responding with speed and versatility in processes of negotiation.	Shows great skill and strategy in the planning and development of negotiations.	Co-operates, yields, adapts, avoids, competes, commits and agrees appropriately in each context and negotiation.
	Exercising mediation in situations of conflict between persons, groups and organisations	Is never available to intervene in processes of conflict and negotiation unless directly involved.	Has difficulty in intermediating in situations of conflict, because tends to get too involved in them.	Shows availability to exercise the role of mediator and is well accepted by the parties involved.	Maintains an appropriate position when exercising functions of mediation, facilitating agreements and commitments between the parties.	Is chosen as mediator in situations of conflict. Keeps parties collaborating until they find way out, assuming satisfactory, lasting commitments.

Chapter 4

Systemic Generic Competences

These involve abilities and skills related to the comprehension of an overall system or whole. Systemic generic competences call for a combination of imagination, sensibility and skill enabling one to see how the parts are related and interact within the whole.

The systemic competences have been grouped into three categories: organisation, enterprise and leadership.

Under the heading of *organisation* there are three competences: "objectives-based management", "management by projects" and "quality orientation". The first two make reference to two basic tools: management by objectives, a technique that can be applied to any personal, social or institutional field; and management by projects, a much required competence in universities. Quality orientation is also in great demand in today's world. It is not enough to do things; we must do them well, seeking excellence in everything we undertake. Developing this competence in university life means, first of all, accepting the challenge of trying to do things well, being concerned not only to complete work, but to make sure that it bears the stamp of quality. Quality begins with oneself, with everything that we do, how we do it and apply it. It is the search for excellence and continuous improvement.

The second category is *enterprise* and comprises three competences: creativity, enterprising spirit, and innovation. Creativity means skill in responding originally to the demands of a given context. It means applying knowledge creatively to resolve common situations in a given context or surroundings. Enterprising spirit is a competence that is much in demand today. There is a lack of persons with enterprising traits, who assume risks, believe in themselves and seize the initiative to embark on

projects, activities, undertakings that they can promote and move forward. Finally, the third competence in this section is innovation. Innovation as a personal competence is understood as the capacity to respond satisfactorily to personal, organisational and social needs, modifying processes and results. To develop this competence, one must be favourably disposed to thinking in another way, able to see and think things through from different perspectives, and therefore adept at creative thinking.

Finally, the last section of systemic competences is *leadership*, a heading that includes two basic competences: "achievement orientation" and "leadership" *per se*. Having an achievement orientation means not losing sight of what we want, clarifying what we expect to achieve, and in short orienting activity toward desired results. The latter are what mark the *direction* of individual or group behaviour, and achievement takes precedence over everything. This is a clearly systemic competence, and requires a forward, holistic outlook to integrate all elements and align them with desired achievement. This competence is closely associated with profitability, which may be individual or institutional, but may also be geared toward social benefit.

The competence of "leadership" is understood as the capacity to influence others to obtain from them the best that they are able to give and contribute. Leadership is not an easy competence to acquire or develop. Some authors consider it a competence that is strongly based in the personality and mostly innate, and therefore not one that everyone can aspire to. Today, however, leadership is considered a competence that can be acquired and above all developed with training, experience and much practice. The good side of the coin is that it can be developed and is not purely innate – i.e., something that you either have or don't have.

COMPETENCE: CREATIVITY

Description

Creativity is one of the prime motors of progress in the history of science and the arts. It is easy to remember the names of researchers, authors, artists, etc. who at one time were able to construct innovative, sometimes ground-breaking, feasible alternatives – that is, people with the power to make a significant contribution to their field.

Occasionally, professional or academic activity is characterised by a constant repetition of activities and procedures. There are people or situations that always repeat the same patterns or simply follow the guidelines that regulate their framework of action. Occasionally this leads to exhaustion of motivation, to a certain drabness in individuals or the quality of their work. Students, professionals or potential clients can eventually suffer a certain monotony, feel that they are falling behind, not taking advantage of their real capacities or, effectively are missing good opportunities that lie outside the limited, creativity-starved, one-way path they are on.

Other persons, however, even though working in the same scenarios with the same resources at their disposal, are able to generate innovative and original proposals thanks to their way of focusing on situations, addressing problems, carrying out procedures, undertaking activities, applying techniques, devising strategies etc. In a word, by being creative.

This means having a good degree of flexibility, originality, open-mindedness, method and capacity to structure and produce contributions that are creative. So the competence of creativity is defined here as the capacity to address and respond satisfactorily to situations in new, original ways within a given context.

Interaction with other competences, attitudes, interests, values

The competence of creativity is associated with divergent thinking. One needs to be able to get out of the rut of pre-established thinking in order to generate creative proposals. In turn, creative proposals actually trigger divergent thinking in the person who generates a new proposal and also in those who share it, as they have the opportunity to address reality through a new artefact.

Also required are a certain spontaneity and capacity for wonder. Creative alternatives are out there. In some cases they have always been there, until someone has released his/her own spontaneity and looked at the world with a certain ingenuity, shedding pre-conceived ideas and being able to feel a sense of wonder at marvels that had come to seem common.

Development of the competence of creativity can be positively or negatively conditioned by people's sense of self-esteem. Low self-esteem inhibits creation for fear of repeating actions which in the past led to disapproval by others. Overly high self-esteem can cause us to make creative proposals that are perhaps innovative but not appropriate – that is, proposals that do not suit the context or lack effective potential for improvement. The right amount of self-esteem is what enables us to exercise creativity without fear of social disapproval, but being sensibly aware of what is innovative, appropriate and enriching, and what is not.

Importance of this competence for academic and professional life

In both academic and professional settings, the competence of creativity brings important benefits. People who exercise their creativity in their studies or at work are probably more motivated and enjoy their work more than people who do not. Dull repetition of a certain way of studying or doing one's job can stultify, whereas work done creatively can give rise to new proposals that enable the person to grow and seek advancement.

People who are creatively competent are a plus to their surroundings as well. Creativity is an important competitive advantage in new fields and technologies where much remains to be done and built. However, it is even more of a strategic advantage in contexts where everything seems to have been already invented. In such situations, the creative capacity can be crucial, marking the difference between excellence and mediocrity. Consequently, there are many professional sectors where this competence is of prime importance.

In the case of students, the opportunities to exercise creativity provide at least two important advantages. First, such opportunities help to further develop creativity, and secondly, they enable students to strengthen their learning orientation. This gives them more freedom, since they take greater responsibility for and ownership of their learning process, with the advantages that this entails.

How to incorporate it into the academic curriculum

Offering students opportunities to exercise their creativity is a challenge for lecturers. It means being flexible as to the contexts of academic work and opening up room for choosing and taking decisions when setting guidelines for academic work. The first years in a degree course are less amenable to such openings, and in general it is advisable to lay down more structured guidelines. But in the final years of a degree course, lecturers should offer opportunities for students to construct and generate designs, strategies, reports, techniques, projects, etc. so that they can exercise and evaluate their creative capacity.

The three levels of mastery of this competence correspond to three types of scenario usually found over the span of a degree course. First there are indicators concerning the generation of innovative solutions to known problems and situations. At the second level students are expected to be able to manifest formally their original contributions in diverse fields. At the third level there are indicators concerned with a more advanced degree of creativity, with original, reliable, flexible, complex, practical solutions.

COMPETENCE: CREATIVITY

Definition: **Addressing and responding well to situations in new and original ways within a given context**

Mastery of this competence is closely related to: **Divergent thinking, Spontaneity, Capacity for marvel and wonder, Self-esteem, etc.**

Levels of mastery:

1. Generating and conveying new ideas or generating innovative solutions to known problems or situations
2. Generating original, quality ideas that can be made explicit and defended in known and unknown situations
3. Contributing original, practical, applicable, flexible and complex ideas and solutions, affecting self and own processes, as well as others

Indicators:

1. Fluency, flexibility, capacity to generate solutions (quantity of ideas, ideas that improve results, ideas that span various fields)
2. Originality (innovative ideas, original ideas, ground-breaking ideas)
3. Attitude/outlook (Critical thinking, open mind, "without limits")
4. Method (by analogy or imitation, by association or integration, spontaneity)
5. Capacity to do something with those ideas (express them or convey them, make them explicit, put them into practice)

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Generating and conveying new ideas or generating innovative solutions to known problems or situations***	Contributing suggestions for the ideas, situations, cases or problems posed	Never proposes suggestions or doesn't do so independently.	Contributes suggestions when required to do so, or suggestions are limited.	Contributes own suggestions regarding problems or situations.	Generates a range of ideas and/or solutions to issues raised.	Generates a large quantity of alternative ideas, spontaneously and/or before required to do so.
	Proposing ideas that are innovative as far as contents, development, etc. are concerned	Hesitates to consider or propose innovative ideas.	Proposes ideas that contain nothing novel.	Proposes innovative ideas.	Suggests innovative improvements for processes in which he/she directly takes part.	Outstanding for innovative contributions.
	Acknowledging different manners of doing things; being non-conformist	Doesn't question own situation or circumstances. Simply works according to established patterns.	Questions things, but accepts own situation as unchangeable.	Realizes there are various ways to do things. Is somewhat non-conformist.	Questions the traditional ways of doing things and tries out new ways to bring about improvements.	Detects situations that can be improved and proposes innovative solutions.
	Generating new ideas or solutions to situations or problems based on what is known	Is unable to extrapolate knowledge to other fields.	Is able to extrapolate own knowledge, but this doesn't help him/her to generate new ideas.	Recognises valuable ideas or practical solutions that have worked in other contexts.	Generates new ideas on analogy with other situations or problems experienced previously.	Recognises valuable ideas or practical solutions that have worked in other contexts, and adapts and develops them in own context.
	Transmitting or conveying to others the new ideas generated	Is unable to express own new ideas.	Expresses own ideas with difficulty.	Can express and convey own new ideas to others.	Shares own ideas and makes self understood by all.	In sharing ideas, generates a creative atmosphere.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second Level of proficiency: *Generating original, quality ideas that can be made explicit and defended in known and unknown situations*	Contributing quality suggestions for problems or situations that arise	Can't observe a problem from different point of view.	Proposes ideas in new situations from different points of view.	Contributes own ideas for problems or situations from different angles.	Generates own alternatives for problems and/or situations from different angles.	Generates a large quantity of quality ideas, to choose the best from among them.
	Proposing original or unconventional ideas	Simply repeats ideas.	Proposes new ideas that are not considered original.	Proposes original ideas.	Proposes original ideas that improve the processes or groups of which he/she forms part.	Noteworthy for originality of his/her contributions and for approach taken to solve problems.
	Being open-minded about new ideas and perspectives	Fails to see other realities different from own.	Only maintains an open mind in certain areas and situations.	Keeps an open mind about new ideas and perspectives.	Is able to help others keep an open mind.	Generates an open atmosphere where new ideas are entertained without hesitation.
	Integrating knowledge from several disciplines, sources or fields to generate novel ideas for known and unknown problems and situations.	Is unable to integrate own prior knowledge to generate new knowledge or ideas.	Integrates knowledge from diverse fields but without generating novel ideas.	Generates new ideas bringing in knowledge from several disciplines, sources or fields.	Integrates knowledge and ideas to generate novel thinking applicable to new or unexpected situations.	Integration of knowledge generates ideas that improve previous solutions to known problems or situations.
	Making ideas explicit through diagrams, equations, etc.	Is unable to organise own new ideas.	Has difficulty in appropriately structuring the new ideas that he/she has generated.	Can convey novel ideas formally.	Can make others understand his/her new ideas by expressing them formally.	By expressing new ideas formally, prompts, creative contributions from the rest of the team.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Contributing original, practical, applicable, flexible and complex ideas and solutions, that affect self and own processes, as well as others***	Being able to generate ideas whose consequences go beyond self or own field of application	Generates ideas with very low impact.	Generates ideas that directly affect self but do not affect or improve other fields.	Generates ideas that have consequences beyond own person.	The ideas that he/she generates affect more than one field of application, thus improving general results.	Noteworthy for introducing unique or leading-edge solutions that improve various aspects or fields of action.
	Proposing ground-breaking ideas as far as contents, development etc. are concerned	His/her ideas lack singularity or originality.	His/her ideas are innovative but based on existing solutions.	Proposes ground-breaking ideas. Appreciates radical or unconventional ideas.	Proposes ground-breaking ideas that help others to question the existing way of doing things.	Adopts novel approaches, generates new ideas and injects creativity into whatever he/she does, improving systems, procedures and processes.
	Generating new thoughts without restrictions	Thinks within established bounds, due to social, cultural, perceptive etc. limitations.	Has difficulty in adopting divergent perspectives in the generation of ideas.	Keeps an open mind that doesn't allow him/her to set limits in generating new ideas or solutions.	Is able to think "outside the box" in diverse and complex fields.	His/her different angle on things helps to develop the creative capacity of the team.
	Using specific methods to improve creativity	Doesn't apply any type of method that would enhance own creativity.	Uses a single method to generate new ideas for problems or situations that arise.	Applies different approaches that enable him/her to generate creative ideas.	His/her practice with different approaches makes it possible to generate some creative ideas spontaneously.	Has developed sufficient competence to generate creative ideas spontaneously.
	Being able to elaborate the ideas generated	Is unable to elaborate the ideas that he/she proposes. His/her ideas are not viable.	Is able to generate viable ideas, but is unable to put them into practice.	Is able to put into practice own ideas generated.	Frequently finds and applies practical, appropriate solutions to unusual problems.	Is recognised as a generator of creative, valuable and applicable ideas that improve results.

Description

Enterprising spirit is the capacity to commit certain resources on one's own initiative in order to take advantage of an opportunity, assuming the risk that this entails. People are said to be enterprising if they forthrightly undertake difficult or risky actions.

At the first level of this competence, people with enterprising spirit are able to address usual situations with initiative. Having a good conception of themselves, their level of self-esteem enables them to act with confidence. They weigh risks and opportunities, and then take decisions, considering their own personal interests and the social consequences that may arise from them. In addition, such people are able to foresee the effects of the actions they undertake. If they consider that the situation is highly complex, they seek help in confronting it.

People at the second level of enterprising spirit join with others in taking initiatives. They get other persons or groups to participate in their undertakings, involving them in the assumption of risks but ensuring that everyone sees all these risks as their own. Moreover, they manage to involve others in their vision of the future.

Finally, when they reach a third level of competency, enterprising people are able to undertake complex ambitious projects. They have a forward outlook and take decisions with confidence. They become involved in in projects having a social dimension.

Interaction with other competences, interests, attitudes, values

Enterprising spirit (together with creativity and innovation) is one of the competences comprising the group known as enterprising capacity.

Mastery of this competence is also related to self-motivation (as one's own initiative is involved) and to leadership, since people can involve and direct others using their own initiative. It has to do with endurance and adaptability, since changes can spark two opposite attitudes, and that of adaptation requires initiative and motivation to undertake actions in a situation seen as an opportunity and not as a threat. Also important for this competence is a good level of development of the decision-making capacity.

Attitudes and values come into play in the social dimension of enterprise and when people must analyse and assume others' risks as if they

were their own, or when they must evaluate the consequences of decisions made not only by themselves but by others.

Importance of this competence for academic and professional life

To meet learning and work objectives, it is important to develop one's enterprising spirit. As the years pass and students' autonomy increases together with the complexity of the work they must do, a well-developed enterprising spirit becomes more and more essential.

People who have an enterprising spirit can help drive groups and organisations, facilitating the personal development and capacity for commitment and risk-taking of their members. This is a competence that is and must be well developed in persons who are leaders in their contexts.

How to incorporate it into the academic curriculum

Development of this competence is fostered by adopting teaching strategies that require students to analyse explicitly the opportunities and risks of a situation, and to search for allies in addressing it.

In teamwork tasks, it is useful to state that someone should take on the enterprising role, mobilising the others and ensuring that they become involved in the initiative. This will put into practice the attitudes and strategies needed to develop enterprising spirit.

The tools of assessment must focus on the entire process of analysis and decision-making, and not only on the solution adopted.

COMPETENCE: ENTERPRISING SPIRIT

Definition: **Undertaking projects on own initiative, committing resources to exploit an opportunity, and assuming the risks that this entails**

Mastery of this competence is closely related to: **Self-motivation, leadership, initiative, creativity, innovation, building a new world**

Levels of mastery:

1. Habitually facing reality with initiative, weighing risks and opportunities and assuming consequences
2. Taking initiatives together with others, sharing with them one's projects and vision of the future
3. Undertaking ambitious (complex and challenging) projects, involving social decisions

Indicators:

1. Initiative
2. Assumption of risks
3. Vision
4. Self-esteem
5. Social influence

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Habitually facing reality with initiative, weighing risks and opportunities and assuming consequences***	Taking initiative in daily situations	Usually hesitates to take decisions daily.	Frequently depends on others for decision-making.	Takes decisions and only asks for help when facing great complexity.	Takes day-to-day decisions autonomously.	Has a great deal of initiative, gaining him/her wide recognition.
	Weighing risks and opportunities, taking decisions in consequence	Takes decisions without thinking or analysing the risks.	Analyses pros and cons but avoids taking decisions.	Weighs the pros and cons of risks and opportunities and takes decisions.	Carefully weighs the risks involved in complex situations.	Makes excellent risk analysis, assumes them and decides with logic.
	Being able to anticipate the effects of actions undertaken	Has reactive behaviour, without vision of the medium term.	His/her initiatives are sometimes unwise due to lack of vision.	Anticipates the consequences of decisions taken.	Is able to anticipate the future over the medium term.	Sees with clarity what the long-term future will hold.
	Including social criteria in own decision-making	Can't see the consequences that own decisions will have on others.	Sees the social repercussions of own initiatives, but gives priority to own interests.	Takes decisions considering both own personal interests and social consequences.	Takes decisions considering social consequences, and gives them priority over own interests.	Gives priority to social parameters when initiating and undertaking projects.
	Having enough self-esteem to take initiatives	Is immobilised by low self-esteem.	Level of self-esteem sometimes makes him/her doubt own possibilities.	Level of self-esteem is suited to reality and permits him/her to act with confidence.	High regard for self and others gives him/her positive vision of others.	Involves others in own initiatives thanks to high self-esteem and confidence in others.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Taking initiatives with others, sharing with them own projects and vision of the future***	Getting individuals and/or groups to participate in own initiatives	Doesn't involve others.	Tries but fails to involve others.	His/her initiatives are usually accepted by others.	Gets others involved in the initiatives that he/she takes.	His/her initiatives spark the interest and commitment of others.
	Involving others in the assumption of own and outside risks	Can't get others to assume risks.	Has difficulty in getting each classmate to assume the risks of others.	Gets everyone to see the risks of others as their own.	Gets others to assume risks jointly.	Inspires so much confidence that others assume risks without fear.
	Getting others to share own vision of future in projects undertaken	Doesn't show interest in sharing own vision with others.	Can't get others to share own vision of future.	Gets others involved in own vision of future.	Clearly outstanding for vision of future.	Enthuses others with own vision of future, even over the long term.
	Promoting projects that benefit those around one	Discards initiatives that do not benefit him/her personally.	Has difficulty in undertaking projects that benefit those around him/her.	Undertakes projects that have positive effects on others.	Promotes initiatives whose major aims include social benefits.	In every project is committed to considering the benefits it will bring to the community.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Undertaking ambitious (complex and challenging) projects, involving social decisions*	Undertaking new ambitious projects	Lacks initiative to undertake projects of certain complexity.	Gets blocked by complex projects, although initiates them.	Takes the initiative in undertaking complex projects.	Undertakes ambitious projects.	Noteworthy for capacity of initiative and for the enthusiasm with which he/she undertakes major projects.
	Being committed and taking the initiative in complex and challenging projects	Doesn't want to get involved in major projects.	Degree of commitment in complex projects falls when difficulties arise.	Undertakes complex projects with commitment.	Seeks projects that are challenging, even though complex.	Assumes leadership and carries out complex projects, gaining the support and involvement of others.
	Taking initiatives thanks to intensely clear vision of the future	Can't see far ahead.	Looking ahead to future causes him/her to hesitate and seek external support.	Has vision of future and takes decisions with confidence.	Takes new initiatives thanks to vision of future.	Has clear vision of future over the medium- and long-term, takes risky initiatives and involves others in the project.
	Being committed to projects with a social dimension	Shows indifference to projects of a social nature.	Shows interest only in formulating and proposing social projects, but doesn't get sufficiently involved.	Gets involved in projects whose social dimension is a feature, although not the predominant one.	The social dimension of projects motivates him/her to undertake or become committed to them.	Proposes and undertakes projects with a predominant social dimension.

COMPETENCE: INNOVATION

Description

Innovation is a deliberate action involving the introduction of something new into a system or organisation, modifying its processes (structures, procedures or operations) and bringing about an improvement in outcomes – that is, in the achievement of objectives (Martín and Rivas, 1984; Tejada, 1998; Rivas, 2000).

Accordingly, the competence of innovation develops when people become capable of modifying processes and results in response to personal, organisational or social needs and demands that arise. The elements characterising a process of innovation enable us to identify progress indicators for working on and assessing this competence:

—*Intentionality*: innovation is not a chance or accidental change, but an intentional, deliberate and systematic one. So a first skill to work on is the capacity to recognise situations needing change and improvement, and the opportunity to bring this about.
—*Personal position* and attitude toward innovation: the possibility of innovating requires an open mind and willingness on the part of the individual to think differently, to analyse and address situations from other standpoints. Depending on that position, people adopt more or less active roles with regard to innovation and its implications, reflecting on: how to do things in a better way, who will be affected and how, and why it should be done (the causes and aims of innovation, its methods, agents and people involved).
—Search for *new methods*: open-mindedness and willingness to do things in a different way, leading to an active search for alternative courses of action, weighing how well they suit the situation and what the aims of innovation will be.
—*Application of novel methods*: applying an innovation depends, finally, on one's willingness to experiment with new processes, testing procedures and resources not used previously, either adapting known methods and solutions to a new situation, or generating new procedures suited to the context of innovation.
—*Evaluation of results*: another feature of innovation is its orientation toward improvement. It is a type of change that adopts a constructive, creative or transforming dimension. Therefore, producing and promoting innovation also means being able to ana-

lyse its results, anticipating expected outcomes, foreseeing risks and benefits, and estimating the profitability of the results obtained.

Interaction with other competences, attitudes, interests and values

Development of this competence is facilitated by providing knowledge and understanding of what innovation is and the processes involved in it. This means identifying what constitutes innovation as opposed to other types of change, knowing and understanding the phases and strategies of is management and development, analysing the conditions that foster and restrict its development, and the roles and attitudes of the stakeholders involved.

Mastery of this competence depends fundamentally on the development of attitudes and procedures that are closely related to other competences: first, to those that enable openness to change and creation,– i.e. creativity, learning orientation, achievement orientation and enterprising spirit; secondly, to instrumental and systemic competences that enable innovation to take place according to a planned, systematic process suited to the intervention context, such as problem-solving, decision-making, project management and quality orientation; and finally, to other competences that facilitate better consideration of the social and personal context in which innovation is to take place – i.e., innovation, teamwork and leadership.

Importance of this competence for academic and professional life

Within the context of permanent change characterising today's post-industrial, knowledge-based society, innovation has become a central value for the survival and development of organisations. The latter no longer excel on the basis of their past history or customs, but because of their capacity to change and respond quickly and flexibly to the changing demands of external and internal users, looking always to provide quality service. Companies and institutions have innovative potential to the extent that they employ creative, innovative professionals and develop processes and structures that harness and incorporate that individual potential, turning it into corporate capital.

Development of this increasingly important value will help students to gain access to the labour market and adapt to their future jobs in a context of these characteristics. Moreover, it will enhance their development of attitudes such as flexibility, open-mindedness and adaptation to the environment, which they will need to adapt actively and responsibly in a social context that shares these same characteristics.

How to incorporate it into the academic curriculum

In the university context we can create or optimise the use of three types of situations that will enable us to work on and assess this competence in students:

- At the first level, students can be asked to deal with problems or situations that must be handled by introducing new procedures, tools or processes into their usual work processes. To this end, they must identify what needs improvement, look for and analyse alternative courses of action, take a well-reasoned decision, apply the new procedure and analyse whether it has meant an improvement in results.
- At the second level students work with real or hypothetical situations, cases or problems where they must analyse and propose a systematic process of innovation. This can refer to any context, but it would be particularly suitable to deal with cases and situations drawn from their own professional field, posed at the level of complexity allowed by students' subject and year. At this level, what is specific is the systematic nature of the approach to innovation – i.e. accurately detecting the improvement needs and opportunities of the situation, finding and analysing different methods and alternatives, weighing who the possible changes will effect and how, and foreseeing future risks or benefits to adapt or generate the best solution for the situation. Application of the innovation is not required in this approach, so as not to restrict its possibilities of development.
- Finally, a third level of complexity would involve, in addition to justification of the project, application of the innovation projected onto a real context and analysis of the results obtained. This condition limits its possibilities of development outside situations directly linked to professional practice, and can best be carried out in *practicum* and graduate programmes.

The assessment indicators proposed provide guidelines for observing progress of this competence in the components of each of the three types of situations. Although lecturers may occasionally be able to observe the course of action, normally assessment will be based on the report that students present as a result of their analysis and project. This will basically be a written report which may be accompanied by an oral defence or talk.

Assessment of the product by the lecturer can be supplemented by students' self-analysis or self-evaluation, which will help students to concentrate on the key elements in the process. Analysis and evaluation of work by classmates can also prove especially interesting in the second and third types of situation, in which, since professional situations are addressed, the work of others broadens and strengthens the understanding and resources generated. While the final grade must logically be given when the work is finished, once all the steps in the process have been completed, lecturers should also make a formative revision at the end of some of these steps to make sure that the project is progressing in the desired direction.

COMPETENCE: INNOVATION

Definition: **Responding well to personal, organisational and social requirements and demands, modifying or introducing new elements into processes and results**

Mastery of this competence is closely related to: **Creativity, quality orientation, project management, achievement orientation, enterprising spirit, problem-solving, decision-making, learning orientation, teamwork and leadership**

Levels of mastery:

1. Introducing new procedures and actions into one's own work process to respond better to limitations and problems detected
2. Finding and proposing new methods and solutions (with or without application) in real or hypothetic situations and/or problems
3. Designing and applying innovative processes leading to better results in real situations and/or projects.

Indicators:

1. Intentionality; recognition of situations needing change or improvement
2. Attitude and position regarding innovation: open-mindedness and disposition to think in new ways
3. Active search for new, applicable methods and processes: open-mindedness and disposition to proceed in new ways.
4. Application of novel methods
5. Analysis and evaluation of results

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Introducing new procedures and actions into one's own work process to respond better to limitations and problems detected***	Recognising limitations and weak points in own work processes and methods	Reluctant to analyse or admit limitations and mistakes in own work processes.	Has difficulty in identifying the limitations and weaknesses in own work processes.	Identifies the limitations and weak points in own work processes and methods.	Accurately detects the weak points of own working methods and procedures.	Easily and accurately detects requirements and opportunities for improvement in the course of own work.
	Reflecting on new ways of doing things	Doesn't seem to reflect on new ways of doing things.	Finds it hard to reflect or reflects with difficulty on new ways of doing things.	Reflects and reasons about how to do things differently.	Is stimulated by reflection on how to do things differently.	His/her reflections stimulate others to reflect on how to do things differently.
	Seeking new procedures and methods for doing things	Doesn't seek different procedures for doing things.	Has difficulty in seeking and finding alternative procedures for doing things.	Proposes alternatives for the process to follow and the methods to be employed.	Analyses alternative procedures of action.	Values alternative procedures of action.
	Experimenting with new procedures	Refuses to apply new procedures or resources.	Has difficulty in testing new procedures or resources.	Tries out procedures or resources that he/she hasn't used previously.	Applies with positive attitude new procedures or resources.	Enthusiastically experiments with new procedures or resources, weighing the improvements they bring.
	Identifying the results of innovation	Doesn't weigh possible improvements obtained with new methods of working.	Has difficulty in seeing the improvements obtained with the new methods of working.	Recognises the improvements obtained in own work through innovation.	Analyses the improvements obtained as a consequence of innovation.	Accurately weighs the improvements achieved with the new methods of working.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Finding and proposing new methods and solutions (with or without application) in real or hypothetic situations and/or problems***	Analysing a given situation and identifying aspects that need improvement	Fails to identify (doesn't know or distinguish) need for improvement in certain situations.	Has difficulty in identifying need for improvement in certain situations.	Analyses a given situation and identifies aspects needing improvement.	Accurately identifies the need for improvement in a given situation.	Accurately detects the need and opportunities for improvement in a given situation.
	Taking into account who innovation will affect and how	Doesn't consider who will be affected by the introduction of changes, or how.	Has difficulty in understanding who and what would be affected by the introduction of changes.	Takes into account who and what would be affected by the introduction of changes.	Analyses in depth who and what would be affected by the introduction of changes.	Accurately weighs who and what would be affected by the introduction of changes.
	Finding new methods for doing things	Only finds one way of doing things in each situation.	Proposes solutions without solid revision.	Finds diverse methods and solutions previously employed.	Analyses alternative methods and solutions applied in similar situations.	Weighs on good grounds alternative courses of action applicable to the situation.
	Proposing innovative methods and solutions	Has difficulty in adapting known methods and solutions to a situation.	Proposes general solutions without taking into account their suitability to the context.	Proposes new methods and solutions adapted to the situation.	Appropriately adapts methods and solutions to the situation.	Generates new, appropriate methods and solutions for the situation.
	Analysing risks and benefits of innovation	Doesn't foresee eventual risks and benefits of innovation.	Has difficulty in foreseeing eventual risks and benefits arising from innovation.	Foresees the eventual risks and benefits arising from innovation.	Values the eventual risks and benefits arising from innovation.	Values each of the possible risks and benefits arising from innovation, specifying their pros and cons.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Designing and applying innovative processes leading to better results in real situations and/ or projects***	Identifying need for improvement in complex situations and contexts	Doesn't distinguish need for improvement in complex situations and contexts.	Has difficulty in identifying need for improvement in complex situations and contexts.	Identifies need for improvement in complex situations and contexts.	Systematically applies a method to identify need for improvement in complex situations.	Defines on good grounds the need and opportunities for improvement in complex situations and contexts.
	Reflecting on causes and aims of innovation	Doesn't reflect on the causes and aims of innovation.	Has difficulty in justifying the whys and hows of introducing innovation.	Reflects on the causes and aims of innovation.	Justifies with arguments the causes and aims of innovation.	Justifies convincingly the causes and aims of innovation.
	Finding new methods for doing things in another way	Proposes alternatives without reference to aims.	Has difficulty in associating the different alternatives with the aims of innovation.	Associates the alternatives proposed with the aims of innovation.	Weighs the logic of different alternatives against the aims of innovation.	Selects with good criteria the alternative that is most consistent with the aims of innovation.
	Using good methods and solutions for innovation	Applies known solutions without considering their suitability to context.	Has difficulty in adapting methods and solutions to the context of innovation.	Applies methods and solutions suited to the context of innovation.	Adapts methods and solutions suitably to the context of innovation.	Generates new procedures suited to the context.
	Analysing risks and benefits	Does not consider the risks and benefits of innovation.	Has difficulty in foreseeing the risks and benefits of innovation.	Foresees eventual risks and benefits of innovation.	Systematically weighs the risks and benefits of innovation.	Accurately weighs the risks and benefits of innovation and its impact on results.
	Obtaining results with innovation	Doesn't get perceptible results with innovation.	Gets unimportant results from innovation.	Obtains an appreciable improvement in results from innovation.	Obtains an important and significant improvement in results.	Achieves outstanding improvement in results thanks to innovation.

Description

Objectives-based management, developed originally as a business tool, is now applied to all areas of active life. It involves clearly specifying the targets or objectives to be achieved and the resources needed to attain them within a given time frame. The idea, therefore, is to optimise time and effort in attaining established goals. Included is a periodic control system to show the degree of progress made from time to time, making it possible to take corrective measures if deviations are detected.

This tool can be applied to corporate, academic, personal or group activities. The important thing is to define clearly, for all the persons involved, the final situation aimed at and the means considered necessary to progress from the starting situation to the target situation specified.

Such clear definition of objectives determines the set of tasks to be performed. Those that form part of the course charted – i.e. those that help to progress toward the stated goals – are the tasks that must be carried out, whereas those that do not contribute to that progress are relegated to a secondary position or even eliminated. So it is not so much a case of "doing things well" as "doing the things that must be done".

This competence requires, in the first place, being able to establish objectives. Objectives stated in general terms or in terms of wishes and desires, such as *to improve, grow, develop*, are not useful for objectives-based management. The target situation must be defined clearly and precisely, so that the persons involved in the process will understand without hesitation what it consists of and how to measure whether it has been achieved or not, as well as any discrepancies that might exist at any moment between the true and desired situations.

Once the final objectives have been set, objectives-based management calls for planning over time the intermediate objectives to be reached and the amount of resources that will be needed in order to progress according to schedule. Naturally, given the pace of change today, when it is a question of long-term objectives, the plan, its allocation of resources and even its final objectives may be subject to periodic revisions to adapt to any changes that may occur. That is, an intrinsic feature of objectives-based management is flexibility.

In short, it is a tool that involves the efforts and resources of a group or organisation in a common process known by all.

Interaction with other competences, interests, attitudes, values

First, because it involves planning over time, objectives-based management is directly related to the competence of planning.

It requires a positive, proactive attitude toward reality. Instead of reacting – i.e. adapting *a posteriori* to variations in the surrounding circumstances –, objectives-based management calls for anticipation of what we want to see happen (the goals or objectives to be achieved) and, in this regard, creation of the future rather than adaptation to it.

It requires the use of analytical thinking, systemic thought, practical and creative thinking. In group tasks, it calls for team thinking, since consensus of the persons involved is required.

It is also related to other systemic competences such as project management, achievement orientation and leadership; to interpersonal competences such as teamwork, adaptability, and negotiations; and to instrumental competences such as oral and written communication, time management and problem-solving ability.

Importance of this competence for academic and professional life

Students may decide to let time pass and simply do the work considered most urgent at the moment, or they may decide to set their own objectives (prepare themselves to become good professionals, do well in exams, etc.) and chart their own course to attain them. Cramming for exams at the last moment or spending long hours in a mad dash to complete a report just before its due date are examples of lack of planning.

If students decide at the beginning of the year what they want their situation to be in June, and set themselves a programme of study and completion of academic work based on that desired goal, they are applying objectives-based management. Their time distribution would be in the form of planned steps toward the desired end-situation. Any activities or tasks that do not help to advance down the charted path would be allocated less time or would be eliminated.

The same thing applies to group work. Individual and group time time is distributed according to efficiency for the achievement of objectives. The first effect of this will be a considerable saving of time and better rate of progress.

In professional life the same thing happens. We devote too much time to "unnecessary" tasks simply because "that is how it has always

been done". Clarifying objectives to be achieved helps us to revise habitual processes and improve them in terms of efficiency.

How to incorporate it into the academic curriculum

Setting objectives and knowing how to plan are not innate skills. Students need to learn to do them and this requires instruction and practice.

Lecturers can convey their own planning of the subject (work to be done throughout the year) in terms of explicit objectives to be achieved. They can also ask students to make their own definition of objectives and their own plan to achieve them.

The use of long-term projects as a methodological instrument may help students to apply the concepts of objectives-based management to their own situation.

In work assigned to groups of students, one of the requirements could be for the group to specify in writing the group objectives and how they will organise time to achieve them. This will help to habituate students to working on mastery of this competence.

COMPETENCE: OBJECTIVES-BASED MANAGEMENT

Definition: Aiming an academic, business, leisure or personal mission toward the attainment of personal or group objectives, through efficient allocation of time, effort and resources

Mastery of this competence is closely related to: Achievement motivation, making things happen; commitment to results; proactiveness, capacity to actively focus on situations, relations and problems; capacity to take risks and decisions; managing and optimising resources

Levels of mastery:

1. Setting objectives and goals, planning how to achieve them and monitoring degree of progress
2. Efficiently pursuing stated objectives and goals, analysing and addressing difficulties and necessary adjustments
3. Setting challenging objectives and goals, sharing and accomplishing them with others

Indicators:

1. Setting goals and objectives
2. Monitoring progress
3. Overcoming difficulties
4. Use of resources

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Setting objectives and goals, planning how to achieve them and monitoring degree of progress***	Establishing own short- and medium-term goals and objectives	Doesn't define own goals and objectives, or acts without relation to them.	Establishes inappropriate goals or isn't committed to them.	Is able to set own objectives appropriately.	Establishes own goals well and is committed to meeting them.	Has a well-devised plan that he/she knows how to justify, shows commitment and is able to complete it.
	Resolving without help basic difficulties standing in way of objectives	Gets blocked by basic difficulties.	Needs help when plan runs up against basic difficulties.	Finds resources to resolve basic difficulties encountered.	Resolves without help basic difficulties encountered in fulfilling plan.	Proposes good solutions for overcoming basic difficulties encountered.
	Adapting action plan and resources to objectives set	Action plan is inappropriate given the resources available to meet targeted objectives.	Even with clear objectives, doesn't appropriately manage resources available.	Action plan is consistent with objectives and with resources available.	Makes efficient use of resources available for reaching objectives.	Incorporates a form that enhances integration of resources and methodology for reaching goal.
	Deciding tasks to be performed, deadlines and basic controls concerning goals and objectives	Action plan doesn't include control indicators or doesn't use them.	Formulates control indicators inappropriately.	Plans the use of indicators to monitor compliance with tasks and deadlines.	Monitors tasks and deadlines compliance using control indicators.	Adapts plan in accordance with analyses made.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Efficiently pursuing stated objectives and goals, analysing and addressing difficulties and necessary adjustments***	Identifying with and committing self to objectives and goals	Has difficulty in identifying with objectives; must be dragged along.	Identifies with the objectives that others propose.	Understands and identifies with objectives, asks about them, etc.	Identifies with and is committed to objectives.	Is committed to objectives and makes contributions to clarify and achieve them.
	Identifying difficulties and finding ways to overcome them to achieve objectives	Has difficulty in recognising difficulties that arise.	Recognises difficulties encountered but doesn't know how to resolve them.	Finds ways of overcoming the difficulties that he/she identifies.	Resolves in practical ways the difficulties that he/she identifies.	Resolves difficulties brilliantly and with personal contributions.
	Using available resources with efficiency	Makes poor use of resources within grasp.	Utilises available resources, but without achieving objectives.	Achieves desired objectives with resources available.	Makes efficient use of resources to achieve objectives.	Optimises use of resources in own work to achieve objectives.
	Systematically revising action plan and modifying it as needed to improve it	Lacks system for revising own plans of action.	Is inconsistent in revising own plans of action according to established control measures.	Regularly analyses and adjusts action plan, according to established control measures.	Systematically analyses own action plan, providing original indicators and methods of control.	Carefully monitors plan, specifying improvements introduced and doing better than required by control measures.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Setting challenging objectives and goals, sharing and accomplishing them with others***	Setting and addressing ambitious, feasible medium- and long-term goals and challenges	Lacks somewhat challenging objectives.	Proposes ambitious objectives, but with feasibility problems given own possibilities.	The objectives that he/she sets are challenging and feasible.	Sets self challenging objectives and incorporates a continuous improvement process.	Sets challenging objectives, with such enthusiasm that it spreads to others.
	Foreseeing difficulties and problems standing in way of objectives	Gets caught up in difficulties on way to objectives due to lack of foresight.	Is only able to see difficulties if they are pointed out.	Foresees and addresses difficulties suggesting solutions.	Is notable for foresight in anticipating problems and difficulties.	Noteworthy for anticipation and creativity in problem-solving and overcoming difficulties, so that they don't distort results.
	Taking advantage of own and outside opportunities and resources, using them innovatively and creatively	Doesn't appear to be aware of own possibilities and personal resources.	Misses opportunities to use resources that could be obtained from other sources.	Recognises and uses own and outside resources creatively.	Uses own and outside resources creatively, innovatively and efficiently.	Is excellent organising resources creatively and strategically to accomplish objectives proposed.
	Taking decisions according to established control measures, without unnecessary hurry or delay	Doesn't react to process control indicators.	Utilises indicators to decide, but does so too early or late.	Revises own processes and takes decisions at the right moment.	Keeps close watch on indicators and if necessary appropriately rectifies ongoing plans of action.	Analyses and explains possible deviations and draws conclusions for improvement.

Description

A project is an effort carried out within a given time to achieve the specific objective of creating a unique product or service, by undertaking a series of tasks and making effective use of resources (TEC of Monterrey, 2000).

So we say that people have competency in project management when they are able to devise, direct, evaluate and monitor a project effectively. The elements making up a project enable us to identify progress indicators for developing and assessing this competence:

Reality analysis: analysis of the situation and needs that will provide the context and justification for the project.

—*Setting objectives*: a clear, precise formulation of realistic but ambitious objectives in accordance with strategically aligned requirements, crucial for getting team to identify with shared objectives and stimulating them to action.
—*Deciding actions and tasks*: effective, efficient actions must be planned in order to accomplish objectives and distribute responsibilities and tasks among those involved in a balanced way.
—*Resources management*: foreseeing, allocating and optimising necessary resources necessary (time, costs, materials, etc.) to undertake the actions called for.
—*Evaluation*: planning the mechanisms for monitoring the project and evaluating results (when and how this will be done and by whom); and introducing changes and necessary adjustments to improve the project.
—*Risks*: risks inherent in the project should also be considered, foreseeing, identifying and anticipating them adequately.

Interaction with other competences, attitudes, interests and values

Development of competency in project management requires a comprehensive approach, relating it to many other instrumental and interpersonal systemic competences. In the first place, with systemic thinking and other competences related to the most technical side of this skill, including decision-making, planning and objectives-based management.

It is also related to competences having to do with initiative to transform and improve things, such as: creativity, innovation, enterprising spirit and quality orientation. Finally, because most real and simulated projects are shared undertakings due to their size and scope, development of this competence is associated with the capacity to work and collaborate with others, and calls for interpersonal communication, teamwork, team thinking and leadership.

Importance of this competence for academic and professional life

In the course of professional practice, project-based work is so prevalent that it is considered a logical teaching option for training students for professional careers. This is particularly so in the case of technical careers, but it can also be used with more or less intensity by lecturers in almost all disciplines (Bará and Valero, 2005). Problem-based learning and its variant, Project-Based Learning or PBL are two of the most successful new teaching methods to be adopted in higher education in recent years.

PBL is used as a strategy to ensure that learning takes place through action. That is, students learn by doing, in the process acquiring an appropriate methodology for confronting the problems that are sure to arise in their future professional practice (TEC of Monterrey, 2000). According to Bará and Valero (2005), PBL is a teaching strategy in which students, organised in groups, undertake projects in order to integrate knowledge and skills from several areas, develop high-level intellectual skills, promote autonomous learning and working, teamwork and self-evaluation.

How to incorporate it into the academic curriculum

In university contexts, we can create or optimise three types of situation that will enable us to work on and assess this competence with students:

— At the first level, students can be assigned work with a project structure to be carried out over the short term on well-delimited topics, with clear guidelines provided by the lecturer. The idea is for students to draw up a project plan, without necessarily carrying it out.

—At the second level, students are expected to plan projects in collaboration with others in situations that are barely structured by the lecturer. Here the deadline and scope can be broader, and students should foresee incidents and risks, even though again, the plan need not require execution.
—Finally, students plan and execute projects in contexts not structured by the lecturer, on broader topics and/or with longer deadlines, and even exercise leadership of the project. Here the projects are carried out, and project methodology may be used in the teaching and learning process.

When PBL is strictly applied as a learning strategy, it is also possible to invert the normal sequence of learning. First the problem is presented, learning needs are identified, the necessary information is sought, and finally, we return again to the problem in order to address and solve it (Bará and Valero, 2005).

Whether small or large, projects are built on the basis of a "motivating issue" that ensures that the undertaking will be challenging, problematic, complex (involving various activities and synthesising a great deal of information), connected to reality, with different possible solutions, and requiring discussion and decision-making (Bará and Valero, 2005). Later, in following guidelines and instructions, five things should be taken into account according to these same authors: 1) establishing the context, subject matter, objectives, motivating issue, enunciation; 2) defining (two or three) deliverables and assessment criteria: 3) enumerating types of activity to undertake; 4) introducing positive interdependence and personal accountability; and 5) outlining a work plan.

For its part, the TEC of Monterrey (2000) attributes the following characteristics to projects: they provide situations where students can learn to resolve problems using relevant knowledge; work focuses on exploring and resolving a practical problem with an unknown solution; interdisciplinary knowledge must be applied; and open solutions must be sought, giving the opportunity to generate new knowledge.

The assessment indicators proposed provide guidelines for observing the progress of competence in the different components, according to the degree of complexity worked on in each situation. The assessment technique employed is fundamentally analysis of the project planned and, as the case may be, undertaken. This is reflected in the project report or folder that the students hand in as a result of their work. Basically, it is a written report which may be accompanied by an oral defence or presentation.

The complexity of the work involved in a final comprehensive project (no matter how small) requires a formative assessment of at least some partial products or deliverables to ensure that the project is going in the right direction. Student participation in the assessment process, through self- or peer-evaluation, will help them to understand and assume the essential elements of the project.

On the subject of project assessment, Bará and Valero (2005) recommend: 1) having the list of assessment criteria (indicators) based on objectives; 2) making regular checks in accordance with the work plan and partial objectives (effective feedback); 3) including in the project self-evaluation of work completed; 4) utilising a project folder (ordered collection of project material) as an item for assessment; and 5) utilising peer-evaluation (each group of students regularly revises the results of other groups and evaluates them according to a published criteria sheet).

COMPETENCE: PROJECT MANAGEMENT

Definition: **Effectively planning, directing, evaluating and monitoring a complex project, developing an idea until it is materialised in a service or product**

Mastery of this competence is closely related to: **Systemic thinking, Decision-making, Planning, Objectives-based management; Creativity, Innovation, Enterprising spirit and Quality orientation; Interpersonal communication, Teamwork and Leadership; Attitudes such as Ability to work and collaborate with others**

Levels of mastery:

1. Designing work with a short-term project structure, laying down guidelines (planning without execution)
2. Planning projects in collaboration with others in less-structured situations, foreseeing incidents and risks (planning without execution)
3. Planning and executing projects in barely structured contexts, exercising project leadership (supposing execution of the project, for example, utilising project methodology in the teaching and learning process)

Indicators:

1. Situation analysis
2. Defining objectives
3. Deciding actions and tasks
4. Managing resources.
5. Evaluation, monitoring changes
6. Risks

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Designing work with a short-term project structure, laying down guidelines (planning without execution)***	Describing the situation that justifies the need for the project	Doesn't contextualise project or plan of action.	Identifies project topic and those involved, but doesn't link it to needs.	Justifies project alluding to the needs it would satisfy.	Precisely identifies needs or requirements that the project addresses.	Contributes evidence regarding the needs that justify the project.
	Establishing clear objectives for the project	Formulates project objectives incorrectly or doesn't know how to formulate them.	Formulates ambiguous, imprecise objectives.	Formulates clear objectives for the project.	The project objectives are precise and workable.	The project objectives are realistic and ambitious.
	Planning actions to accomplish objectives and the persons responsible for same	Enumerates intentions without specifying actions or the persons responsible.	Specifies actions but without establishing persons responsible for each.	Defines concrete actions and specifies who will undertake them.	Weighs the feasibility of actions being planned.	Establishes excellent sequence of actions for achieving objectives.
	Foreseeing and allotting necessary time to complete planned actions	Doesn't foresee time for each action.	Foresees time for each action only in general terms.	Plans time for each action in detail.	Makes provision for additional time in case of contingencies.	Foresees mechanisms for monitoring time compliance.
	Planning evaluation of project results	Overlooks possibility of evaluating results.	Sees that it is necessary to evaluate results without planning how to do so.	Specifies, at least partially, when and how evaluation will be made and by whom.	Plans systematically when and how evaluation will be made and by whom.	Plans systematically when and how evaluation will be made and by whom, using testable indicators.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Planning projects in collaboration with others in less-structured situations, foreseeing incidents and risks (planning without execution)***	Basing description of project context on evidence and facts	Alludes to need for project but doesn't give reasoned argument.	Tries to justify need for project on grounds of barely tested or reasoned opinions and judgements.	Contributes evidence on which to base situation analysis that contextualises and justifies the project.	Systematically organises and analyses available information to determine context requirements.	Weighs adequacy of available information and methods used in obtaining it, formulating own conclusions on the basis of those possibilities and constraints.
	Making project objectives consistent with needs detected in context	Formulates objectives without alluding to needs.	Project objectives are not consistent with stated needs.	Project objectives are consistent with needs detected in context analysis.	Project objectives are a good response to needs detected.	Project objectives are an original, audacious response to current situation.
	Estimating the effectiveness and efficiency of actions	Proposes actions that have evident effectiveness or efficiency problems.	Does not consider the effectiveness and efficiency of actions.	Specifies the foreseeable effectiveness and efficiency of the actions proposed.	Does good job of prioritising actions on basis of effectiveness.	Proposes effective actions, optimising the use of resources.
	Making use of available resources	Doesn't specify what resources will be used.	Enumerates resources, but overlooks those available.	Integrates available resources into project.	Weighs efficiency (results/costs) in the use of resources.	Foresees ways of using resources to maximise achievement of objectives.
	Planning mechanisms for monitoring implementation	Doesn't mention mechanisms for monitoring implementation.	Proposes mechanisms that are scarcely workable or pertinent for monitoring implementation.	Partially plans mechanisms for monitoring project implementation.	Systematically plans when and how implementation monitoring will be carried out and by whom.	Systematically plans when and how implementation monitoring will be carried out and by whom, using testable indicators.
	Identifying possible risks inherent in project	Doesn't consider the existence of risks.	Recognises that risks may exist, but without being realistic.	Identifies the risks that could affect the project.	Identifies and quantifies risks realistically. Accurately foresees them.	By identifying and quantifying risks, is able to provide measures for containing or anticipating them.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Planning and executing projects in barely structured contexts, exercising project leadership (supposing execution of the project, e.g. utilisation of project methodology in the teaching and learning process)***	Weighing and ranking needs and resources in a real intervention context, prioritising requirements identified as object of the project	Describes context of project but doesn't weigh information provided.	Analyses context where he/she is going to work, identifying its main requirements and resources.	Having analysed requirements and resources, prioritises the needs to be satisfied by the project.	Prioritises needs based on logical SWOT map of intervention context.	Object of project is total or partial solution hypothesis for stated need, based on priorities and possibilities analysed.
	Involving team or organisation in project objectives	Not motivated to action due to ambiguity and poor definition of objectives.	Project objectives are administrative and contractual (pointing to organisation of work and tasks).	Project objectives incorporate personal and group interests based on commitment.	The objectives encourage and stimulate team members to action.	Objectives foster/ promote professional development of team members and of team/organisation itself.
	Specifying long-term objectives in terms of workable objectives	The objectives not stated in terms of different degrees of accomplishment.	Short- and long-term objectives distinguished, but without good linkage between them.	The long-term objectives translate into more concrete short-term objectives.	Strategically aligns long-, medium- and short-term objectives.	Objectives link short-term goals to more long-term development of persons, team or organisation (giving meaning to action).
	Distributing responsibilities and tasks according to potential of each team member	Assigns responsibilities and tasks to persons who clearly are not capacitated for them.	Ignores people's profiles in distributing responsibilities and tasks.	Takes into account the profile of each person before assigning them responsibilities or tasks.	Foresees how people can grow or learn in their responsibilities or tasks.	Designs heterogeneous teams with complementary potential.
	Suiting actions and persons to incidents and changes arising during execution of project	Doesn't take into consideration incidents and changes that arise during project.	Considers incidents and changes that arise, but doesn't adapt the project accordingly.	Adapts actions and persons to changes that arise during project.	Adapts actions, persons, strategies and priorities according to incidents that arise.	Records adjustments made in response to incidents.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Planning and executing projects in barely structured contexts, exercising project leadership (supposing execution of the project, e.g. utilisation of project methodology in the teaching and learning process)*	**Making sure that team has resources at its disposal**	Doesn't think about providing resources to team.	Calls for provision of resources, without seeing to it in practice.	Sees that resources are available for the team.	Checks to make sure resources are adequate to tasks.	Monitors how resources are being utilised.
	Monitoring implementation of project to evaluate its results	Doesn't monitor implementation of the project.	Monitors implementation of project, but in a way that doesn't serve to evaluate results.	Monitors implementation of the project, evaluating results at same time.	Introduces pertinent changes into project as a result of monitoring and evaluating it.	Changes introduced in project as a result of monitoring and evaluation greatly improve it.
	Monitoring materialisation of risks inherent in project	Doesn't know the effects of risk on project.	Knows the existence of certain risks for the project, but doesn't record them when they appear.	Monitors materialisation of risks inherent in project.	Monitors materialisation of risks and introduces improvements in project to head them off.	Monitors materialisation of risks, seeing them as opportunities to improve project.

Description

Quality orientation is a competence that seeks excellence in all academic, personal and professional activity, orienting it towards results and continuous improvement. It is a competence that focuses on doing things well, seeking constant improvement in every activity, trying to perform it the best way possible.

Quality is a philosophy that has spread to all aspects of personal, institutional and social life. It is a requirement that we all make and wish to see in the performance of professionals, products or services that we acquire. People want the things that they buy or acquire to have quality, to work well and do what they are supposed to do. As for professionals, we want them to perform according to professional norms and standards.

Teaching quality orientation as a competence means developing in students a mode of behaviour that becomes habitual, an ordinary style of working and acting based on the meeting of rules and requirements that denote quality performance. It is a systematic behaviour, acquired in a way such that it becomes a performance style that defines and characterises the person.

Competency in quality orientation begins with concern for doing things well, with a positive attitude of trying to do everything as well as possible. This builds up habits of attention to detail, planning activity, checking to see what we are doing and how we are doing it. It means giving importance to the process, to the way in which things happen, to the methods and steps taken, to how they are co-ordinated and controlled.

Quality-oriented people are concerned not only with process, but also with results. We can not speak of quality if our results are not up to standard, if they are not as expected, or, in short, if there is no efficiency or effectiveness in what we have done.

Along the continuum of development of this competence, three levels of complexity have been defined:

—Improving daily work
—Systematically improving own action
—Taking the initiative in group continuous improvement processes

The criteria for assessing progress in this competence are set out in the different indicators for each established level. For this competence

there are eleven indicators, ranging from simple individual behaviour to the complex group behaviour that good development of this competence should foster and promote.

Interaction with other competences, attitudes, interests, values

Acquiring and developing this competence means making use of different attitudes, values and behaviours associated with a range of knowledge and techniques. Therefore, it is a complex competence that requires a view of activity as a whole within the personal and situational context and environment where the action takes place.

The competence of quality orientation is related to other instrumental and interpersonal competences which are essential for it to work well. Quality orientation is, in principle, a personal way of acting that requires thinking in a certain way. It also requires personal availability, without which the competence would be empty of content, and it requires having the knowledge and techniques necessary to ensure that one's performance is appropriate and efficient.

When people fully identify with quality orientation, this competence is associated with self-fulfilment, because it necessarily means doing things as well as possible, feeling satisfaction with the job well done and getting desired results.

Importance of this competence for academic and professional life

As noted earlier, quality has extended so far into all fields of work and the professions that it is difficult to escape. It has become a general requirement in all areas, particularly in the professional world, where there are agencies that control the quality of professionals and entities that carry out different business, commercial, scientific or any other type of task in the working world.

In academic life, quality is not only desirable, it is absolutely essential. It is the ordinary way of conducting science, which requires great care, attention, observation and control of what is happening. This detailed, analytic way of acting, forming syntheses, controlling and weighing the variables that come into play in all academic work, is what students must identify with. They must apply this mode of action in all their academic work and activities. The search for accuracy begins with the use of prop-

er terminology, which is distinct and specific in each academic or scientific field, each of which in turn has its own concepts and terms, principles and theories, and its own specific technical and scientific rules and procedures.

Quality orientation begins in students with the acquisition of this terminological language and continues with a way of acting in accordance with certain norms and requirements in the use of scientific, bibliographic and technical sources. It means acquiring a set of attitudes and values that are shared by the professionals in each field and constitute their code of professional ethics. But to build up this professional behaviour, it is necessary to begin learning how to perform in daily work, in the simplest activities, to acquire quality habits.

Academic life is constantly involved in assessing students' work, and therefore the quality with which it has been done – i.e. quality in the work itself, and in the planning, organisation and management of study. Quality in students' ways of relating to and working with others, quality in their own academic performance, in which they show how well they have have acquired habits, rules and procedures by respecting them and showing competence in their use.

Learning quality in academic life transcends this setting and is the best preparation possible for a career in business or the professions, where it has become a requisite. The work world will require not only quality personal behaviour, but also the capacity for quality and continuous improvement when working with or leading teams or groups. Quality involves all members of an organisation, affecting its processes and results.

How to incorporate it into the academic curriculum

Quality orientation is a competence that can easily be presented and developed in the academic world and will serve as a first step toward acquiring the necessary habits and techniques that will later be applied in any other work and/or profession.

Developing a good quality orientation in academic life fosters and enhances the development of other competences such as planning work, self-motivation and self-fulfilment, as well as problem-solving and decision-making skills.

In short, quality orientation is a competence that can be applied to all academic activities without exception. Its general and specific assessment is relatively easy and serves as a good activity for transferring this competence to other aspects of personal, social and institutional life.

COMPETENCE: QUALITY ORIENTATION

Definition: **Seeking excellence in academic, personal and professional activity, focusing on results and continuous improvement**

Mastery of this competence is closely related to: **Analytical thinking, critical thinking, planning, self-motivation, problem-solving, decision-making, self-fulfilment, etc.**

Levels of mastery:

1. Meeting requirements in daily academic work
2. Systematically improving personal work
3. Systematically revising own performance

Indicators:

1. Being neat and orderly
2. Structuring, organising work
3. Norms for academic work
4. Working and studying in depth
5. Attention to detail
6. Personal involvement
7. Method, constancy, perseverance
8. Integration of fields
9. Results orientation
10. Efficiency (good use of resources)
11. Service to others

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: *Meeting requirements in daily academic work*	Presenting work that is neat and orderly	Is sloppy and careless.	Is careless in presentation of work.	Presents work that is neat and orderly.	Presents work that is very neat and orderly.	Presents work that is spectacularly neat and orderly.
	Structuring, organising work appropriately	Lacks structure in the presentation of work.	Presents inadequate structures.	Presents structured, organised work.	Structures work very well.	Outstanding for the originality and appropriateness of structure in work.
	Following the rules given for academic work	Doesn't take into account the rules given.	Partially follows rules.	Meets basic academic rules.	Properly abides by all rules.	Abides by all rules and proposes improvement of some of them.
	Developing and delving deeper into work undertaken	Is superficial in treatment of topics in academic work.	Work is irregular in different parts.	Develops topic well and at some level of depth.	Goes very deeply into topics in academic work.	Develops topics well and at ever greater depth.
	Showing interest and attention to detail	Is very shoddy.	Overlooks important details.	Pays attention to detail and aesthetic form in academic work.	Pays meticulous attention to detail.	Pays meticulous attention to detail looking for perfection in work.
	Showing personal involvement	Is superficial.	His/her work is not personal.	Work shows personal involvement and reflection.	Work shows personal involvement and deep reflection.	His/her work always has a personal stamp of quality.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Systematically improving personal work*	Being methodical in approach to work	Not systematic in approach to things.	Poorly organised in approach to things.	Methodically approaches things with a view to improvement.	Maintains order and logic in everything he/she does.	Outstanding for the perseverance and systematicity of plans and actions.
	Balancing personal and academic life with quality	Can't integrate quality in both personal and academic life.	Careless about balancing quality in personal and academic life.	Balances quality in personal and academic life.	Integrates with effectiveness interpersonal and academic-professional quality.	Outstanding for integration of quality into interpersonal and academic-professional life.
	Being results-oriented	Acts without thinking about results.	Uneven results orientation in own activity.	Focuses on achieving good results in own activity.	Aims for and obtains desired results.	Outstanding results orientation and achievements.
	Making good, efficient use of resources	Wastes or fails to make good use of resources.	Doesn't suit resources to the activities that he/she wishes to undertake.	Obtains good quality with appropriate resources.	Optimises the use of resources.	Achieves best results through excellent use of resources.
	Paying attention to others	Lacks interest in other people and things.	Does things without thinking of others.	Takes others into account in own activities.	His/her activities help and support others.	Orients own activities toward a perspective of social utility.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: *Systematically revising own work and actions*	Systematically revising own methodology	Doesn't revise own work and activities.	Lacks systematicity in revising work.	Draws good conclusions systematically on what he/she has done well or poorly.	By systematically revising own work and actions, fortifies strong points.	By systematically revising own work and actions, reduces flaws and introduces improvements.
	Balancing interpersonal relations and academic-professional action; well-rounded	Ignores or doesn't see potential imbalance between academic and personal life.	Is inconstant in way of reflecting on own actions.	Systematically revises balance between interpersonal and academic life.	Revising and compensating for imbalances detected in own actions.	Outstanding for revision and compensation of imbalances detected.
	Being results-oriented	Doesn't systematically revise own results.	Makes deficient revision of results.	Systematically revises own results.	Checks own progress toward objectives and takes decisions adjusting plan of action.	Focuses revision on aiming for and achieving results, and does achieve them.
	Making good, efficient use of resources	Doesn't revise use of resources.	Revision of the use of resources is deficient.	Systematically checks for efficient use of resources.	Systematically revises use of resources and improves own efficiency.	Outstanding for the revision and efficiency achieved in use of resources.
	Having service-to-others orientation	Doesn't check to see how own actions affect others.	Doesn't show sound reflection on the social repercussions of own actions.	Reflects on the consequences of own actions as a service to others.	Carefully checks the consequences of own actions on others and modifies behaviour accordingly.	Orients own activities prioritising service to others.

COMPETENCE: ACHIEVEMENT ORIENTATION

Description

Achievement orientation is one of the systemic competences, since a view of an entire process is necessary in order to accomplish desired ends. Indeed, to a certain extent, this competence entails a sense of life in which one strives for achievement in everything – in all the personal, social and professional facets of human endeavour.

Achievement orientation helps to give meaning to what we do when we form a vision of the future, which is what moves and motivates us, marking the road to follow until the desired goal is reached. This is the competence that fosters personal progress and, in general, the progress of groups, organisations and society.

In the development phase of achievement orientation, one must be accustomed to planning, to setting objectives and goals to be reached. Also essential are perseverance in working towards those goals, and certain living habits that help us to achieve what we are aiming for.

Another important aspect of achievement orientation consists in having a certain pragmatic view of things, enabling us not to stray from the path toward achievement. This pragmatic view includes weighing what is important and what is accessory, what is feasible and infeasible, what is realistic and what is idealistic. In short, a practical view that encourages us to take the path toward achieving what we propose. This does not mean renouncing things or searching for the easiest way, but choosing, among one's highest aspirations, a path that will lead to achievement. Achievement orientation helps us to always have an end in sight, a given purpose for anything we do in any facet of life. Achievement orientation, at least at its highest level, is linked to the desire to improve, where people exert all efforts striving to stand out over others.

Along the *continuum* of developing this competence, three levels of complexity have been established:

- Orienting daily activities toward the achievement of results
- Achieving results in difficult situations
- Achieving results whose repercussions go beyond the usual scope of action

The criteria for assessing progress in this competence are set out in the different indicators for each established level.

Interaction with other competences, attitudes, interests, values

Generally speaking, achievement orientation is closely associated with two systemic competences: systemic thinking and forward vision. It shares with systemic thought the need for thinking in a holistic way, taking a comprehensive view of things so that all the elements and features of a process can be taken into account.

With the factor of leadership and future vision, achievement orientation shares a tendential feature. That is, it requires a guideline toward achievement, a utilitarian approach aimed at attaining results, at accomplishing some pre-established goal.

Achievement orientation is a personal competence that can be shared or developed in groups. It is a competence that can be enhanced in working groups where students share the responsibility and need to develop it. Achievement orientation also has a more social dimension, which is to look for the social utility of activities and actions on the job or in a profession. This is important because it might seem that people who are very achievement-oriented work exclusively for their own personal benefit or interest. However, achievement-oriented people can also have a clear and determining social vision and undertake action to achieve results that will benefit or be useful to society.

Importance of this competence for academic and professional life

Achievement orientation is an essential competence in academic life. All students have the goal of getting their degree, completing their studies successfully. In addition to this general aim, each student must set goals as to the type of academic results they wish to achieve, to be attained with more or less effort, and this is a clear manifestation of achievement orientation.

Apart from final academic results, students have many other goals in different facets of their lives, and in all of them they must focus their efforts on certain achievements. In all aspects of life one must look ahead to the future, and this means having goals that will help us to reach the future we desire.

At work or in professional life, we are constantly faced with activities where we need to achieve results. This is a constant in working life. Each project, plan or activity is always linked to certain objectives. Highly achievement-oriented persons in the working world show their proac-

tive behaviour for achieving results, manifest enthusiasm and are able to stimulate others with their eagerness to achieve.

How to incorporate it into the academic curriculum

Achievement orientation is a competence that can be developed and assessed through different academic activities. Students can show their achievement orientation from the moment they start planning their work and studies. It is possible to monitor this process to see how they formulate and delimit expected achievements. This competence can be assessed through individual tutorials and evaluation of a project and results. Training in achievement orientation can be exercised in daily life through ordinary personal and family activities, and in the academic setting, through assigned coursework and extracurricular work and activities that students choose voluntarily.

Achievement orientation means enhancing students' perseverance in their activities through expressly stated goals, objectives and purposes. It means having a strong personal desire to achieve results with maximum performance and punctuality, striving to achieve them by overcoming difficulties encountered and endeavouring to reach the most challenging heights.

COMPETENCE: ACHIEVEMENT ORIENTATION

Definition: **Undertaking actions conducive to achieving new results successfully**

Mastery of this competence is closely related to: **Systemic thought, forward vision, profitability, progress, planning, sense of life, social utility, etc.**

Levels of mastery:

1. Focusing daily activities on the achievement of results
2. Achieving results in complex situations
3. Achieving results whose repercussions transcend habitual scope of action

Indicators:

1. Pragmatism, profitability
2. Perseverance
3. Desire to do things well
4. Ambition, competitiveness
5. Motivation, satisfaction

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Focusing daily activities on the achievement of results***	Being practical about initiatives undertaken	Doesn't give importance to profitability.	Gives little importance to the practicality of what he/she does.	Behaviour guided by a practical approach.	Seeks some kind of profitability in everything undertaken.	His/her pragmatism is calculated and always keeps an eye on return on investment.
	Being perseverant in own daily activities	Shows inconstancy in own daily work.	Has difficulty in focusing on the work and activities to be undertaken.	Shows perseverance in whatever he/she does or undertakes.	Outstanding for constancy of effort in everything he/she does or undertakes.	Is not dismayed by obstacles and considers them a new challenge.
	Striving to deliver with care and quality	Presents or does things haphazardly.	Doesn't pay attention to detail or to the quality of results.	Works hard to finish things neatly and well.	Takes care to define and finish work well.	Outstanding for performance and quality of work.
	Striving to stand out with high expectations of achievement	Doesn't have major aspirations.	Spirit of ambition disappears whenever he/she has to compete with others.	Shows ambition and competitive spirit in projects.	Enjoys competing with others and manifests ambition to achieve.	Stands out over others in competitive spirit and desire to achieve.
	Being motivated by setting and achieving objectives	Doesn't show interest in what he/she does.	Shows little interest in achieving results.	Is motivated by achievement of objectives proposed.	Is self-motivated and shows satisfaction at achieving what he/she proposes.	Motivated by achievement of results and contages others with own enthusiasm.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: ***Achieving results in complex situations***	Being pragmatic in complex situations	Gets rattled in complex situations; goes off on tangents.	Has difficulty in finding the practical side of difficult situations.	Shows pragmatism in situations of certain complexity.	Shows practical sense making it possible to resolve complex situations.	Outstanding for practical solutions to difficult problems.
	Maintaining constancy in complex or difficult situations	Is indolent when faced by difficult, complex projects.	Is inconstant in proposals and projects.	Perseveres with spirit in the face of difficulties or complex projects.	Sees obstacles and difficulties as challenges, and overcomes them with spirit.	Enjoys demanding projects and undertakes them ambitiously.
	Desiring to do things well even in difficult or complex situations	Is overwhelmed by difficulties, and presents things haphazardly.	Doesn't try hard enough to do things well when they prove difficult.	Endeavours to do own work well, regardless of difficulties involved.	Shows significant signs of wishing to work with quality.	Enjoys presenting well-done work; seeks perfection.
	Maintaining high expectations and performance in complex situations	Chooses not to deal with difficult issues.	Finds reasons and explanations for not trying harder than necessary.	Endeavours to improve in every undertaking.	Stands out in everything he/she does.	Difficult, complex challenges bring out his/her strengths.
	Showing motivation for resolving complex situations	Plagued by self-doubt in situations of certain difficulty.	Is easily discouraged in difficult or complex situations.	When faced by complex situations or projects, finds reasons to forge ahead.	Finds energy in self to feel motivated and overcome complex situations.	Always finds reasons to overcome difficulties, and is able to motivate others to resolve them too.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Achieving results whose repercussions go beyond the usual scope of action***	Showing pragmatism and achieving profitability in problematic situations	Achievements never go beyond the ordinary.	Has difficulty in making efforts worthwhile in unusual situations.	Efforts worthwhile in both ordinary and problematic situations.	Optimises own efforts so that they transcend ordinary contexts.	Outstanding for the benefits gained from efforts, reaching high levels of achievement outside ordinary contexts.
	Showing perseverance in all responsibilities accepted	Is lazy about responsibilities.	Shows constancy in strictly essential habitual activities.	Shows perseverance beyond own ordinary activities.	Is constant and tenacious in all work and activities, in whatever field.	Outstanding in all activities in any field, showing indefatigable persistence.
	Desiring to do things well, showing quality in everything undertaken	Does what is strictly necessary without showing interest in going further.	Does what is obligatory; doesn't show sufficient effort in extraordinary tasks.	Shows quality work habits, even in areas that are not mandatory.	Outstanding for job well done in every area attempted.	Enjoys working hard and well in all formal and informal areas.
	Showing ambition and competitiveness in all dimensions of life	Doesn't show desire for improvement in self or others.	Barely achieves objectives in ordinary contexts.	Achieves ambitious goals beyond daily work.	Outdoes others in striving to achieve objectives, even beyond what is required.	Enjoys achieving ambitious goals in all fields, including those outside ordinary scope of action.
	Showing motivation in achieving results of social importance	Shows indifference toward the social repercussions of own activities.	Has difficulty in feeling motivated to go beyond ordinary daily activity if task has social repercussions.	Shows good inclination and involvement in socially important activities and projects.	Shows concern for the meaning of what he/she does and its social repercussions.	Promotes with initiative and motivation projects aimed at social importance.

COMPETENCE: LEADERSHIP

Description

Leadership is a systemic competence that requires skill in other areas in order to be exercised effectively. We understand leadership as the *capacity to influence individuals and/or groups, anticipating the future and contributing to their personal and professional development*. It is a complex competence that should be developed in the final years of a degree course. Leadership is the capacity to influence people, bringing out the best in them in order to achieve desired results.

In the above definition, three fundamental traits of leadership are mentioned: capacity to influence, anticipating the future and contributing to the development of others. These traits can be found in many current definitions of leadership drawn from educational and business sources.

The first trait helps to distinguish what is and is not leadership. A leader has the capacity to influence others, to make them feel that his/her opinion, point of view, or consideration matters. If this were not the case, we wouldn't be speaking of leadership, but instead of authority or management. If people do things because someone above them in a hierarchy orders them to do it, that is not leadership. Leaders have followers, persons who agree with their ideas and proposals, share them and make them their own.

The second trait is anticipation of the future. This means that leaders need a very important leadership quality, which is capacity of vision. Vision enables people to stay ahead of events; it enables them to see what is going to happen over a more or less lengthy period of time. This power of vision is what makes it possible to orient or guide people and groups toward forward-looking goals and objectives. What mobilises people is the future, and this is why we say that so and so, or such and such an organisation has/doesn't have a future.

The third characteristic is the leader's contribution to personal and professional development, to the well-being of others. Leaders must be proactive and willing to serve others. They present ideas and projects not for their own benefit but fundamentally for the common good, for others to benefit by. Therefore, leadership is the capacity to get the best out of people and try to create the right conditions so that this can happen.

Today much emphasis is placed on leadership with a view to service (service to clients, service to company or organisation, and service to

employees). This type of leadership means working with a spirit and set of values that stress the importance of contributing something valuable. Leaders understand that their own merit lies in their capacity to generate something meaningful in others, rather than providing something significant to themselves, beyond the satisfaction of their own ego.

When we think of leadership, we generally remember outstanding leaders like Gandhi, Churchill, Kennedy, Martin Luther King, etc., and therefore tend to think of leadership as a quality found in very few people. However, around all of us, in any group of students, in any organisation, there are leaders. Some are waiting in the wings and appear only when the right opportunity or circumstances arise.

Leadership is a competence and as such it can be acquired, developed and polished. This does not mean that there are not certain basic personal qualities that are innate and facilitate the process. However, all people can learn and practice leadership skills in the assurance that they can improve this quality, even though they may never actually become leaders. All students should develop their competency in leadership, as it is so important and relevant to so many jobs.

Along the *continuum* of development of this competence, three levels of complexity have been established:

- Taking initiatives and knowing how to convey them to others
- Conveying confidence and moving others to action
- Exercising influence in own surroundings so that desired objectives are achieved

The criteria for assessing progress in this competence are set out in the different indicators for each established level.

Interaction with other competences, attitudes, interests, values

Exercising leadership brings into play many mechanisms that are closely associated with other competences. For example, leaders draw on different types of thinking, such as the systemic thought necessary to show a vision of the future; instrumental and interpersonal competences such as interpersonal communication, decision-making, teamwork.

Leadership requires the development of certain attitudes and values such as confidence in others, support and solidarity, an ethical sense that guides all behaviour, a contagious enterprising spirit, an achievement orientation that stimulates all the members of the team.

True leaders convey their sense of confidence in others, in their own strengths, in their belief that even challenging goals and objectives can be achieved. This is necessary to inject drive into a group, to marshal the sufficient and necessary energy to forge ahead toward results. People aren't willing to put their effort into something in which they don't believe or which they think cannot be attained.

Leaders share ideas and values and show their personal influence so that everyone contributes wholeheartedly to achieve desired results.

Importance of this competence for academic and professional life

In the academic field, situations are frequently proposed where leadership is required to gain the support and contributions of all members of a team or group for a proposal or initiatives.

Both in academic and professional life, leadership is a very necessary, highly valued competence. Indeed, in surveys of companies and institutions, leadership is always ranked among the top ten competences.

To be sure, acquiring and developing the competence of leadership calls for a comprehensive, holistic vision of things, where technical challenges are combined with good interpersonal skills, two aspects that are ordinarily found in the working world.

By exercising leadership, many students change their attitudes and understand how difficult it is to bring together different interests and points of view. They begin to appreciate the need to exchange ideas and arrive at a consensus in order to turn these ideas into shared undertakings. And this means evolving as people and gaining personal and group maturity.

On many occasions, the essential difference in certain positions of responsibility lies in knowing how to exercise leadership suited to the situation and to the objectives set.

How to incorporate it into the academic curriculum

Leadership is a competence that can be very aptly developed through assigned group or teamwork, or simply in all ordinary group activities undertaken inside and outside the classroom.

Due to its complexity and the other competences required for its full development, leadership should be taught during the final undergraduate years and during master's courses.

Leadership training in the academic world is not only possible, but necessary and essential, since in the professional world leadership skills are what make the difference between two good professionals.

Leadership training helps students to assume personal and group responsibilities which would otherwise be difficult to promote and evaluate.

COMPETENCE: LEADERSHIP

Definition: **Influencing people and/or groups, anticipating the future and contributing to their personal and professional development**

Mastery of this competence is closely related to: **Systemic thought, planning, self-motivation, interpersonal communication, decision-making, teamwork, objectives-based management, innovation, enterprising spirit, achievement orientation, self-fulfilment, confidence, support, human dignity, etc.**

Levels of mastery:

1. Taking initiatives and communicating them with conviction and integrity, stimulating others
2. Conveying confidence and moving others to action
3. Exercising influence in own surroundings to achieve desired objectives

Indicators:

1. Effective communication.
2. Personal consistency
3. Delegation. Empowerment
4. Promoting creativity
5. Recognition
6. Self-confidence

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
First level of mastery: ***Taking initiatives and communicating them with conviction and integrity, stimulating others***	Communicating initiatives clearly	Avoiding or forgetting to communicate own proposals.	Has difficulty in making proposals understood.	Communicates initiatives with clarity.	Is convincing when conveying initiatives.	Enthusiases others with own initiatives.
	Maintaining consistency between what one says and does	Evident inconsistencies between what he/she says and does.	Sometimes is inconsistent. (Shows some inconsistencies).	Good consistency between what he/she says and does.	Maintains consistency in critical situations or when under pressure.	Conduct is a model of consistency and integrity.
	Delegating, distributing work in balanced way	Does everything without delegating part of the work to others.	Isn't good at distributing tasks.	Is good at distributing work well.	Distributes work according to capacity of each team member.	Distributes work conveying confidence.
	Stimulating others to think, promoting creativity	Isn't concerned with what others think.	Isn't much interested in getting others to contribute new ideas.	Encourages others to think for themselves.	Stimulates generation of ideas and suggestions through diverse procedures.	Thanks to influence on classmates, they are creative and improve the quality of what they do.
	Appropriately expressing recognition for things well done	Fails to recognise others' achievements.	Has difficulty in recognising the merits and contributions of others.	Appropriately expresses recognition for things well done.	Through recognition, stimulates satisfaction of group members at the work they've done.	With recognition fosters the initiative of others.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Second level of mastery: *Conveying confidence and moving others to action*	Clearly conveying thoughts and moving others to action	Speaks but doesn't spark interest.	Awakens a certain interest, but without moving to action.	Conveys thoughts with clarity, moving others to action.	Generates important contributions based on own initial proposals.	Triggers good communication which sparks the initiative of others.
	His/her consistency gains support of others	Inconsistencies generate lack of confidence.	Lack of consistency makes people hesitate.	Gains support of others through consistency.	Generates confidence and moves others to action through consistency.	Generates involvement and commitment in others through consistency.
	Sharing responsibilities to motivate others	Distributes tasks mechanically (without paying attention to people's capacities).	Fails to involve people when distributing tasks.	Delegates responsibilities to motivate others.	Delegates responsibilities to spark initiative in others.	Delegates responsibilities to enhance the capacities of each group member.
	Stimulating others to produce ideas for improvement	Doesn't stimulate others to contribute.	The contributions elicited don't lead to action or improvement.	Stimulates others achieving good ideas that improve action.	Achieves high level of initiative in each person.	Obtains an atmosphere of fertile ideas and contributions that significantly enrich work.
	Moving others to action through recognition of merit	Expresses recognition arbitrarily or irregularly.	His/her form of recognition doesn't have a motivating effect.	His/her recognition of actions moves others to action.	Creates an atmosphere of mutual recognition that generates cohesion among the members of the group.	His/her recognition contributes to a feeling of identification and belonging to the group, achieving commitment to common objectives.

Levels of Mastery	Indicators	Descriptors				
		1	2	3	4	5
Third level of mastery: ***Exercising influence in own surroundings to achieve desired objectives***	Communicating decisions with conviction to achieve group objectives	Avoids communicating group objectives.	Fails to communicate group objectives with conviction.	Communicates decisions with conviction to arrive at group objectives.	Keeps group informed of all steps taken and their effect on group objectives.	Is able to enthuse group in the pursuit of common objectives.
	Demanding the same thing from self as from others to achieve objectives	Remains aloof from group objectives.	Requires others to meet objectives, without getting personally involved.	Demands the same thing from self as from others to achieve objectives.	Promotes in the group a level of mutual, shared exigency.	Creates group awareness and generates self-discipline in orientation toward common objectives.
	Delegating in order to achieve targeted objectives	Doesn't delegate to arrive at common objectives.	Distributes tasks, but without relating them to common objectives.	Delegates in order to achieve proposed objectives.	Not only delegates, but empowers others to take initiatives to arrive at common objectives.	Conveys enthusiasm so that others will make outstanding contributions toward group objectives.
	Making others think of attaining ambitious objectives	Overlooks contributions of group members.	Counts on others to attain objectives, but doesn't stimulate them to produce ideas.	Stimulates others to think about achieving ambitious objectives.	Systematically stimulates others to contribute ideas and initiatives.	His/her collaborators are confident that they can and should develop new ideas to contribute to attainment of group objectives.
	Recognising the contributions of others in attaining objectives	Takes others' contributions for granted, without pointing out the specific merit of each.	Tries but doesn't manage to involve others in the spirit of attaining objectives.	Recognises the contributions of others in the attainment of objectives.	Generates an atmosphere of honest, open mutual recognition among group members.	Individually stimulates each collaborator to pursue and identify with common objectives.

Final considerations

We have concluded a period of reflection and study. The results can be seen in this volume, which is designed to provide professors in higher education with ideas on generic competences.

In order to arrive at the adjustment called for in the Bologna Declaration on European convergence, two points of support are offered: the credits system that is to be used in "measuring" learning, and competences. These are closely related instruments and together will enable higher education to respond to the needs of society. With regard to competences, the diagram in figure 4 outlines the process to follow in choosing the ones that should be worked on in each degree course.

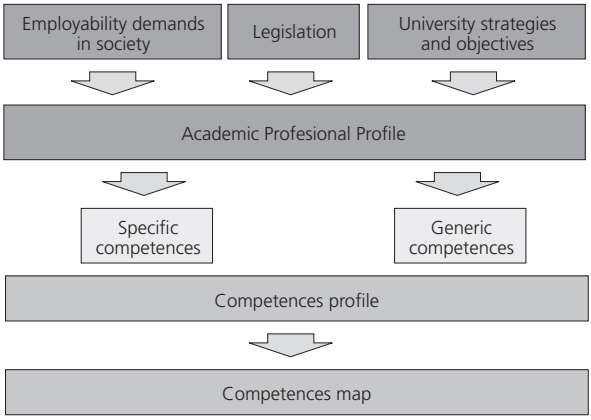

Figure 4
Origin of competences

Responding to demand and employability, in accordance with ministerial guidelines and pursuing the strategy of each university or group of universities, academic and professional profiles must be drawn up for each degree course to be offered. From these profiles, the university or universities must deduce the specific and generic competences that are to distinguish all professionals trained there. The resulting competences profile must then be distributed by year and by subject or module over the length of the degree course. This distribution constitutes the competences map of each degree.

In drawing up their competences profiles and maps, universities must decide the generic competences that will distinguish the professionals graduating from their classrooms. At first, no more than ten or twelve competences should be chosen, so as not to overburden the curriculum with "new" contents and to keep them from becoming competences on paper only, with no real place in the academic curriculum.

Figure 5 shows the structure underlying the conception of matrices or tables devised for each of the competences described in this volume as the point of departure for addressing each one of them.

Development of generic competences

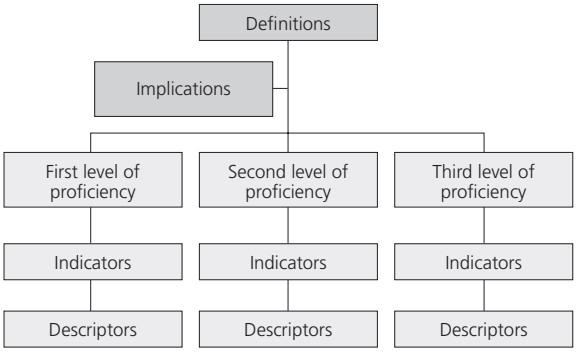

Figure 5

Competence assessment structure

This diagram can also be used to organise the assessment of specific competences, if a detailed development of modules or subjects is desired.

As part of the comprehensive training of citizens and professionals demanded today by society, generic competences constitute a novelty for lecturers, who now must consider them as part of what their teaching load. Incorporating them into the teaching-learning process means planning how to develop the competences in question in students, how to nourish them in tutorials and finally, how to assess them. This is one of the reasons why the authors of this study have devoted two and a half years to the work of organising and writing these pages. Introducing generic competences into the academic curriculum is undoubtedly one of the factors that will contribute to the success of the changes proposed by European universities.

Provisionality of the tool

The assessment system presented in this work may seem artificial and even just an appendix to something that should be worked on more naturally as part of the specific competences of each subject. With time, however, the incorporation of generic competences into higher education will surely have occurred in a way that will make their presence, intentional development and assessment seem natural and something that has always been there.

Nevertheless, experience with them is now just beginning. Since the path is largely new, we will need support and aid to help in training both lecturers and students in new approaches to teaching and learning.

Clearly, the innovative teaching required to accomplish the objectives of the declaration of Bologna (1999) and the creation of the European Higher Education Area is both a need and an opportunity to propose alternative ways of evaluating the progress of students' learning. The main educational proposal arising from this analysis is that we must start with what is known, transfer it and gear the process toward autonomous, permanent, independent learning, toward students taking responsibility as the prime stakeholders in the process. This means a change in the role of lecturers, in their approach to teaching and their view of learning. In short, it means a change in mentality, regarding the implicit theory underlying their teaching practice. It is one of the most promising modern lines for renovating teaching and one that will favour university learning.

So training in competences means a change in mentality. It means working hard and co-operatively to learn, acquiring an education that reaches into our daily lives. It involves progressing from a concept of

credits based on the work of teachers to a view of credits based on the effort and work of students, going from a syllabus based on contents to a syllabus based on competences. Designing and developing a competence-based curriculum involves being aware of how teaching must now veer sharply toward learning outcomes, based on student evidence. Working on competences means focusing teaching on students' learning. Lecturers therefore become facilitators of this process.

Learning is thought of as a way of knowing, understanding, managing and demonstrating each professional action. Universities are therefore institutions where the creation, transmission and management of knowledge are combined. They are centres where people are taught to think and where they learn how to learn. Moreover, they are endowed with new assessment systems consistent with the new planning and development of the curriculum (Hernández et al., 2005).

As for students, their role is to become more involved and dedicated to their own learning, which must now be less dependent and more autonomous, as they progress from their first to last years in the university, in a context where it is no longer a question of guessing the right answer, but of knowing how one arrives at that answer.

Many job profiles for positions of responsibility in diverse fields, including hospitals, schools and companies, are formulated in terms of explicitly generic competences (it being taken for granted that university graduates have the necessary specific competences). Selection interviews devote most of their time to verifying whether candidates possess these generic competences. Universities must guarantee the professional competence of graduates and facilitate their employability or usefulness to society. The educational system as a whole must guarantee the integral education of citizens, achieving at least a satisfactory level as far as employability is concerned.

There are lecturers who argue that generic competences have always been valued. This is true. However, it may have been done somewhat selectively and subjectively, on the basis of students' interest, class attendance, neatness of work, willingness to co-operate with the lecturer, etc.

The system presented in this volume seeks to make the assessment process more comprehensive and objective by specifying criteria for evaluating levels of development of each competence. By using them, lecturers can systematically monitor this progress and conduct specific individual and/or group tutorials.

Clearly and as noted by others, some of the concepts dealt with here, including "competence", mean different things to different peo-

ple, depending on whether one adopts a functional, behavioural or constructivist approach. In this volume we have tried to incorporate the most positive contributions of each approach, arriving at an accepted definition that facilitates communication in such a new area as that of competences. Allowing for future improvements, we trust that the consensus in the present work will make it possible to move forward.

The same thing can be said of the definition offered for each of the generic competences. Much care has been taken to express them in terms of competence, rather than mere capacity, knowledge, ability, skill, attitudes or values. We consider that in addition to evidence of their development, integration of the different elements involved is fundamental.

So we are setting off on a path that has not been taken before. To do so, we have taken advantage of experiences in different fields, trying to incorporate them with common practical sense. After all, this is how new paths are always forged. On publication of this volume, a period will begin of experimentation and improvement of this instrument. Over the medium term, with the contribution of professional educators who will help with their suggestions, we expect to have a powerful tool. It should be said that the matrices of some of the competences have already been used by University of Deusto lecturers to test their validity and worth. However, we cannot yet speak of wide, systematic experience.

Working with this competence assessment tool also requires a profound change in learning processes, through the incorporation of alternative methodologies designed to ensure student participation and acceptance of responsibility for their learning. It is crucial to see that assessment is meaningful if it helps students to learn and if they feel involved in the process. Assessment must be planned transversally when planning teaching modality and methods, as well as the specific work and activities expected of students. It must be integrated in them, so that it will be consistent with expected learning outcomes and the process followed to these ends (De Miguel, M. 2006).

Flexible assessment

One contribution of particular importance is the progressive participation of students in their own assessment. Referring to a different group, Ashford (1989) noted the need to develop the capacity to observe and consistently evaluate oneself, comparing one's conclusions

with those of others (teachers, classmates). After all, there is a social sense to most, if not all, of our professional actions.

Self-evaluation is a very important way of enhancing personal and professional development. It brings into play key factors for maturity, such as self-criticism, self-knowledge and self-regard, objectivity about oneself, and suitability. Regularly having to make a self-assessment means questioning one's own motives for attitudes and behaviours.

The assessment tables presented here offer the possibility of making a self-assessment based on the matrices provided directly or through questionnaires derived from them; or (as at the UD), they can be used to computerise different assessment modalities – i.e. self-assessment, peer-assessment and assessment by the lecturer.

Speaking in terms of competences, there are some aspects, beyond the purely conceptual, about which information cannot be gathered or that cannot be observed directly by the lecturer. In the new paradigm, students also learn outside the classroom, working with their classmates, and gain practice outside the walls of the university.

So other sources must be called on, including students themselves, and information from others such as classmates, lecturers, practicum tutors etc. (Villa and Poblete, 2006). For the education of students, having the opinion of others is important because it will help to correct the bias of subjectivity and to reach realistic conclusions, which in turn will help students to develop behaviours better suited to situations (Cardona and García-Lombardía, 2005).

Logically speaking, if the main movement in the convergence process is the paradigm shift from teacher-centred learning to student-centered learning, and assessment is infused into learning, then assessment processes must become more flexible concerning:

—strategies
—techniques to be used,
—persons involved
—time frames

Therefore, student accompaniment is fundamental at the individual and group level, making sure that *immediate feedback* is given on the evaluation made of their progress. So assessment is no longer a value judgement, a grade, but instead becomes an indicator, a sort of thermometer telling us the state of health of students' learning at all times, and is of prime interest to the students themselves. The value judgement

that they receive at the end (their grade) will be in tune with the work that they know they have done.

Importance of tutorials

Effective assessment requires giving new importance to tutorial work, well beyond traditional tutorials. Coaching is a new function that can emphasise the work of the lecturer, who assumes a more symmetrical role with that of students than in traditional teaching.

As tutors, lecturers plan their work (teaching) and "help" students to plan their work (learning). They help students to find, in their own experience or background, meaning in the subject matter being taught. They get students to reflect on the knowledge and intentionality of the competences to be developed within a module or subject. They provide resources for students to incorporate along with others that they find elsewhere. They orient the meaning of the knowledge and background being acquired by students, so that they can generate their own knowledge and convictions. They facilitate the creation of a team "culture" in the classroom, where people share interests, knowledge, thoughts, experiences. They participate in moderating discussion and debates. They monitor and support students' learning processes, and finally they assess and guide this process.

Without work in this regard, competences will most likely never be developed or evaluated, and if this is the case, no progress will be made toward convergence as required in creating a European Higher Education Area.

With the publication of this volume, the group working on competence-based learning now opens its doors to the entire university community. By placing this instrument at the community's disposal, we wish to foster exchanges that will help to further the convergence process in which we are all engaged.

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