

# COMPETENCE ASSESSMENT STATUS REPORT (NATIONAL SURVEY)

BELGIUM

AGREEMENT NUMBER AND ACRONYM:  
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# Competence-based education and training in Flanders Survey

FATCAT

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## 1 Definitions, organisation of education and training in Flanders (focussed on competence based education)

A competence is a combination of knowledge, skills and attitudes necessary to successfully execute a task or job.

Competence-based education means that knowledge, skills and attitudes are gradually trained in a study programme, that students are followed up and that they get feedback from their teachers. At the end, competences are assessed.

Powers for education lie with the communities. The Flemish, French and German speaking Community each have their own education system. Within the Flemish Government, the Minister of Education is responsible for almost all aspects of education policy, from nursery to university education.

Nevertheless, the federal authorities are competent for some educational issues:

- the start and the end of compulsory education;
- establishing the minimum conditions for obtaining a diploma;
- determining education staff pensions.

### Nursery Education

Although nursery education is not compulsory, almost all children attend nursery education in Flanders. Nursery education works on a multifaceted education of children and encourages their cognitive, motor and affective development.

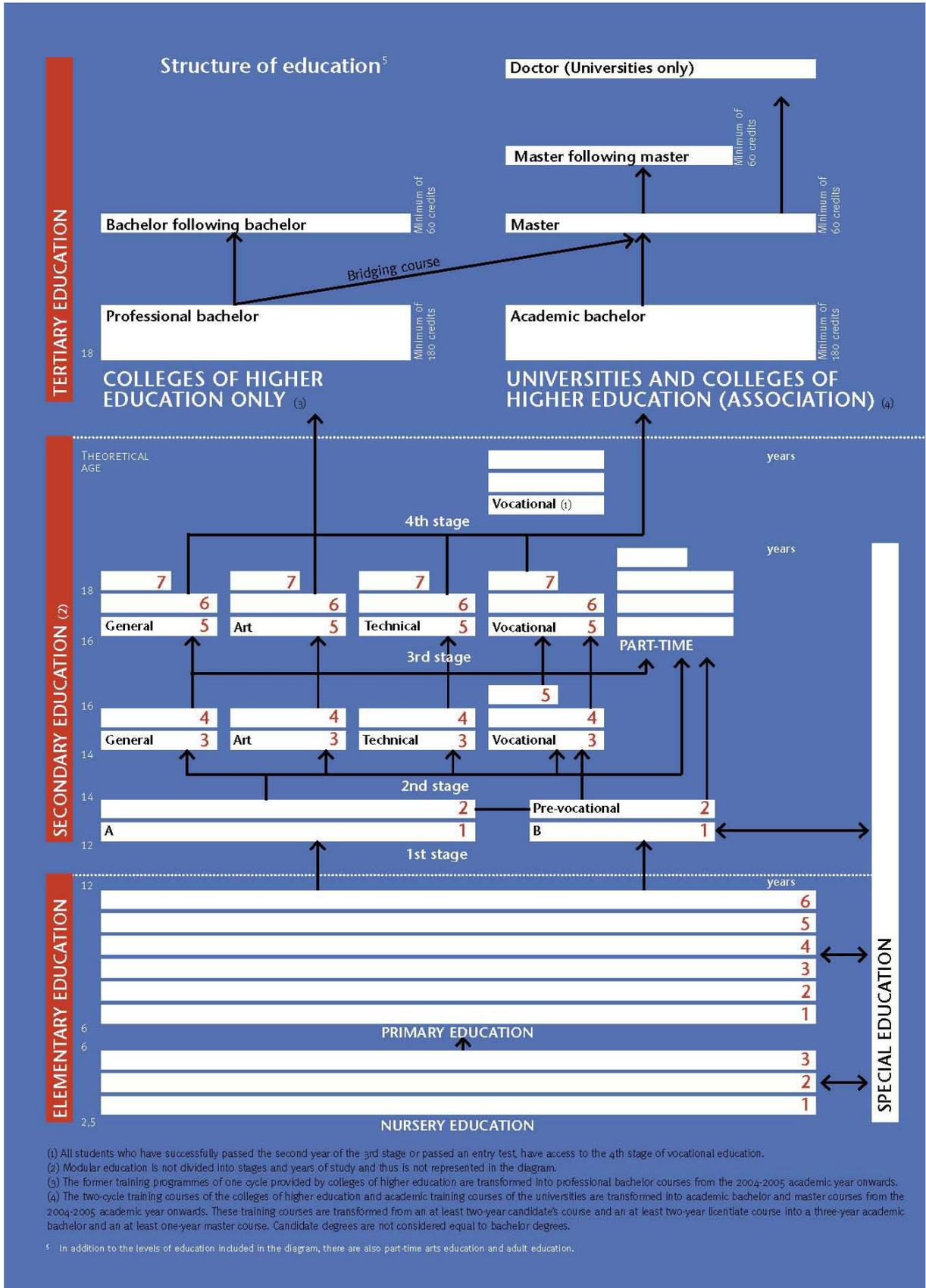
### Primary Education

In mainstream primary education, attention is focused on cross-curricular themes such as 'learning to learn', 'social skills' and 'ICT'. Since 1 September 1998, attainment targets have been applicable in mainstream primary education. Those are minimum objectives, which the government considers necessary and attainable for primary school children.

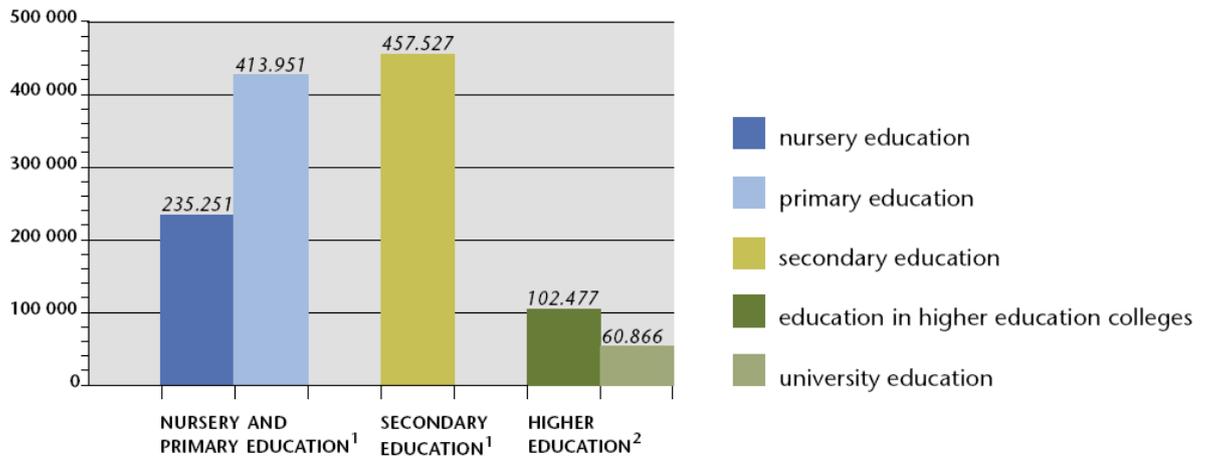
### Secondary Education

The majority of teaching periods in the first stage is devoted to the core curriculum. From the second stage, we distinguish four different education forms:

- General secondary education (aso)  
places an emphasis on broad general education. Pupils are not prepared for a specific profession. Aso provides a very firm foundation for passing on to tertiary education and that is why most pupils choose to continue studying after aso.
- Technical secondary education (tso)  
places a special emphasis on general and technical/theoretical subjects. After tso, young people can exercise a profession or pass on to tertiary education. This education also includes practical classes.
- Secondary arts education (kso)  
combines a broad general education with active arts practice. After kso, young people can exercise a profession or go on to tertiary education.
- Vocational secondary education (bso)  
is a practice-oriented type of education in which young people learn a specific occupation in addition to receiving general education.



**GRAPH 1: School population in full-time education per level of education (2006-2007 school year)**



<sup>1</sup> Number of pupils in mainstream and special education.

<sup>2</sup> Number of students enrolled under a diploma contract in an initial training programme.

## Competence Agenda in Secondary Schools

A first action programme concentrates on guiding pupils in making a study and career choice.

A second action programme aims at the systematic and structural development of workplace learning.

Not only pupils but also teachers will get the opportunity to participate in 'workplace learning' for practical and technical courses.

A third action programme aims at the improvement and development of a sense of entrepreneurship.

In conclusion, a fourth action programme focuses on strengthening the accreditation of experiential learning (APEL). APEL expands the available talent pool by validating competencies, independently of the place where or the way in which they were acquired.

A Flemish Parliament Act is in preparation that will introduce a co-ordinated Flemish qualification structure. It is a tool, which promotes communication between education and work because the same framework is used for the needs of the labour market and the objectives of a training programme.

If people seek a job or consider changing jobs or starting a training programme, the qualification structure will show which competencies are needed to that end. That is why the qualification structure will play a role in guiding study and career choices and later careers of people.

### Higher education

In Flanders, the following higher education courses are provided:

- Bachelor courses
  - Professional bachelor courses
  - Academic bachelor courses
- Master courses
- Further training programmes
- Postgraduates and updating and in-service training courses
- Doctoral programmes

(The competences in higher education will be discussed in chapter 2)

### Adult education

Adult education is entirely apart from the initial educational pathway. Courses delivered in this type of education may lead to a recognised diploma, certificate or qualification.

Adults aged 18 and over and young people who have complied with full-time compulsory education, may enrol. Depending on the course chosen, there may be specific entry requirements.

Adult education consists of three levels of education: adult basic education, secondary adult education, higher vocational education

In future, not only adult education centres but also secondary schools and colleges of higher education will be allowed to organise such courses of higher vocational education.

Typical of those courses is the close co-operation with the professional sectors. Moreover, workplace learning plays a key role in these courses. Those courses will also distinguish themselves by creating transparent and flexible pathways. The courses of higher vocational education do not only focus on immediate employability on the labour market. Higher vocational education can also be a step towards a professional bachelor.

### Lifelong Learning

Lifelong and life-wide learning is a continuous process in which the learners acquire the necessary knowledge and competencies to better cope with their professional, social and cultural tasks in a fast changing society.

As the needs of the labour market are changing at a rapid pace, lifelong learning is needed to meet those requirements.

Educational institutions are taking more and more initiatives for the purpose of creating a more flexible education system. In order to develop and maintain a positive attitude to lifelong learning, it is essential to have experiences of success on the way. Therefore, attention is being paid to the continued modularisation of education at all levels.

In Flanders, various forms of flexibilisation have already been laid down by law: including transition between courses through bridging or transfer programmes,

recognition of competencies acquired earlier on in life, distance learning, ICT integration, evening courses, mobility programmes, dual learning pathways,...

One of the main objectives of open distance education for example is making the educational provision accessible to as many adults as possible by taking their way of living and world of experience into account to the maximum extent.

Various combinations of learning and working, whether in part-time or in an alternating form, can also facilitate the transition from learning to working and vice-versa. Some Flemish educational institutions have made concrete efforts to introduce dual learning pathways in the education provision.

Competence-based education has his fellows and opponents: the fellows are convinced of the need to convert to competence-based education while the opponents argue that knowledge is from far the main competence a university should focus on.

## 2 The key competences in higher education in Flanders

Universities and university colleges focus on acquiring knowledge, making valid reasonings, research skills and attitudes, self management, information gathering and understanding, working in multidisciplinary teams, management skills, ect.

**Professional Bachelor's** programmes have the objective to bring students to a level of general and specific knowledge and competences required to perform a particular profession or group of professions independently. A professional Bachelor's programme can therefore lead directly to a place on the labour market.

The main objective of the **academic Bachelor's** programmes is that students will go on to a Master's programme. Thus, they are geared towards bringing the students to a certain level of scientific or artistic knowledge and competences, required for scientific or artistic work in general, and towards a specific field of sciences or arts in particular.

Preparing students for the labour market is only a secondary objective.

Some Bachelor's programmes are a follow-up to another (professional) Bachelor's programme. This follow-up programme is geared towards the broadening of or specializing in competences acquired during the initial Bachelor's programme.

**Master's** programmes have the objective to bring students to an advanced level of scientific or artistic knowledge and competences required for scientific or artistic work in general, and to a specific domain of sciences and arts in particular, which is required for autonomous scientific or artistic work or to apply this scientific or artistic knowledge independently in one or a group of professions.

Some Master's programmes are considered as advanced or further studies.

The qualification of Doctor is granted by a panel of researchers after a public presentation of the Doctor's thesis in which the writer/researcher/student has demonstrated to be able to conceive new scientific knowledge based on independent

research. The doctoral thesis should have the potential to lead to publications in scientific journals.

The Flemish Ministry of Education and Training determined the level indicators and the award-type descriptors in the Law on Higher Education Reform of 4 April 2003. It is clear and demonstrable that the descriptors for higher education degrees in Flanders fit with the cycle qualification descriptors in the Framework for Qualifications of the European Higher Education Area, because Flanders is using almost the same descriptors for qualifications in the Flemish Framework and the cycle descriptors of the Bologna Framework.

The Flemish Framework is required in law to be based on learning outcomes.

The use of ECTS was introduced by the Law on Higher Education Reform of 4 April 2003.

The following minimum study load was established:

- Bachelor's programme: 180 credits;
- Advanced Bachelor's programme: 60 credits (extra)
- Master's programme: 60 credits;
- Advanced Master's programme has minimum 60 credits (extra)

The Doctoral degree has no credit values assigned.

### **First cycle descriptors**

Dublin descriptors – first cycle

- have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;
- can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study;
- have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues;
- can communicate information, ideas, problems and solutions to both specialist and nonspecialist audiences;
- have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

### **Bachelor level descriptors in Flanders**

Bachelor's programmes with a professional orientation

Professional orientation implies that the programmes are aimed at (bringing students to) a level of general and specific knowledge and competences, based upon the application of scientific or artistic knowledge, creativity and practical knowledge.

More specifically, Bachelor's programmes with a professional orientation aim to bring students at the level of general and specific knowledge and competencies that are needed for the independent practice of a profession or a cluster of professions.

The specific level descriptors of Bachelor's programmes with a professional orientation are:

- general competences such as the capacity for logical thought and reasoning, the ability to acquire and process information, the ability for critical reflection and project-based work, creativity, the ability to perform simple supervision tasks, the ability to communicate information, ideas, problems and solutions to both specialists as well as laymen, and a positive attitude towards life-long learning;
- general professional competences like the ability to work together as part of a team, a solution-oriented attitude in the sense of being able to define and analyse independently complex problematic situations in professional practice, and the ability to develop and apply effective strategies to solve them, and to develop a sense of social responsibility in connection with the professional practice;
- specific professional competences at the level of a newly-qualified professional.

Bachelor's programmes with an academic orientation

Academic orientation implies that the programmes are aimed at (bringing the students to) a level of general knowledge and the acquirement of academic or artistic knowledge and competences, based upon the application of scientific or artistic knowledge, creativity and knowledge. Bachelor's programmes with an academic orientation are scientific research based.

More specifically, Bachelor's programmes with an academic orientation aim to bring students to the level of knowledge and competences that are needed for scientific or artistic functions in general and specifically, with as aim the access to the Master's programme.

The specific level descriptors of Bachelor's programmes with an academic orientation are:

- general competences such as the capacity for logical thought and reasoning, the ability to acquire and process information, the capacity for critical reflection, creativity, being able to perform simple management tasks, the ability to communicate information, ideas, problems and solutions to both specialists as well as laymen and a positive attitude towards life-long learning
- general academic competences such as a research attitude, knowledge of research methodologies and techniques and the ability to apply them adequately, the ability to collect the relevant data that can influence the formation of an opinion about social, scientific and ethical issues, appreciation of uncertainty,

ambiguity and the limits of knowledge, and the ability to initiate problem-driven research

- an understanding of basic academic, discipline-related knowledge inherent to a certain domain of the sciences or the arts, systematic understanding of the key elements of a discipline which includes acquiring coherent and detailed knowledge that is inspired partly by the most recent developments in the discipline, and an understanding of the structure of the specialisation and its inter-relatedness with other specialities

Advanced Bachelor's programmes

Advanced Bachelor's programmes are actually further studies and aim at deepening the knowledge and/or competences acquired in a professional Bachelor's programme.

### **Second cycle descriptors**

Dublin descriptors – second cycle

- have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context;
- can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;
- have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgements;
- can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously;
- have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

Master's level descriptors in Flanders

#### *Master's programme*

Master's programmes are aimed at bringing the students at the advanced level of knowledge and competences required for scientific or artistic work in general, and to a specific domain of sciences and arts in particular, which is required for autonomous scientific or artistic work or to apply this scientific or artistic knowledge independently in one or a group of professions.

The specific level descriptors of Master's programmes are:

- general competences at an advanced level such as the ability to reason and act in an academic manner, the ability to handle complex problems, the ability to reflect on one's own thoughts and work, and the ability to convert this reflection into the development of more effective solutions, the ability to communicate one's own research and solutions to professional colleagues and laymen, and the ability to develop an opinion in an uncertain context;
- general academic competences at an advanced level such as the ability to apply research methods and techniques, the ability to design research, the ability to apply paradigms in the domain of the sciences or the arts and the ability to indicate the limits of paradigms, originality and creativity regarding the continuously expanding body of knowledge and insight, and the ability to collaborate in a multidisciplinary environment
- advanced understanding and insight in scientific, discipline- specific knowledge inherent to a certain domain of the sciences or the arts, insight in the most recent knowledge in the subject/discipline or parts of it, the ability to follow and interpret the direction in which theory formation is developing, the ability to make an original contribution towards the body of knowledge of one or several parts of the subject/discipline, and display specific competences characteristic for the subject/discipline such as designing, researching, analysing and diagnosing;
- the competences needed for either independent research or the independent practice of the arts at the level of a newly-qualified researcher (in the arts), or the general and specific professional competences needed for independent application of academic or artistic knowledge at the level of a newly-qualified professional.

### *Advanced Master's programmes*

Advanced Master's programmes are actually further studies and aim at deepening the knowledge and/or competences in a certain field of study.

The descriptors of the Master's programmes are equally valid for the Advanced Master's programmes.

### **Third cycle descriptors**

Dublin descriptors – third cycle

- have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;
- have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;
- have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;
- are capable of critical analysis, evaluation and synthesis of new and complex ideas;

- can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;
- can be expected to be able to promote, within academic and professional contexts,
- technological, social or cultural advancement in a knowledge based society;

Doctoral level descriptor in Flanders

The goal of the doctoral training through research is the training for an independent researcher who

- have demonstrated the ability to make a contribution to the development and the growth of knowledge body;
- have demonstrated the ability to produce new knowledge in a field of study or at the borders of different fields of study through independent research, including the fine arts and music.

The PhD thesis may result in national or international refereed publications.

Very important to add is the system of Prior Experiential Learning. Each institute of higher education can accredit Prior Experiential Learning. The accreditation of Prior Experiential Learning (APEL) is the process through which learning achieved outside education or training systems is assessed and, as appropriate, recognized for academic or career planning purposes.

### 3 Why competence based education in Flanders and the role of evaluation in competence based education

Today, it is no longer enough to have up-to-date knowledge to be able to do a job. Everything is processing so fast that this up-to-date knowledge is quickly obsolete. That's why employees need to have the necessary competences for life long learning but also the competences to adapt to the changing environment. A modern employee must be able to manage his own competences. That's why education should not only pay attention to knowledge but also to those necessary (life long learning) competences.

Through evaluation, the teacher assesses to what extent the student has reached the required objectives. Since the objectives must be well known by the students, the nature of the objectives will determine the evaluation form. The objectives of many institutions (usually expressed in competences that are to be achieved) and the evaluation forms are written down in the ECTS files. Those of KaHo St.-Lieven may be found on [www.kahosl.be/ects](http://www.kahosl.be/ects) (Dutch-English). On the one hand, the evaluation checks whether a student's study results are sufficient to pass for a particular course subject and to acquire the credits that are linked to this course subject. The exam, on the other hand, provides information to the student and the teacher about the progress and difficulties. It also provides information about how the learning process may be adjusted by the student as well as by the teacher.

If the evaluation takes place at the end of the educational learning process, the term summative evaluation is used. If only the end result is considered the term product

evaluation is used. Formative evaluation is meant to inform the student about his personal skills and knowledge in comparison with the expectations and requirements of the teacher. Feedback is vital in such situations. Thus, process evaluation (information about the progress of the learning process) is done by interim tests. In recent years there has been a shift in Flanders from a test culture towards an assessment culture. Along with the introduction of an innovative educational culture (project education, problem-oriented education, etc.) new evaluation forms are being introduced.

These new forms of evaluation or assessment may be characterized as follows:

1. Knowledge construction is the primary factor instead of knowledge production (quality instead of quantity);
2. The objective is to measure not only knowledge but also cognitive strategies, skills and attitudes;
3. Lifelike situations are taken as a starting point;
4. Integration into the instruction process (formative evaluation for coaching the learning process);
5. Students play an active part.

The introduction of these new assessment forms (peer assessment, self assessment, 180° feedback, portfolio) does not mean that the more traditional forms (closed book, open book, oral, written, paper, presentation, etc.) are put aside. They are used merely to supplement these traditional forms in order to evaluate different objectives. It is a known fact that the exam determines what the student learns. When the student knows that an exam comes down to a demonstration of theoretical knowledge, he will only learn the subject matter by heart. Other evaluation forms lead to very different study behaviour.

In Flanders the cooperation between the professional field and the various course departments is extensive. All courses have a course advisory board with representatives from the professional field. All students do a work placement and make a dissertation on the working field. These educational activities (work placements and dissertations) exist as separate educational components in the course and are evaluated separately (permanent evaluation, report, presentation, etc).

In 1997 the European Credit Transfer System (ECTS) was introduced in many professional training courses in Flemish higher education. Thanks to the Bologna Declaration of June 1999 and the Flexibilisation Decree in Flanders (April 2004), ECTS has developed into an accumulation system in Flanders as well as in Europe and beyond.

#### 4 What competences do employers (from higher education) require employees to have

KaHo Sint-Lieven was coordinator of a study about this subject in cooperation with partners from 3 other EU member states. Content of the project <http://project.kahosl.be/tqm>

#### **Context of the project**

In the struggle for economical survival and the search for excellence through continuous improvement, organisations are looking for young employees who are properly equipped to function in an efficient and effective way within their culture. We must ask the questions:

- Are institutes of higher education aware of the required knowledge, skills and attitudes of young employees?
- Do the actual study programmes match these requirements?

The University Partnership for TQM brings together trade and industry on the one hand and education providers on the other. They participate in this project in order to identify the gaps between the needs of the working/professional field and the educational services offered and provide solutions to fill them.

On the basis of the results of enquiries in industry (interview, inquiry form), a specific inventory of the most important basic qualifications for graduates was made. Each of these basic qualifications included several items. The following basic qualifications were distinguished:

- Business Orientation – Owner orientation
- Customer Orientation
- Employee Orientation
- Environmental Orientation
- System and Process Focus
- TQM basics
- Continuous Improvement
- Quality Tools
- Applications of Statistical Mathematics
- Quality Systems
- Measuring Technique
- Personal Characteristics

The companies/organisations were asked:

- 1 to attach a degree of importance to these concepts (ranking);
- 2 to define these concepts as Skills, Attitudes and/or Knowledge.

This inquiry form was presented to the companies / organisations in writing and if necessary an additional telephone call was made.

Also the same inquiries were presented towards education (important quality concepts and skills for graduates) and made it possible to determine the 'gap' between education and industry.

Findings and conclusions:

- In general we may say that the basic conclusions of the study apply to all the countries represented in the UE-TQM-partnership. The survey concludes that universities should use TQM themselves, they should 'preach what they teach'.
- The similar study that was made in the United States gives interesting material to compare our study.

#### Attitudes:

The study has proved that companies attach most importance to quality related attitudes. The actual behaviour determines a person's performance. The company itself, on the contrary, can always refine technical Knowledge, when necessary. In the case of attitudes, this is much more difficult. Therefore, an important guideline in this matter is that colleges of higher education and universities should stimulate the right behaviour in relation to TQM with their students. Summarising the findings of the inquiry, one could emphasize the following features of desired behaviour: commitment and sense of responsibility, entrepreneurship, eagerness to learn, improve and innovate, result-orientation and cost-awareness, customer orientation, see things as a whole and quality as part of the business, discipline and care.

#### Skills and knowledge:

Also skills and knowledge are required. With regard to skills, the study proves that companies want the following skills from young employees: identification of customer expectations, communication and interaction skills, meeting techniques, problem solving techniques, project management, basics of measuring techniques, self-assessment and benchmarking techniques, ability to think logically and self control.

General 'academic' skills such as communication and interaction skills are considered to be more important than more specific, technical skills such as 'basics of measuring techniques'.

### **Results of the project**

#### **Core competences of young graduates in higher education in the field of business needs**

ATTITUDES (which drive performance, a form of "readiness": willingness, desire, suitability...)

- Have a sense of showing initiative, and the ability to show responsibility and creativity in permanently improving and innovating the organisation;
- Are willing to opt for permanent learning, self reflection, self evaluation and self regulation;
- Feel at home in an environment where co-operation is natural;
- Are willing to combine personal contributions and objectives with the results aimed at by the organisation, and the expectations of customers or other interested parties in the organisation;
- To translate the goal of "excellence" into their daily tasks, and at the same time, wish to place their position within the entire organisation.

SKILLS (integrated knowledge and understanding acquired in practice, and ability to use these in new situations)

- Are capable of employing techniques for identifying customer expectations
- Master their own language, written and verbally, are able to express themselves clearly, and are able to communicate in a businesslike manner
- Are able to issue verbal and written reports
- Can give presentations

- Can handle meeting techniques
- Are able to listen
- Are able to plan and respect timing
- Are able to think logically and work methodically
- Are capable of independently acquiring new knowledge
- Are able to define, plan and budget, organise or follow-up and evaluate the project, on the basis of the results achieved
- Are able to read and interpret graphs, tables and statistics
- Are able to employ the key quality improvement techniques such as cause and effect analysis, determination of basic causes, brain-storming techniques, process analysis using flow charts, etc. , analysing problem situations, formulating measurable objectives, preparing action plans, evaluating effectiveness, and correcting current practice.
- Are capable of comparing the results of their own organisation with the performance of other companies, and derive improvement or innovation objectives on that basis
- Are able to carry out total or partial self-evaluation according to the reference framework of a quality award model, such as the European Quality Award
- Are able to use the key measuring techniques relevant to the subject

### ***Resources***

\* *Higher Education Qualifications Framework in Flanders (Belgium) 2008, A presentation for compatibility with the Framework for Qualifications of the European Higher Education Area - Publication*

\* *Education in Flanders, The Flemish educational landscape in a nutshell 2008, D/2008/3241/204 – publication by the Department of Education*

\* *New Methods of Evaluating Student's Performance in the Vocational Training System in the framework of a Leonardo Da Vinci Pilot Project HU-04/B/F/PP-170021 - Publication*

\* <http://project.kahosl.be/tqm> *Leonardo Da Vinci Programme – Publication Guidelines for the integration of TQM-basic competences in the curriculum of higher education*

\* *Recognition and accreditation of prior experiential learning: Situation in Flanders (Belgium), Presentation University Ghent*

\* *DESECO project about core competences in primary and secondary education, 2001 – Publication department of education*