

Premises to accreditation: a minimum set of accreditation requirements

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1 – Glossary and principles

1.1– Evaluation

Evaluation is widely used to express a judgement on the potentials or on the effects of public actions (political, economic, investments, planning, infrastructure projects ...).

A more rigorous definition of evaluation is:

- a cognitive activity aimed at providing a judgement on an action
- performed following explicit and clear procedures
- with the intention to produce outside effects.

1.2 – Formative / summative

The evaluation can be formative or summative.

If the evaluation has a formative function, it is oriented towards the improvement of the actions, to better structure the processes, to change, during the work, what seems to be not working. Formative evaluation is essentially based on the qualitative judgement of experts, even if it depends on data or indicators, and it typically concludes with recommendations. The evaluator becomes, in some way, a participant or co-responsible in the management of the action.

If the evaluation has a summative function, it is interested in the accountability, in certification or, in extreme cases, in accreditation. A summative evaluation usually rests heavily on data and indicators, and concludes with affirmations or opinions. The evaluator is neutral, attentive to outcomes.

1.3 – Essential premises

The evaluation must identify and respect certain essential premises:

1) the mandate of the evaluation:

- know who will use the evaluation,
- know what will be the principal use of the evaluation (summative or formative)

2) the primary objectives of who is being evaluated:

know to what degree the evaluation must be oriented towards:

- internal efficacy: comparison of the results obtained from the Programme with to the initial objectives,
- external efficacy: comparison of the results obtained from the Programme with the outside requirements (economic and social context).

3) the instruments of observation and judgement

- know the value system of the organisation implementing the action,
- define the indicators that describe the primary objectives coherently with the value system,
- know how to concretely gather the information that will enable us to draw conclusions and express judgements (formative, summative or mixed) based on facts.

1.4 – Quality

Quality in University formation concerns, obviously, the calibre of the results of the teaching and learning process.

This definition reveals its difficulties when we try to define the system of values and the relative indicators that “bite” into the problem of quality: the competence of the teachers, the suitability of the facilities, the existence of an organisation that is able to control and intervene in the formative process, the acquisition of knowledge by the students, their good results in exams, their pass rate and much more?

The ISO 9001¹ definition of Quality:

"The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs" in higher education can be interpreted as (Sparkes 1999)²:

"specifying worthwhile learning goals and enabling students to achieve them".

Where:

¹ ISO 9001: 2000, Quality management systems - Requirements (specifies requirements for a quality management system for any organization that needs to demonstrate its ability to consistently provide a product that meets customer and applicable regulatory requirements and aims to enhance customer satisfaction - It is now the only standard in the ISO 9000 family against which third-party certification can be carried)

² Sparkes J.J., 1999, A proposal for a formalised procedure for achieving good quality teaching of engineering in European universities, Position paper on Quality and Quality Assurance, H3E - Higher Engineering Education for Europe, Working Group n.2 "Quality and Recognition in Engineering Education"

i) specifying worthwhile goals involves paying attention to academic standards, to the expectations of society, to students' aspirations, to the demands of industry and other employers, to the requirements of professional institutions, to the fundamental principles of the subject, etc.; the "stated or implied needs" of these stakeholders are not all mutually compatible, so there can be many possible and valid interpretations of "worthwhile".

ii) enabling students to achieve these goals involves making use of research into how students learn, adopting good course design procedures and building on successful teaching experience, all of which may require professional development for most lecturers.

The concept of "fitness for purpose" purpose cannot lead to acceptance of any system that operates according to any identified and declared purpose: "fitness for purpose" must be complemented with "fitness of purpose", i.e., the relevance of the purpose must be challenged (Kristoffersen, Sursock, Westerheiden, 1998). Such complement is guaranteed by due consideration of customer needs and requirements.

1.5 – Accreditation

According to (Hämäläinen et al, 2001)³, the term accreditation *expresses the abstract notion of a formal authorising power, acting through official decisions on the approval of institutions (or not) or study programmes.*

However, if the provider of the accreditation is a public organisation allotting funds, the meaning becomes quite precise: accreditation is a process aimed at introducing standards of quality, according to objective parameters, for those subjects who implement actions in the formation system in order to realise public policies for the development of human resources.

Accreditation is a binary judgement (pass – not pass) on the award of a status or on an approval.

It is a process, primarily an outcome of the evaluation. It can be considered an extreme case of summative judgement after an evaluation process.

1.6 – Responsibility

Responsibility for the quality of the formation is to be sought at the level where competences aggregate and are coordinated, that is, at the level of the Programme.

³ Hämäläinen K., Haakstad J., Kangasniemi J., Lindeberg T., Sjölund M., 2001, Quality Assurance in the Nordic Higher Education – accreditation-like practices, European Network for Quality Assurance, in Higher Education, Helsinki

The Programme has the primary responsibility for establishing:

- the professional figure to be trained (integration between the university system and society or work market),
- the consequent learning objectives (expected level of knowledge and skill that the student must have acquired at the end of his studies, foreseen areas of competence and professional placement, possible national and international benchmarking),
- the timing, starting from which prerequisites and with which resources these objectives are to be reached.

1.7 – Responsibility in action

It is up to the Programme:

- to verify the correspondence between the professional figure actually produced and the general prospects of the work market,
- to implement instruments to verify the good progression of the teaching programme (student progression in quantity, quality, time),
- to coordinate the different formative experiences, entrusted (allotted or delegated) to the single teachers in the most varied forms (lessons, exercises, seminars, projects, field experience, etc....), check the coherence between these and against the objectives, ascertain the compatibility with the study timing and the available resources (human and material).

1.8 – Transfer of responsibility

Through these acts, documented in a reliable and verifiable manner, the Programme provides the reference Institution (Faculty, University) with the elements for judgement that will enable them to assume, with an adequate degree of confidence, the final responsibility:

- for the coherence of the study degree with the professional figure to be formed,
- for the level of the titles conferred in its name (the effective knowledge and abilities of the graduating student),
- for the quality of the training that is provided to enable the students to reach that level.

1.9 – Data, judgements, procedures

There are basically three types of instruments, quite different one from the other, on which an evaluation/accreditation model is based: quantitative indicators, qualitative judgements of experts, organisation system.

An effective evaluation model must resort to a combination of elements of these three “types”. Moreover, it is general practice that it also includes a

significant control element such as the gathering of the opinions of the students.

- Quantitative indicators

In the grammar of evaluation, these are like syllables or, at most, like words.

Some quantitative indicators of "performance" are essential. It is appropriate that these be produced at a central level in a uniform and certified way and supplied to the structures to be evaluated or accredited. As they are of a numeric type, they can provide (with due caution for the case) scales or comparisons of a type that are generally perceived as "objective".

They must be collected, processed correlated and compared in a professional way: in developing a set of indicators the aim is to find a balance between measurability and relevance for drawing conclusions and making judgements.

- Qualitative judgements of experts

In the evaluation syntax these are the sentences that make up the discourse.

Many aspects important for quality of formative processes cannot, partly or entirely, be conveyed as numbers (e.g. the appropriateness of the objectives or resources, the effectiveness of methods, the results of learning). It is therefore necessary to have the professional judgement of experts, usually well-known researchers, professors and professionals.

These experts benefit from maximum credit when they analyse situations that fall into the area of their direct competence. Their evaluation, in such cases is constructive and supports the quality management of the Programme.

On the other hand, this process is not so appropriate for setting up scales of comparison, and it is also slow and costly, so that it can be replicated only in long periods (for example, every five years).

- Organisation System

In this case, the question is whether the system is kept under control in an appropriate way. The results are not directly evaluated, the implicit assumption is that correct management (with precise responsibilities, accurate documentation, competence, resources...) will bring into play all of the control elements that lead to an analysis, bring to light the weak points and therefore press forward towards the improvement of the results.

As it is a standardised type of evaluation, it is easier to find experts able to conduct it, also in shorter time and at lower costs. But such experts can be more easily deceived on the real nature of what they are examining and, on the other hand, concentrating on purely procedural aspects, they run the risk of wasting time with factors that are not strictly pertinent to the qualities that are perceived as such by the students and academics.

2 – Criteria for evaluation and accreditation: a proposal for the debate.

Universities can be very different, not only from one country to the next, but also among different scientific sectors within the same country.

Also the needs of the three levels of higher education are different. The three levels of higher education call for evaluation models based on different approaches.

Level I (bachelor or equivalent), which is the entry level for a large number of students, requires a strong emphasis on the legibility of the curriculum (in terms of basic, characterising culture, knowledge and skills target levels, areas of competence and professional roles envisaged, national and international benchmarking, if applicable) and on organisational aspects.

The evaluation of Level II (Master or equivalent) must take into account the fact that learning contents are geared to the highly specific (professional or research) goals of the reference Departments. A sizeable majority of international student exchange activities should be concentrated at this level.

The evaluation of Level III (Doctorate) should be based on the ability to provide a markedly research-oriented learning environment. It is closely interconnected with the evaluation of the research activities of the Departments.

This means: evaluation objectives and criteria which are well diversified but share a common requirement: formulating a final judgement on each Course of Study based on a very narrow final set of key quality aspects.

The latter should be selected so that, in a clear and readily recognisable manner, they go to the very “heart” of the quality of educational activities, which is limited neither to the quality of individual teachers nor to formal managerial procedures, but rather is the overall quality of a an organised collective effort encompassing several fronts.

After the review of the general principles (Part 1) and with the help of notable examples from some European evaluation models (Appendix), we should now try to pinpoint a “minimum set” of desirable characteristics that should be present in the evaluation models of level I and level II Programmes.

Identifying the “minimum set” of evaluation requirements suitable for Programmes of the first and second level, common to all countries and to all scientific sectors, appears to be a reasonable and achievable objective. Such “minimum set” could stimulate discussion about what constitutes good quality within higher education and support the development of a common methodological framework and common quality criteria for comparative international evaluations within higher education programmes.

2.1 – Basic policy of a Programme

A Programme should be evaluated on the basis of its ability to put into effect a policy focusing - clearly and distinctly - on the external and internal "efficacy" of the learning process:

- specify worthwhile learning goals
- enable most students to achieve the established objectives.

According to a policy of this sort, quality must be interpreted in terms of:

- relevance of the purpose (fitness of purpose)
- fitness for purpose

with a special accent on "transformation".⁴

The "efficiency" criterion or, in other words, the cost awareness, should be seen as a constraint affecting the implementation of the policy, not as a policy in itself; therefore not an object of evaluation for the purposes of accreditation.

2.2 – The mandate of the evaluation

The first and foremost purpose of the evaluation is to reflect the design and management of a Programme: the evaluation checklist should express the set of minimum aspects, and the main factors thereof, that the Programme should use in a stable manner before it is submitted to an external evaluation. The latter shall be conducted on the basis of the same checklist.

The self-evaluation document, as reviewed and commented on by external evaluators, shall be used by:

- the management of the Programme, with a formative and summative function relating to the all the individual actions that put the policy into effect
- the university that has entrusted the Programme with the task of conferring in its name an academic degree corresponding to effective qualifications
- government bodies and third parties for the correspondence between the qualifications and the academic degree

⁴ However there is here something beyond simple "fitness of/for purpose". Enablement implies a philosophy centred on the student; a "comprehensive" system which, before excluding, seeks to understand the reasons behind the exclusion, and asks itself whether and to what extent it is the student who must adapt to the system or the system that must adapt to the student.

- partner universities, in our particular case those included in the European circuit, for purposes of mutual recognition; in particular within the countries signatories of the Bologna declaration
- all interested parties: by facilitating academic and professional recognition - thus increasing the transparency of qualifications -, by promoting informed judgements about qualifications that can be understood in another educational context, by promoting the employability of graduates at national and international level. (*see Diploma Supplement and Lisbon Convention*⁵).

Vision is needed: policies for evaluation and accreditation should not remain scaled down to local perspectives and to threshold requirements. In a recent contribution (Jeliaskova and Westerheijden, 2001)⁶ it is pointed out that:

... it becomes ever more interesting for higher education establishments to acquire recognition or "accreditation" for their programmes from agencies that are known and respected not just within their own (small) country – Europe is replete with small countries – but across Europe. ...

⁵ Council of Europe and UNESCO "The Convention on the Recognition of Qualifications concerning Higher Education in the European Region" Lisbon 8 - 11 April 1997

in particular:

Article VIII.1

Each Party shall provide adequate information on any institution belonging to its higher education system, and on any programme operated by these institutions, with a view to enabling the competent authorities of other Parties to ascertain whether the quality of the qualifications issued by these institutions justifies recognition in the Party in which recognition is sought. Such information shall take the following form:

A - .in the case of Parties having established a system of formal assessment of higher education institutions and programmes: information on the methods and results of this assessment, and of the standards of quality specific to each type of higher education institution granting, and to programmes leading to, higher education qualifications;

B - .in the case of Parties which have not established a system of formal assessment of higher education institutions and programmes: information on the recognition of the various qualifications obtained at any higher education institution, or within any higher education programme, belonging to their higher education systems.

⁶ Jeliaskova M., Westerheijden D.F., 2001, A Next Generation of Quality Assurance Models, CHER 14th Annual Conference

2.3 – The focus of the judgement

The instruments of the external evaluation are:

indicators: with summative functions: in particular: indicators of intake, progression, success of the student and of the graduate

experts' judgements: with both summative and formative functions, on the aspects and factors required by the model.

The organisational system, which is highly variable from one case to another and is always developed over several levels (Programme, Faculty, University), should be left in a free format and should be evaluated ex-post, in terms of its suitability to support those actions having a bearing on the internal and external efficacy of the Programme.

Thus, it is sufficient to ensure that the following indications are provided for each aspect / factor envisaged by the model:

- it must be absolutely clear which person or committee is responsible for the policy, the quality and the execution of all educational matters relating to a given study programme
- that those responsible discharge their duties competently and on time⁷
- that each action is documented in a pertinent and accessible manner.

In other words, that the effectiveness of an organisational system is evidenced by the description of the actions and their documented effects, factor by factor.

2.4 – Changing the philosophy of the self-evaluation report

Our proposal is to discard the logic and practice of periodic "evaluation reports" and adopt a logic of on-going monitoring: it is desirable that each Programme be required to keep and regularly adjourn an "information model" that collects and updates the quantitative parameters and the qualitative descriptions enabling other Parties (with special regard to: academic authorities, third parties, external evaluators...) to formulate an informed judgement.

This "information model", which preferably should be made fully known to the public, can be flanked by a "self-evaluation supplement", reserved to evaluation authorities, discussing the strengths and weaknesses of the Programme.

⁷ in addition to strategic actions, this includes simpler actions, such as, for instance, drawing up a schedule of examinations, the maintenance of facilities, ...

2.5 – The structure of the information model

A comparative examination of the evaluation checklists (Appendix) shows that the different items to be considered in evaluating a Programme can be grouped into four key “aspects” or “dimensions” of the evaluation:

- Requirements and objectives
- Teaching, learning and assessment
- Learning resources
- Monitoring, analysis, review

An appropriate quality assurance mechanism will be present if these four aspects are kept under control in an effective manner by the Programme.

Each “aspect” is clarified through a certain number of “factors” separately indicated, even though it will be of great value to consider their interconnections (e.g., the . *structure and content of the Programme* must be described as a logical expansion of *ensuing general educational objectives, benchmarking*).

The “factors” listed in Tab. I together with their “key aspects” represent the “minimum set” needed in the information model.

Information may also serve to the purposes of the Diploma Supplement, which *“is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed ...”*

Tab. I – “minimum set” of evaluation requirements

link to Diploma Supplement requirements

2	INFORMATION IDENTIFYING THE QUALIFICATION
<p><i>2.1 Name of qualification and title conferred:</i></p> <p><i>2.2 Main field(s) of study for the qualification:</i></p> <p><i>2.3 Name and status of awarding institution:</i></p> <p><i>2.4 Name and status of institution (if different from 2.3) administering studies:</i></p> <p><i>2.5 Language(s) of instruction/examination:</i></p>	

Aspects	factors
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external efficacy: specify worthwhile learning goals

<p>1 – Requirements, Objectives</p>	<ul style="list-style-type: none"> - parties concerned, with whom to determine the reference professional roles - requirements of the parties concerned - main employment opportunities for the graduates - ensuing general educational objectives, benchmarking
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<p>5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION</p> <p><i>5.1 Access to further study:</i></p> <p><i>5.2 Professional status (if applicable):</i></p>
<p>3 INFORMATION ON THE LEVEL OF THE QUALIFICATION</p> <p><i>3.1 Level of qualification:</i></p> <p><i>3.2 Official length of programme:</i></p> <p><i>3.3 Access requirements(s)</i></p>

internal efficacy: enable most students to attain the objectives

2 – Teaching, Learning, Assessment	<ul style="list-style-type: none"> - characteristics of students at intake - structure and content of the Programme - teaching materials and methods - examination and assessment methods
3 – Learning Resources	<ul style="list-style-type: none"> - academic standard of the staff - educational and teaching standard of the staff - technical and administrative staff - facilities (equipment, laboratories, accommodation, libraries, ...) - academic support to students, guidance and welfare services

<p>4 INFORMATION ON THE CONTENTS AND RESULTS GAINED</p> <p>4.1 Mode of study:</p> <p>4.2 Programme requirements:</p> <p>4.3 Programme details: (e.g. modules or units studied), and the individual grades/marks/credits obtained:</p> <p>4.4 Grading scheme and, if available, grade distribution guidance:</p> <p>4.5 Overall classification of the qualification:</p> <p>6 ADDITIONAL INFORMATION</p> <p>6.1 Additional information:</p> <p>6.2 Further information sources:</p>
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technical efficacy: organisation and control of the educational process

4 – Monitoring, Analysis, Improvement	<ul style="list-style-type: none"> - data on student intake - data on student progression - students / graduates opinions - rating and results of graduates on the job market - analysis and comment of data - review activities and follow up
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2.6 –The contents of the information model

Let us examine the most critical factors.

Requirements

The first aspect of the model is “Requirements and objectives”. In order to determine the requirements, expressed in *market language*, it is necessary to identify clearly the parties concerned.

In some instances, it is possible to stipulate a veritable alliance with the world outside the university as a valuable aid to overcome deep-seated habits and to increase public awareness of the logic underlying the Programme.

Educational Objectives

The translation of the “requirements” factor into “educational objectives” is performed by the university; it uses the know-how and the *language of training specialists*; it consists essentially of harmonising the knowledge building processes and learning outcomes that meet the requirements.

This is the point at which it is necessary to reflect critically on the strategies, make choices, clearly express justifications for the chosen priorities.

The best guide currently available for the formulation of learning outcomes is provided in the “Benchmarking Statements” by the QAA. This document could perhaps be adopted as the starting point for the definition of educational objectives, in terms of contents and levels.

Teaching, Assessment Methods

Once the educational objectives of the Programme have been identified and deployed as specific objectives of the individual courses of study, the teacher is provided with great freedom of action as to the methods to be employed in order to achieve them and to ascertain whether they have been achieved.

Nor could it be otherwise, considering that the teacher is by definition the professional possessing the competencies that qualify him/her for this function.

The teacher and his/her course of study represent a complex system, whose management requires competencies of a technical-scientific nature as well as pedagogic and social competencies.

Effective system operation hinges on a diffused propensity to reflect, i.e., the ability of each teacher to observe the effects of his/her actions and to make appropriate corrections, as necessary.

The actual behaviour of a teacher can hardly be controlled effectively from the outside other than at the stage of apprenticeship, when the young teacher receives hands-on training in the field flanking, in a subordinate position, more expert teachers.

People are the fundamental element in the quality of services, especially those like formation involving a high content of expertise and behaviours. But

assessing people using objective criteria is by definition very difficult, and this is especially true for professionals in higher education. It is advisable, however, to prevent teachers from proceeding by trial and error. This can be done through specialist training programmes for newly-hired teachers, to enhance the pedagogic and teaching skills they need to manage the classroom and apply the assessment techniques in a competent manner.

An effective way to assess the behaviour of a teacher ex-post is to verify the contents of the examinations in order to determine the knowledge / skills they are designed to assess, and the marking criteria adopted. In other words, to determine whether the tests ascertain the presence of the knowledge / skills required (and made known beforehand), avoiding both false negative and false positive results.

The collection of student opinions by means of questionnaires or other equally effective means is a complementary method that can supply useful indications.

2.7 – Breaking down the “factors” into their constituent “elements”

A working description of the factors is provided by breaking them down into their “elements”; an overview of the evaluation modes, such as those mentioned in the Appendix, supplies many interesting indications.

An example: the “examination and assessment methods” factors can be broken down into elements such as (QAA, doc. E, Annex E):

- *Does the assessment process enable learners to demonstrate achievement of the intended outcomes?*
- *Are there criteria that enable internal and external examiners to distinguish between different categories of achievement?*
- *Can there be full confidence in the security and integrity of assessment procedures?*
- *Does the assessment strategy have an adequate formative function in developing student abilities?*

A list of common elements helps to make the evaluation reports more comparable; however, it is advisable to leave freedom of choice in the selection of the elements making up a factor.

The first two “aspects / factors” levels, in fact, reflect an analytical approach, with a list to be obligatorily exhausted.

At this level, a holistic approach stressing the interdependence between the elements and their complementarity should be encouraged. This a “gestaltic” vision, diametrically opposed to the “molecular” approach: the elements must be addressed and then evaluated in a context of mutual relationships.

Accordingly, while, as a rule, it will not be possible to accept compensations between the factors of an aspect, it is reasonable to consider the possibility of compensations between the elements that, taken together, add up to a factor.

Thus, the information model will reveal that the Programme is much more than a static configuration of components or a mere list of actions. Indeed, it is a self-organised structure, susceptible of evolution and development, to be assessed on the basis of clear and explicit criteria.

2.8 – Conclusion

Adopt a logic of on-going monitoring: it is desirable that each Programme be required to keep and regularly adjourn a public and on-line "information model" with a view to:

- enabling any competent authority or Party to ascertain whether the quality of the qualifications issued by the institution justifies recognition,
- enabling prospective students and employers to formulate informed judgements about expected qualifications and means /resources made available by the Programme to support the learning process.

A Programme should be evaluated on the basis of its ability to put into effect a policy focusing - clearly and distinctly - on the external and internal "efficacy" of the learning process.

An appropriate quality assurance mechanism will be present if the following four key "aspects" or "dimensions" are first of all described in the "information model" and then kept under control in an effective manner by the Programme:

- Requirements and objectives
- Teaching, learning and assesment
- Learning resources
- Monitoring, analysis, review

The "key aspects" and their articulation in "factors" (an example proposed in Tab. I) may be the basis of an agreed "minimum set" of requirements for the information model.

The same body of information must be integrated with the purposes of the Diploma Supplement.

APPENDIX⁸

The ideas in the European evaluation models⁹

A limited selection of a few representative models will be now examined, bringing out the minimum structure that they have in common and with the widest evaluation horizon summarised in the previous chapter.

These documents are:

- A - CNAVES, Conselho Nacional de Avaliação do Ensino Superior (Portugal) - Processo De Avaliação, Ensino Universitário - Guião De Auto-Avaliação (2000)
- B - CNVSU-MIUR, Final Report of the Workgroup "Accreditamento dei Corsi di Studio", 2001, <http://www.cnvsu.it/library/downloadfile.asp?id=10680>
- C - Consejo de Universidades (Spain), II Plan de la Calidad de las Universidades - Guía de Evaluación de da Titulación (2002)
- D - CRUI, Il Modello di Valutazione CampusOne, <http://www.campusone.it/link/?ID=95>
- E - Estonia - "Quality Assessment Council", Standards for Accreditation of an Educational Program in Estonia (Programs), Abbreviated Checklist for Evaluation Experts (1998)
- F - ISO 9001:2000, Quality management systems Requirements
- G - Phare / ETF, Quality Assurance in Higher Education – Manual of Quality Assurance: Procedures and Practices, European Training Foundation, Nov. 1998
- H - SECAI (Sistema de Evaluación de la Calidad de las enseñanzas de Ingeniería), CRE-COLUMBUS, <http://www.columbus-web.com/>
- I - QAA, Handbook for academic Review, Quality Assurance Agency for Higher Education, 2000, <http://www.qaa.org.uk/>
- J - VSNU. Quality Assessment Made to Measure, Protocol for the External Assessment of ,Educational Programmes 2000-2005, July 1999
- K - ZEvA (Central Evaluation and Accreditation Agency Hanover), General Standards for the Accreditation of New Degree Courses, Bachelor's Degree, Master's Degree, Continuing Education [http://www.zeva.uni-hannover.de/eiga/Standard\(GB\).pdf](http://www.zeva.uni-hannover.de/eiga/Standard(GB).pdf)
- L - ZEvA (Central Evaluation and Accreditation Agency Hanover), Cross Border Quality Assessment in Physics - Evaluation Report, Series "Lehre an Hochschulen" 24/2001, Hanover 2001 http://www.zeva.uni-hannover.de/eva/E_Ber/crobo.pdf

⁸ originally presented in "Quality Assurance in Engineering Education on a National and European Scale", E4 – Enhancing Engineering Education in Europe, march 2003

⁹ from now on, *in italic the excerpts from the original texts*

A first key to the comparative reading of these documents regards the mandate of the self-evaluation document that is to be drafted.

A second key regards the specific contents of the model of self-evaluation, contents that can be read more easily if forced into the frame of four fundamental "aspects" of formation quality:

- 1 – Requirements, Objectives
- 2 – Teaching, Learning, Assessment
- 3 – Learning Resources
- 4 – Monitoring, Analysis, Improvement

Aspects 2, 3, 4 closely correspond to sections 6, 7, 8 of ISO 9001: 2000 standards (doc. F):

- 6 - Resource management
- 7 - Product realization
- 8 - Measurement, analysis and improvement

while Aspect 1 expands subsection 5.2 - customer focus".

With regard to the first key to the reading, the VSNU (doc. J – 1.2) remains on a rather general level: "*The whole system of quality assessment, internal and external, has three purposes : quality assessment, quality improvement and establishing accountability*" , a statement that gives no indications on the preferred model contents.

CRUI-CampusOne (doc. D) declares that its model of self-evaluation "makes use of a methodology based, with due adaptations, on well known models used for evaluating the quality of businesses that produce services (ISO 9000) and drawn up in collaboration with professional associations in the quality control sector".

Substantially, the declared primary purposes are:

- Compare the objectives against the results ("fitness for purpose")
- Evaluate quality to increase quality
- Evaluate to inform the actors involved and the outside world ("to provide public information")

QAA (doc. I - Annex C, 1) first declares great attention to the learning environment and the outcomes of the learning:

A self-evaluation document is a statement that demonstrates that a subject provider has evaluated the following, in a constructively self-critical manner:

- *appropriateness of the academic standards it has set for its programmes;*
- *effectiveness of the curriculum in delivering the intended outcomes of the programmes;*
- *effectiveness of assessment in measuring attainment of the intended outcomes;*
- *extent to which the intended standards and outcomes are achieved by students; and*
- *quality of the learning opportunities provided for students.*

ZEVA (doc. K – 1) also bites directly into the flesh of “quality” of higher education, by declaring:

The basic guidelines along which the degree programmes ought to be orientated if they are aiming at accreditation by ZEVA are:

- *The graduates must meet the expectations of them (from the higher education institution, the labour market, society); the higher education degree awarded must be a reliable indicator that the relevant demands have been fulfilled.*
- *The examinations must reach a level and standards necessary for the completion of the degree course and the awarding of the academic degree in accordance with the Diploma Supplement.*
- *The curriculum must be suitable for providing the necessary qualifications and imparting the appropriate knowledge for the examinations.*
- *The resources necessary for this must be available; the organisation of the course of studies, the teaching and the examinations must fulfil appropriate conditions.*
- *The concepts, on which the curriculum is based with regard to the qualifications to be obtained and to the educational goals determining the courses offered, must be appropriate.*

ZEVA at (doc. L – 2.3.2.3) states:

Quality plays a role on three levels: individual courses, the curriculum phases and the curriculum as a whole, with particular emphasis on the internal coherence. It includes two aspects: the quality of performance of the staff: lectures, materials, timetable, etc. and the quality of students: what they have learned in the respective parts of the curriculum.

1 – Requirements and Objectives

The formation requirements must be established on the basis of outside references, taking into account the professional roles the students are to be prepared for:

The learning objectives (contents and learning outcomes) are to be consistent with the recognised requirements.

QAA (doc. I - Annex E: 8, 10) evaluates the intended learning outcomes in relation to external reference points:

- *What are the intended learning outcomes for a programme?*
- *How do they relate to external reference points including relevant subject benchmark¹⁰ statements, the qualifications framework and any professional body requirements?*

¹⁰ Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of programmes in a specific subject. They also represent general expectations about the standards for the award of

- *How do they relate to the overall aims of the provision as stated by the subject provider?*
-
- *How does the provider ensure that curriculum content enables students to achieve the intended learning outcomes?*
- *How does the provider ensure that the design and organisation of the curriculum is effective in promoting student learning and achievement of the intended learning outcomes?*

VSNU (doc. J – 2.1) states that:

The objectives result in a specific, well-defined profile or a spectrum of profiles of graduates that corresponds to the academic and professional requirements that can be set by both national and international standards. The labour market prospects that the institution has in view for its graduates are also set out.

-
- *Academic objectives of the curriculum by international standards*
- *Professional objectives of the curriculum by international standards*
- *Envisaged profile of the graduate*
-
- *Operationalisation of the objectives in goals*

ZEvA (doc. L – 3.1) states that:

The starting point for the formulation of aims and objectives should be the qualifications one wants to equip graduates with. Since a considerable portion of the Diploma graduates continue studying for a Ph.D. or for a doctorate in engineering, preparation for independent research, as required for preparing a doctoral thesis, should be part of the objective, if only to prevent the doctoral phase from taking excessively long. However, only a small number, even of those students who obtain a doctorate, will stay in academic life.

Thus, to a large extent the desired qualifications should be determined by the requirements of occupations outside academic research.

... ..

qualifications at a given level and articulate the attributes and capabilities that those possessing such qualifications should be able to demonstrate.

They provide the academic community with a means to describe the nature and characteristics of the study programmes in a specific subject area. Subject benchmark statements also provide support to institutions in pursuit of internal quality assurance.

The primary purpose of Benchmarking declarations is to support: the university institutions in planning and validating their Programmes, the evaluators, both internal and external, in assessing and comparing standards, professional organisations if accreditation processes are undertaken, students and employers when they seek information about Programmes.

<http://www.qaa.ac.uk/crntwork/benchmark/benchmarking.htm>

The inventory of desirable qualifications ... obtained will certainly be too large and diverse to be covered by a coherent programme of reasonable length. Each faculty will thus have to make a selection, guided by the opportunities this will imply for graduates, as well as by the sort of programme that can be offered by staff or by guest lecturers.

CNVSU-MIUR (doc. B) articulates Aspect A: REQUIREMENTS as follows:

A1: Which students is the Programme addressing:

- *What are the entry qualifications?*
- *What are the student types? (e.g.. age, sex, geographic origin, ...)*
- *What is the predictable number of the students?*
- *What is their preparation? (is there an entry test: what does it ascertain; is it reliable?)*

A2: For what roles is the Programme preparing the student:

- *What are the outside references and expectations? (requirements of professional organisations, expectations of employers, standard profile references or accreditation, academic requirements, preparation to research)*

A3: What are the principal characteristics that you want to instil in the student?

- *What are the expected learning outcomes(formation)?*
In general terms of:
 - *information, knowledge, skills,*
 - *cognitive skills,*
 - *autonomous learning*
 - *specific technical skills*
 - *transferable skills*
 - *advancement towards work or further studies*
- *In which sectors and at which level? (threshold, intermediate, , advanced)*
- *Are the expected learning outcomes consistent with the planned roles?*

CRUI (doc. D) articulates Dimension B – REQUIREMENTS AND OBJECTIVES as follows:

B1. requirements of the interested parties

The Programme must identify and define in a clear and well-documented manner, jointly with the social and economic context in which the Programme is operating and which presumably the graduate will enter, the formative requirements of a cultural, technical and or scientific character as well as current and foreseeable employability requirements.

B3. learning objectives

The Programme must define learning objectives that are: coherent with the formative objectives, specific, measurable, realistic, achievable in the period of time consistent with the duration of the Programme (with reference, particularly, to the profile of the average incoming student), planned in time The learning objectives must be defined in terms of knowledge (understanding), capacities and

skills (know how to do) and behaviour (know how to be) expected from the student at the end of the educational process.

ESTONIA (doc. E), asks:

REQUIREMENT III: STUDY PROGRAM (Criteria)

- *Program goals are clearly formulated and must reflect graduation requirements.*
- *Program is comparable with programs of similar institutions within Europe.*
- *Program is flexible to changing circumstances and requirements in Estonia.*
- *Curriculum is based on cumulative entirety of all subjects and enables students to obtain level of general, specialized, and professional education with sufficient competitiveness in labour market.*

The Consejo de Universidades (doc. C) lists the following justifications to be provided when a Programme is designed :

1.2.- Analysis of the demand and employment of graduates:

- *.....*
- *Existence of studies or prospective data on the demand and on the level of employment of the graduates*
- *To what extent the employment level of own graduates has been taken into account, as a criterion for planning and access limitation*
- *The near term evolution of the title conferred, the possible convenience of reformulating the objectives as a function of job demands*
- *Whether and how data on the follow-up of graduates are effectively taken into account by the authorities in charge of the Programme*
- *Other reasons (academic, historical, ...) that may support the setting up of the Programme.*

CNAVES (doc. A) seems to dwell more on the institutional framework of the Programme, rather than on external references; the result looks somewhat self-referential:

Origin and evolution of the Programme

- *Objectives of the Programme*
- *Brief description of the context in which the Programme was conceived*
- *Institutional articulation of the Programme with the department and / or Schools within the University*
- *How the Programme is related to the pertinent scientific area, at national and international level; evolution of the Programme during the analysed period (note: the last 5 years) ...*
- *Modifications introduced as a consequence of previous evaluations*

However, this is found in the section "III - Data relative to the Programme"; in section "V- Analysis and Comments" the view becomes ampler:

During the elaboration of this Guide five dimensions have been considered: relevance, adequacy, students, processes, resources. In) simple language, such dimensions regard, respectively, "why / the reason for a given programme", "what /which Programme", "for whom", "how" and finally "by which means" of a given Programme.

Concerning the "relevance", i.e., the justification for the existence of a course, we can identify two criteria: one regarding the justification of the Programme in the light of the requisites of the society in which it operates and of the strategies ... of the University (criterion pertinence) and the other which concerns the internal and external influence of the Programme (criterion impact).

2 – Teaching and Learning

QAA (doc. I - Annex E: 13 to 18) evaluates:

Curricula: the means by which the subject provider creates the conditions for achievement of the intended learning outcomes.

- *Do the design and content of the curricula encourage achievement of the intended learning outcomes in terms of knowledge and understanding, cognitive skills, subject specific skills (including practical/professional skills), transferable skills, progression to employment and/or further study, and personal development?*
- *Is there evidence that curricular content and design is informed by recent developments in techniques of teaching and learning, by current research and scholarship, and by any changes in relevant occupational or professional requirements?*

Assessment: the assessment process and the standard it demonstrates.

- *Does the assessment process enable learners to demonstrate achievement of the intended outcomes?*
- *Are there criteria that enable internal and external examiners to distinguish between different categories of achievement?*
- *Can there be full confidence in the security and integrity of assessment procedures?*
- *Does the assessment strategy have an adequate formative function in developing student abilities?*
- *What evidence is there that the standards achieved by learners meet the minimum expectations for the award, as measured against relevant subject benchmarks and the qualifications framework?*

Teaching and learning: the teaching delivered by staff and how it leads to learning by students:

- *How effective is teaching in relation to curriculum content and programme aims?*
- *How effectively do staff draw upon their research, scholarship or professional activity to inform their teaching?*
- *How good are the materials provided to support learning?*
- *Is there effective engagement with and participation by students?*
- *Is the quality of teaching maintained and enhanced through effective staff development, peer review of teaching, integration of part-time and visiting staff, effective team teaching and induction and mentoring of new staff?*
- *How effectively is learning facilitated in terms of student workloads?*

VSNU (doc. J – 2.2, 2.3, 2.5) evaluates:

Structure and content of the programme

- *Level and contents of the propaedeutic year*
- *Orientation function of the propaedeutic year*
- *Selective function of the propaedeutic year*
- *Level and contents of the basic degree curriculum*
- *Level and contents of main subjects and specialisations*
- *Level, contents and scope of options*
- *Function and place of the graduation paper in the programme*
- *Academic standard of the programme and links with research*
- *Attention paid to academic and professional skills*
- *Attention paid to verbal, written and computer skills*

Learning and teaching environment

- *Effective concept for the educational and teaching environment*
- *Suitability of the educational methods chosen in terms of curriculum content and targets*
- *Proportion of contact hours, independent study and other study activities*
- *Examination and assessment methods*
- *Quality of the supervision and assessment of graduation papers*

Curriculum organisation

The typically Dutch concept of 'studeerbaarheid' reflects the extent to which the programme allows students to complete the study programme without unnecessary obstacles or bottlenecks in time. This reference to 'allowing' in the previous sentence means good counselling and supervision, supported by a good system for monitoring students' progress.

- *Counselling and supervision*
- *The propaedeutic year and the basic curriculum can be completed in the time allowed for them*
- *...*
- *Balance between planned and actual study load*
- *Examination schedules*
- *Obstacles to specific groups of students*

ZEvA (doc. L – 3.2) in the chapter about teaching and learning methods makes a number of interesting statements, which are worthwhile recording:

The profile selected by the faculty will have consequences not only for the contents of the programme, but also for the blend of teaching methods chosen to implement it. In addition to attending ex-cathedra lectures, students need the opportunity to learn how to tackle problems using the methods employed in physics.

The development of oral and written communication skills is vital not only in professional life but also in furthering the acceptance of physics by society at large.

To develop problem-solving skills, it may be advisable to confront students with problems that increase in complexity, from simple applications of material treated in lectures to projects that require a combination of knowledge and skills taught in different parts of the curriculum, supplemented by independent study.

A common feature is a shift of focus from what is taught by the faculty to what is learned by students.

The explosive increase in our knowledge makes exhaustive coverage by ex-cathedra lectures illusory.

Finally, lack of motivation on the part of many first-year students may be a factor in the large dropout rate, which is detrimental both to students and to the public image of the university. More active involvement of the students might lead to better motivation.

Phare / ETF (doc. G – page. 47) has a section " Teaching and Learning practice where the following checklist is proposed:

- *Teaching and learning methods applied (e.g., lectures, seminars, laboratories): description, justifications for the choices made and analysis*
- *Study skills course (e.g., learning note taking, learning how to learn, critical thinking)*
- *Encouragement of independent (individual work) and team learning (group work)*

and a section "Evaluation of students" where:

- *Assessment methods used ... : description, justifications for the choices made and analysis*
- *Frequency of assessment (continuous assessment / end of term examinations only): description, justifications for the choices made and analysis*
- *Responsibility for setting the level and standards for the assessment ...*

ESTONIA (doc. E), whose checklist is derived from Phare, asks:

REQUIREMENT III: STUDY PROGRAM

-
- *Optimal proportion of lecture and individual learning are available with sufficient materials to develop good learning habits.*
- *Educational program involves problem-solving tasks and creativity at all levels.*
- *Graduating procedures clear, guarantee objective evaluation, and correspond to program goals.*
- *Content of continual education programmes corresponds to academic goals and offers the newest knowledge and skills.*
-

REQUIREMENT IV: EDUCATIONAL (TEACHING) PROCESS

- *Modern teaching methods used and adaptable to deliver knowledge in a most rational manner.*
- *Computers and licensed software extensively used in teaching and learning.*
- *Congruous programs at different academic levels allow transfer students to join program easily.*
- *Program of study is based on a detailed academic calendar.*
- *Student assessment is objective and based on goals of program. Flexible examination procedures exist. Written exam results are used for analysis and monitoring.*

CNVSU-MIUR (doc. B) articulates Aspect B: PROGRAMME as follows:

B1: Structure

- *is it documented that the structure (general contents of the teaching, breadth, depth, connections) has been established in function of the intended learning outcomes?*
- *for each type of learning experience (lessons, exercises, laboratories, projects, etc.), have the corresponding learning objectives been specified?*
- *are teaching methods explicitly designed to promote the interconnection, the recomposition, the permanence of the knowledge?*
- *is the study load programmed, is it evaluated in a realistic manner?*
- *have load limits, set up at the department and university levels, been respected?*

B2: Contents

- *Are the specific contents developed by lessons coherent with the intended learning outcomes?*
- *are the contents up-to-date?*
- *are the contents compatible with the students' qualifications at the point when they are proposed?*
- *are the single teaching contents coherent with the programmed workload at the general structure level?*

B3: Materials and Methods

- *are the teaching materials and methods set up so that they take into account the different learning styles present in all student populations?*
- *are the methods specific in relation to the intended learning outcomes? (laboratories, seminars projects,..)*
- *are study materials effectively available (books, handouts, documents, software, etc.) and do they adequately support the intended learning outcomes?*
- *are the instruments employed to assess the achievement of the expected learning outcomes (during and final) appropriate, effective and reliable to measure to what degree the student has achieved the intended learning?*

The Consejo de Universidades (doc. C) on the subject of exams dwells on the following evaluation elements:

The variety of methods used for the assessment of the students' learning

The most common assessment practice in relation to the following aspects:

- *type and content of examinations, tests and other forms of assessment*
- *mechanisms for grading*
- *pertinence of the grading criteria*
- *value and weight of practical contents*
- *whether criteria are adopted to average or compensate grades among different subjects of a semester or of a course*
- *means and location to inform students of mid-course or final exams*

3 – Learning Resources

QAA (doc. I - Annex E: 20, 21) evaluates:

Staff:

Is the collective expertise of the academic staff suitable and available for effective delivery of the curricula, for the overall teaching, learning and assessment strategy, and for the achievement of the intended learning outcomes?

- *Are appropriate staff development opportunities available?*
- *Is appropriate technical and administrative support available?*

Facilities:

Is there an overall strategy for the deployment of learning resources?

- *How effectively is learning facilitated in terms of the provision of resources?*
- *Is suitable teaching and learning accommodation available?*
- *Are the subject book and periodical stocks appropriate and accessible?*
- *Are suitable equipment and appropriate IT facilities available to learners?*

VSNU (doc. J – 2.9) evaluates according to the following checklist:

- *Effectiveness of the organisation and staff qualities*
- *Effectiveness of the organisation*
- *Communications and spread of responsibilities*
- *Academic standard of the staff*
- *Distribution of expertise*
- *Adequate size of the establishment for reasonable teaching load*
- *Educational and teaching standard of the staff*
-

Facilities

- *Size and quality of teaching rooms*
- *Practical and laboratory facilities*
- *Library*
- *Computers and ICT*
- *Financial constraints*

ZEVA (doc. L – 2.3.2.2) describes requirements set to resources as follows:

Academic Staff

a) The quality and dedication of staff is of paramount importance for the success of an education in physics.

b) The staff must be large enough, in terms of experience and interest, to cover all of the curricular areas of physics. Qualified teachers for the non-physics subjects in the curriculum must be available.

c) Teachers or other staff must ensure that students receive proper curricular and career advice. In addition, to a certain extent it should be possible for students to obtain help with personal problems related to their studies.

Supporting Staff

d) Staff of sufficient number and quality must be available to carry out managerial, technical and administrative tasks related to the study programme, such as the administration of study progress, working out the yearly schedule and timetable of courses, gathering and dissemination of management information, assistance with information and communication technology and maintenance of laboratory equipment and computer facilities.

Facilities

e) A (subject) programme can only be properly implemented if adequate facilities, including offices, classroom space and laboratories, are provided.

f) The libraries must contain subject-related and non-subject-related literature, including books, journals, and other reference material sufficiently varied and up to date for collateral reading in connection with the instructional and research programmes and later professional work. This is also important for maintaining contact with alumni.

g) Computer facilities for students and staff must be adequate to allow and encourage their use during the study. Computer equipment must be appropriate for searching information resources and for all other applications in (subject), including modelling, simulation, data processing and laboratory work.

h) The laboratory facilities must reflect the requirements of the study programme; this includes appropriate up-dating and maintenance of the equipment.

ESTONIA (doc. E), asks:

REQUIREMENT V: ORGANIZATION OF STUDIES AND RESOURCES

- *Organization of studies assures rational use of student's time and creates conditions for best achievement.*
- *Students receive good counselling and sufficient/timely information on organization and content of studies.*
- *... ..*
- *Appropriate policy exists for promotion and renewal of staff and distribution study loads to improve the curriculum successfulness.*
- *Sufficient faculty exists with needed qualifications. Faculty must systematically improve their qualifications.*
- *Sufficient financial and material resources exist to fulfil the goals of the program.*

CNVSU-MIUR (doc. B) articulates Aspect C: FACILITIES AND SERVICES:

C1: material resources

- *Does the laboratory equipment satisfy the Programme requirements?*
- *Is the equipment intended prevalently for teaching activities generally adequate?*
- *Are the library resources adequate and accessible at suitable hours?*
- *Is the computer equipment available to students adequate and accessible at suitable hours?*
- *Are computer facilities available to students??*

C2: Human resources

- *Are the competence and the qualifications of the teaching staff, and their distribution in the various roles, adequate?*
- *What is their level of excellence, documented by scientific and professional production?*
- *Are sufficient teachers available in all the involved subject areas?*
- *Does the teaching staff remain stable enough to ensure continuity?*
- *Are there teacher -training activities for newly recruited teachers?*
- *Is the technical staff supporting the activities of the Programme adequate in terms of quantity and professional qualifications, for functions that support teaching?*

C3: activities of:

- orientation, selection, insertion,
- tutorials, assistance, remedial work
 - *Is the assigned staff specifically trained?*
 - *Are the student support activities active and effective to facilitate the advancement and completion of the studies?*
 - *How much do students know about them and use them?*

SECAI (doc. H) groups resource indicators under the factor "Quality of teaching process" :

- *Human resources: teaching staff (9 indicators)*
- *Human resources: administration and general services staff (3 indicators)*
- *Material resources: buildings, equipment and other material (6 indicators)*

CNAVES (doc. A) takes into account the following resource indicators:

Human resources:

- *List of teaching staff involved in the Programme, indicating: name, category,.....,age, academic position, ..., years of teaching experience*
- *For each teacher, a form describing teaching and research activities)*
- *List of supporting staff*

Material resources (relative to the analysed period):

- *Equipment dedicated specifically to the Programme; teaching, audio-visual and IT equipment; equipment of laboratories, libraries, support services.*
- *IT facilities specific to the Programme, access to students (access hours, ease of use)*
- *Multimedia resources available to the Programme, access to students (access hours, ease of use)*

4 - Monitoring, Analysis and Improvement

A preliminary remark: the analysis is based both on qualitative observations and on numerical data and indicators.

These last (for example; enrolment, drop-out rates, average study time, staff numbers, international exchange,...) provide necessary support for evaluation

of the activities. However, they are considered warnings or clues, rather than actual evaluation parameters.

As Phare indicates – ETF (doc. G – 6.1.3): *Indicators however should be interpreted with care as their meaning is often ambiguous. It can be misleading to believe that indicators necessarily reflect quality. Failure rates is an example of a relevant indicator for the analysis of an institution effectiveness that, in itself, does not reflect quality. A low failure rate can indicate a low academic level (low quality) or a highly effective student support (high quality). ... Therefore it is necessary to interpret the quantitative data within the context of the institution and specifically its goals and objectives.*

On the other hand, it is necessary to plan and implement a strategic review activity, in order to verify the suitability of the Programme in relation to its aims and objectives.

On this topic, QAA (doc. I - Annex E: 17) at the section "Enhancement" states that the institution's approaches to reviewing and improving the standards achieved shall be evaluated.

Reviewers should ask:

- *How does the subject provider review and seek to enhance standards?*
- *They should then evaluate the adequacy of the processes used.*
- *Sources of information will include internal and external review documents, external examiners' reports, professional and/or statutory body accreditation reports, and examination board minutes.*
- *Review activities will include analyses of information, practices and procedures, discussions with teaching teams and discussions with external examiners.*
- *As a result of these activities reviewers should be able to assess the capacity of the subject provider to review and calibrate their standards, and to promote enhancement.*

It is a very elegant and concise style to establish goals and methods of the review activities, an effective way to establish a rule without making the language and contents too heavy.

VSNU (doc. J – 2.4, 2.6, 2.7) handles the fundamental data for the control of student intake / path / output with the following checklist:

Intake

- *Quantity of student intake (propaedeutic year, basic degree) in previous years*
- *Quality of student population (propaedeutic year, basic degree) in previous years*
- *Secondary recruitment (part-time, higher professional education) M/F ratio*
- *Attention to various groups within the population (for example ethnic minorities, foreign students)*
- *Satisfactory information and guidance*
- *Activities for transition from secondary education to university*

Success rates

- *Propaedeutic year success rates*
- *Post-propaedeutic year success rates*
- *Curriculum success rates*
- *Average length of study*
- *Policy*

Quality of the graduates

- *Academic qualities*
- *Professional qualifications*
- *Content and standard of the graduation papers/projects*
- *Content and standard of the traineeships*
- *Job market prospects achieved*
- *Rating of graduates by the job market*

ESTONIA (doc. E), asks:

REQUIREMENT V: ORGANIZATION OF STUDIES AND RESOURCES

-
- *Organization of studies is continuously improved by systematic analysis of student loads, grades, and failures.*
-

REQUIREMENT VI: FEEDBACK AND QUALITY ASSURANCE

- *Unit gathers enough information about working career of graduates regarding employer satisfaction of educational level, knowledge, and skills.*
- *Unit gathers data systematically and uses it to improve the quality of the program.*
- *University internal quality assurance system exists. Students actively participate in the quality assurance system. A corrective action procedure for deficiency elimination exists.*

CNVSU-MIUR (doc. B) articulates Aspect D: MONITORING, ANALYSIS, IMPROVEMENT as follows:

D1: indicators

- *of: - result, - resource, - process, - context,*
- *students' opinions regarding the formative programme*
- *data on the students' progression*

D2: Job insertion,, - opinions of ex-students

- *opinions of employers*
- *is it known where the students find work?*
- *is the position (after three years) congruent with the studies?*
- *are alumni opinions, regarding the Programme, collected and analysed?*
- *does the training received enable the alumni to overcome their early professional difficulties?*
- *are data on the satisfaction of the employers collected and analysed?*

D3: analysis and improvement

- *does a systematic analysis exist?*
- *are decisions made consequent to the evaluation results?*
- *are these decisions effective? Are their consequences verified?*

CRUI (doc. D articulates Dimension E – RESULTS, ANALYSIS and IMPROVEMENT as follows:

E1. RESULTS

The Programme must identify the information and data, define and implement the methods of collection and processing and present the results related at least to:

- *the Programme's capacity of attraction of students and other interested parties,*
- *the internal efficacy of the formation (monitoring the students' careers, the students' opinions on the teaching, on other formative activities and on the Programme in general).*
- *efficacy of the support services;*
- *the external efficacy of the formation (monitoring the position of graduates on the work market; opinions of the graduates on the formation received, opinions of the employers on the preparation of the graduates)*
- *in order to be able to evaluate the correspondence of results with the set objectives.*

E2. ANALYSIS AND IMPROVEMENT

The Programme must promote adequate processes of analysis of the results, of continual improvement for the efficacy of the system of management for the processes related to all the dimensions of the evaluation (needs and objectives, organisation system, resources, formative process, result of analyses and improvement) through systematic research, the identification and the implementation of all the opportunities for improvement.

The Program must also deal with difficulties that arise in the supply of teaching and services, seeking the causes in an effort to prevent problems from recurring.

SECAI (doc. H) treats monitoring of internal and external efficacy in two factors , with the related indicators:

Quality of immediate results

- *The degree of achievement of educational objectives*
- *The relation between students that graduated and started a programme*
- *The average duration of studies*
- *Graduates' performance in post-graduate courses*

Quality of graduates' professional integration

- *Insertion in a first job*
- *Professional integration*
- *Effective placement of graduates*
- *Ability to learn during work life*
- *Recognition of the quality of graduates' training by employers*

5 - Organisation

ZEvA (doc. L – 2.3.2) very concisely states:

Within the organisation of the faculty it must be absolutely clear which person or committee is responsible for the policy, the quality and the execution of all

educational matters relating to a given study programme. Should these responsibilities be divided among more than one person or committee, the structure must allow for and guarantee the necessary coordination.

The person or committee concerned must have sufficient competence and authority to carry out what is deemed necessary, they must have the necessary resources, and must be well incorporated within the faculty government structure and the research environment.

As regards the management of the education programme, four distinct but interrelated aspects need to be considered. They are Policy, Resources, Quality as well as Information and Communication.

- *Educational policy: curriculum structure in the context of the political, economic and cultural situation and in the international context, providing international contacts for students, relations with secondary education and employers; educational concepts.*
- *Resources: teaching staff and facilities, management and administrative staff.*
- *Quality of the education: quality of individual courses, coherence within the phases of the curriculum and the curriculum as a whole, a proper system of evaluation.*
- *Information and Communication: gathering and dissemination of information concerning educational developments in general, study progress of students, developments in secondary education, job market, etc.*

VSNU (doc. J – 2.11) focuses on the internal quality assessment used by the unit which is being evaluated.

The committee looks at the structure and organisation of the quality assessment system and at the way it works in practice, among other things in the 'curriculum committee'.

(By Dutch law, each study programme has a 'curriculum committee' comprised of staff and students, that gives advise to the institute's staff management on all study related matters.)

The review committee also considers the involvement in internal quality assessment of the students following the curriculum.

In describing the system of internal quality assessment, there is also an explicit examination of the way the institution dealt with the results of the previous assessment.

The following checklist is used for evaluation purposes:

- *Structure and organisation of the internal quality assessment system*
- *Operation of the internal quality assessment system (including curriculum committee)*
- *Student involvement in the internal quality assessment system*
- *Improvements and actions in response to the previous assessment*
- *Quality of the self-evaluation report (descriptive and analytical)*
- *Rating of strengths/weaknesses analysis and critical content*

ESTONIA (doc. E), asks, very concisely and effectively:

REQUIREMENT I: STRUCTURE AND MANAGEMENT OF EDUCATIONAL POLICY

- *Unit develops instruction, plans, policy, and procedures. Responsibilities for each area are formulated clearly.*
- *Formulated goals are known to relevant academic units. Units collaborate in program implementation.*
- *An unit should exist, performing systematic analysis of academic quality of program. Program is modified where and when needed.*
- *A supervisory system exists to monitor the performance of faculty and students.*

Dimension A – ORGANISATION SYSTEM of CRUI (doc. D, is an extreme example of a structure formalised in high detail, (at the opposite end compared to the "Review" activities of QAA ,doc. E - Annex E: 17), and reflects a strong ISO 9001: 2000 commitment:

A1. MANAGEMENT SYSTEM

If Programme must develop, keep up-dated and constantly improve its own system of management of the processes related to all the dimensions of the evaluation (organisation system, requirements and objectives, resources, formative process, results, analyses and improvement), with a clear identification and description of the processes to be managed.

The Programme must also define what documentation is useful for the management and provide adequate means of communication:

- *Processes identified for Programme management,*
- *Sequence and interactions of the identified processes,*
- *Specific norms or models adopted by the Programme as reference for the development of its own management system.*
- *Documents used for Programme management,*
- *Methods of document identification and retrieval*
- *Means of Communication (with interested parties),*
- *Checking methods of the effectiveness of the communication*

A2. RESPONSIBILITY

The Programme must determine its own organisation structure, define the responsibilities for the management of all the identified processes and ensure that these responsibilities are assumed.

- *Assignment and acceptance of the responsibilities and definition of the lines of communication among the various positions.*
- *Presence of the personnel with responsibility for teaching management.*

A3. REVIEW

The Programme must provide for a periodic review of the management system in order to ensure its continual suitability, adequateness and efficacy.

- *Review methods and validity period*
- *Information and data taken into consideration for the review,*
- *Outcome of the review.*
- *Actions undertaken consequent to the review and their efficacy.*