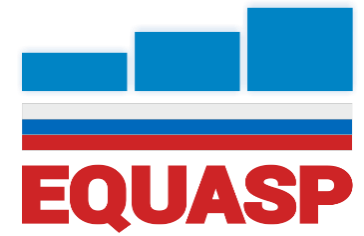*AEER Conference on Engineering Education*
MADI - Moscow, 11 March 2015

Online Quality Assurance of Study Programmes: the EQUASP Project

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Wider objective of the EQUASP project

To promote the **improvement of the quality of technological study programmes** (SPs) through the **introduction of an internal quality assurance** (iQA) **system** focused on **the definition of learning outcomes** and **the definition and implementation of an online documentation and monitoring system** of the quality of SPs consistent with the ESG.

Why a

clear and complete documentation

of learning objectives, educational process, learning context, learning outcomes and management system is an

essential and necessary aspect of the QA of SPs?

Because this is a requirement established by the
ESG

Part 1: European standards and guidelines for internal quality assurance within higher education institutions

1.7 Public information:
Institutions should regularly publish up to date, impartial and objective information,
both quantitative and qualitative, about the programmes and awards they are offering.

<u>Because</u> the availability of information and data on the characteristics and results of SPs is essential for their

transparency,

one of the most important objective of the Bologna process, and in order to

'**ensure trust**'

in the SP capacity to meet the requirements for quality,

in one word

to guarantee its quality, making possible the formulation of an informed judgment on the SPs' quality by all the interested parties, first of all students and labour market.

But the availability of information and data on the characteristics and results of SPs is also essential and necessary for their

comparability

at national and international level, another important objective of the Bologna process.

Furthermore, the availability of information and data on the characteristics and results of SPs constitutes a

powerful incentive to the improvement of SP quality

(as a matter of fact, when a SP is required to document its quality, in case of bad quality it is also stimulated to adopt the opportune actions for its improvement).

Without taking into account that their availability is necessary in every
quality assessment and accreditation process.

And why
online documentation?

Because today the net is the tool most widely used to get information on the SPs by stakeholders.

And finally

why do we think that
an online monitoring system
of the quality of SPs is another
essential and necessary aspect of the QA of SPs?

<u>Because </u>it is well known that the QA system of a SP can not disregard the knowledge of the quality perceived by its stakeholders.

Which will be the main outcomes and outputs of the project?

➢ **Document "EQUASP Standards & Guidelines for the QA of SPs"**

➢ Software for the online documentation of the QA of SPs

➢ **Document "EQUASP Questionnaires for the monitoring of the perceived quality of SPs"**

➢ Software for the online monitoring of the perceived quality of SPs

Process for the definition and content of the EQUASP Standards & Guidelines

We started from the definition of "study programme of quality ", i.e., according to the ESG:

"A study programme can be said of quality when it complies with the national standards and requirements and:

➢ it establishes **educational objectives** consistent with the mission of the institution the SP belongs to and the educational needs of the labour market of reference, and **learning outcomes** consistent with the educational objectives

➢ it **designs and implements an educational process** adequate to achieve the learning outcomes, which embeds a student-centred learning approach, assures a correct assessment of students' learning, keeps under control its development and establishes appropriate regulations for students' admission, recognition, progression and attestation;

- **teaching staff, facilities, student support services, partnerships** with businesses, research institutions and other HEIs, and financial resources are adequate to achieve the learning outcomes and are kept under control;

- it **monitors** the results of the educational process;

- it adopts an adequate and effective **management system** able to assure the SP quality and its continual improvement, and guarantees public access to the information on the SP;

These statements have been assumed as the five '**EQUASP standards**' for the iQA of SPs:

➢ Standard A - **Needs and Objectives**

➢ Standard B - **Educational Process**

➢ Standard C - **Resources**

➢ Standard D - **Monitoring and Results**

➢ Standard E - **Management System**

*It is important to underlines that the sequence of the standards promotes the design of **student-centred or output-based SPs**, which assume the student as the centre of the teaching and learning process.*

*This requires that programmes leading to a bachelor or master degree are no longer to be described and planned solely according to their content, but mainly according to the **learning outcomes** (i.e. statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning) to be achieved by students during the educational process.*

Then, remembering the definition of "quality assurance of a study programme":

"the whole of the activities (processes) for the management of the educational service aimed at achieving the established educational objectives and then at 'ensuring trust' in meeting the quality requirements to all interested parties"

we have identified the *fundamental processes for a management for quality of study programmes*.

Example

Standard A - Needs and Objectives

A1 - Identification of the educational needs of the labour market and other stakeholders

A2 - Definition of the educational objectives

A3 - Definition of the learning outcomes

Then, for each identified process, the '*quality requirements*' *(i.e. the needs or expectations for quality)* have been established according to the ESG, together the *expected activities* for their accomplishment .

Example

Quality Requirement A3 - Learning outcomes

The study programme should define learning outcomes, in terms of what students are expected to know, understand and/or be able to demonstrate after completion of the educational process, consistent with the national qualification framework, if any, and the established educational objectives.

Expected Activities

The SP should establish learning outcomes in terms of what a student is expected to know, understand and/or be able to demonstrate after completion of the learning process. They should be specific for the SP and properly detailed in order to favour the understanding of the depth and extent of learning expected at the end of the educational process. The learning outcomes should be adequate to the reference cycle (I or II) of the SP and consistent with the national qualification framework, if any, and with the established educational objectives.

The learning outcomes should be properly documented.

The SP should compare the established learning outcomes with those of other SPs of the same typology offered in the national and international contexts, in order to check the similarities and point out its peculiarities.

Furthermore, for each identified quality requirement the *information and data* to be documented by the study programmes in order to provide evidence of the quality of the educational service offered, and therefore to assure their quality, have been established, again according to the ESG and the best practices of the European Agencies for quality assessment and accreditation of SPs.

Required Documentation

Learning outcomes
List the learning outcomes of the SP.
Provide only information properly documented.

Comparison with learning outcomes of other SPs of the same typology
Describe the exits of the comparison with the learning outcomes of other SPs of the same typology or make available the document where they are registered.

The document constitutes a *fundamental milestone* of the EQUASP project because it will be the reference document for the description of the educational objectives, educational process, resources, results and management system of the SPs and for the designing of the software for the online documentation.

Conclusions

In this way we hope that the EQUASP project will be able to:

➢ promote the design of student-centred technological SPs, focused on the definition of learning outcomes consistent with the needs of the interested parties;

➢ bring the internal QA process of SPs into line with the ESG for QA;

➢ enhance quality of SPs and to increase their transparency and comparability;

➢ promote modernisation of higher education through an online documentation and monitoring system of SPs quality;

➢ obtain recognition by the competent national authorities of the internal QA system and of the online documentation and monitoring system as adequate systems for the QA of SPs, in order to guarantee their dissemination and their sustainability;

i.e. to achieve all its specific objectives, and to give a further contribution to the **realization of priorities in QA for higher education and implementation of the Bologna process in the RF**.

Thanks for your attention