1ˢᵗ Conference on Internationalization Practices in the Field of HE
PICASA-2015
November 19ᵗʰ and 20ᵗʰ
Yerevan State University, Yerevan, Armenia

Comparability, Transparency, Accreditation:
Magic Words for a Successful Internationalization of HE

Angelo Musaio, *Alfredo Squarzoni*
University of Genoa

Abstract

The paper identifies and analyses what can be considered fundamental conditions for the international recognition of Higher Education (HE) at least at European level, i.e. the comparability, transparency and accreditation of study programmes (SPs).

Comparability and transparency of SPs are the first objective of the Bologna process. The conditions for the comparability are identified in comparable duration and learning outcomes of the SPs. In turn, this requires the design of student-centred SPs, in which the focus is no more on what a student has been taught, but on what a student has learned and is able to do. Furthermore, in order to be comparable, SPs must assure their capacity to achieve the established learning outcomes or, in other words, to 'assure the quality' of the educational service provided.

Transparency requires a complete, clear, updated and easily available documentation of the SPs' characteristics (educational objectives, educational process, available resources, results of the educational process, management system).

Accreditation by an internationally recognized agency is the 'icing on the cake' for the international recognition of SPs. The establishment of SP learning outcomes consistent with those shared at international level and the presence of an effective internal quality assurance (QA) system should be the main accreditation criteria to be fulfilled by SPs. As an example of accreditation procedure consistent with these requirements, the paper summarizes the main characteristics of the EUR-ACE system of accreditation of engineering SPs.

The conclusion describes the on-line QA of SPs recently proposed in the context of the Tempus project EQUASP also in order to promote the international recognition of technological SPs of Russian Federation.

1. <u>Introduction</u>

Although student and academic mobility are clearly the most observable features of internationalisation of HE, they are not the only aspects. The internationalisation process manifests itself in various ways, and encompasses the full spectrum of educational programmes and activities that contribute to internationalised learning, ranging from the internationalisation of study programmes' content and delivery to the mobility of students and scholars. Another major form of internationalisation relates to the growing convergence of tertiary education systems (e.g. Bologna process).

The internationalisation process has evolved in response to several trends. First, as world economies become increasingly inter-connected, international skills have become ever more important for operating successfully on a global scale. This has led to growing demands to incorporate an international dimension into education and training.

Another significant trend relates to the profound changes in the organisation and structure of national higher education systems to improve their inter-operability. This phenomenon has been most evident in Europe with the Bologna Process aimed at establishing a European Higher Education Area (EHEA) and promoting the European system of higher education (HE) worldwide. The Bologna Process is far-reaching, insofar as a number of non-EU countries have endorsed the Bologna declaration and joined its convergence process, to reach 47 participants spread geographically between Iceland and Kazakhstan.

The Bologna declaration proposed to adopt a system of easily readable and comparable degrees based on a common degree structure. In addition, in order to enhance transparency and to facilitate academic and professional recognition of HE qualifications, the Bologna declaration engaged signatory countries to develop instruments to translate and recognise credits and qualifications earned elsewhere, including in other countries. A major development has been the establishment of the European Credit Transfer and Accumulation System (ECTS), a student-centred system based on the student workload required to achieve the SP learning outcomes. Meanwhile, the Diploma Supplement was developed as a follow-up tool for the implementation of the Lisbon Recognition Convention.

Consequently, **comparability** and **transparency** of SPs can be considered the fundamental conditions for the international recognition of HE at least at European level.

But, what are the conditions the SPs have to fulfil in order to be considered 'comparable' and 'transparent'? Here below the authors' opinion.

2. <u>Comparability of study programmes</u>

Of course, in order to be comparable at European level, SPs must have comparable **duration**. This is obvious, in consideration of the fact that in standard situations - i.e. in presence of students with 'normal' intelligence, with equivalent school preparation and equivalent learning facilities - the educational level achievable by students is function only of the SP duration.

At this regard the Bologna process suggests an organization of the SPs in three main cycles (Bachelor, Master, Doctorate), each one consistent with the number of ECTS credits established in the Bologna declaration.

But, a comparable duration is not sufficient to guarantee the comparability of SPs.

Student-centred study programmes

In order to be comparable, first SPs must have comparable 'learning outcomes', i.e. "statements of what a learner knows, understands and is able to do on completion of a learning process" according to the definition of the European Qualification Framework for LifeLong Learning (EQF for LLL, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32008H0506(01)).

The requirement of comparable learning outcomes requires a drastic change in the design of SPs.

The 'old' SPs, not based on the concept of cycles, were designed on the basis of tradition and the resources already available. They can be considered as 'input-based' or 'teacher/staff oriented/centred'. In such SPs, the emphasis was placed on the individual interests of academic staff or on the existing organisation of studies.

At present, Higher Education Institutions (HEIs) are undergoing a transformation process. The traditional approach is slowly giving way to an 'output-based', 'student-oriented/centred' approach, which takes the student as the centre of the teaching and learning process.

The aim of student-centred SPs is to make students as competent as is feasible in a given timeframe for their future role in society. In these SPs, the focus is no more on what a student has been taught, but on what a student has learned and is able to do. Therefore, SPs 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 to be achieved by students during the educational process.

Level of learning outcomes

Furthermore, always in order to be comparable, the learning outcomes have to be adequate to the reference cycle (I, II or III) of the SP.

From the European perspective, an important step in constructing the EHEA has been the development of an agreed set of general descriptors (that is generic statements of the broad expected outcomes) to outline the essential components of any SP that leads to the completion of a Bologna cycle.

These are known as the Dublin Descriptors and are based on the following inter-related dimensions:

• acquiring knowledge and understanding;
• applying knowledge and understanding;
• making informed judgments and choices;
• communicating knowledge and understanding;
• capacities to continue learning.

The Dublin Descriptors have been endorsed by the European Ministers of Education as part of the report 'A Framework for Qualifications of The European Higher Education Area' (http://www.ehea.info/Uploads/Documents/050218_QF_EHEA.pdf). They form the backbone of the Qualifications Framework for the European Higher Education Area (QF for EHEA).

Besides the QF for EHEA, the European Union has established a European Qualifications Framework for Lifelong Learning (EQF for LLL), which has eight levels, covering learning achievements at all educational levels. As far as HE is concerned, the top three levels (i.e. level 6, 7 and 8) in this framework are compatible with the three cycles included in the QF for EHEA.

The Dublin Descriptors/EQF descriptors form general reference points at the European level in which any specific SP has to be situated.

Quality and Quality Assurance of Study Programmes

However, also the establishment of comparable learning outcomes is not sufficient to guarantee the comparability of SPs. In order to be comparable, SPs must also assure their capacity to achieve the established learning outcomes or, in other words, assure the quality of the educational service provided.

Coherently with the ISO 9000 definition of quality, with 'study programme quality' it is meant "the grade (level) of fulfilment of the educational objectives established coherently with the needs and expectations of all those who are interested in the educational service provided". In other words, "the level of accomplishment of the quality requirements established coherently with the needs and expectations of all the stakeholders".

Quality assurance (QA) is the instrument to make SPs' quality transparent and trustworthy for all the stakeholders, students and employers first.

Always coherently with the ISO 9000 definition of QA, with 'study programme quality assurance' it is meant *"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 the stakeholders"*.

Today, the definition of a suitable internal QA system can rely on the standards and guidelines for internal QA established in the first part of the document 'Standards and Guidelines for Quality Assurance in the European Higher Education Area' (ESG) (http://www.enqa.eu/wp-content/uploads/2015/11/ESG_endorsed-with-changed-foreword.pdf), adopted by the European Ministers of Education in the Bergen meeting on May 2005 and revised in the Yerevan meeting on May 2015.

The standards set out agreed and accepted practice for QA in HE in the EHEA and should, therefore, be taken account of and adhered to by those concerned, in all types of HE provision. The guidelines explain why the standard is important and describe how standards might be implemented. They set out good practice in the relevant area for consideration by the actors involved in QA. Implementation may vary depending on different contexts.

3. <u>Transparency of study programmes</u>

It has already been said that ECTS and Diploma Supplement are the main instruments developed by the Bologna process in order to promote transparency of SPs.

However, it is authors' opinion that transparency of SPs requires also a complete, clear, updated and easily available documentation of the SPs' characteristics (educational objectives, educational process, available resources, results of the educational process, management system), in other words, of the QA of SPs.

It is quite evident that the availability of the documentation of the QA of SPs is necessary in order to make possible the comparison of SPs and to 'ensure trust' in their capacity to achieve the established educational objectives, making possible the formulation of an informed judgment on the SPs' quality by all the parties interested in the educational service provided.

Furthermore, the availability of the documentation of the QA of SPs fulfils a requirement established by the ESG, which in 'Part 1: Standards and guidelines for internal quality assurance - 1.7 Public information' establish that: "Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible".

Without taking into account that it constitutes a powerful incentive to the improvement of SPs' 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) and is necessary in any quality assessment and accreditation process.

Information and data to be documented should fulfil specific characteristics directly connected with the needs of transparency and comparability: they should have a simple structure and be drawn up in a short and essential form, according to drawing-up modes (extension, language, reading format) homogeneous at national (and international) level, and should be easily accessible on the net, today the most common and used mean to get information on everything, SPs included.

4. <u>Accreditation of study programmes</u>

There is another 'magic word' for the successful internationalization of HE: **accreditation**.

In HE, 'accreditation' means the procedure according to which a recognised body attests formally the fulfilment of pre-definite standards or quantitative and/or qualitative requirements.

Accreditation has many 'values'. Those connected to international recognition of SPs can be listed as follows:

- it encourages confidence that an institution's or SP's presentation of the education it provides is fair and accurate, including the description of services available to students and the accomplishments of its graduates.

- It assures that a neutral, external party (the accrediting organization) has reviewed the quality of education provided and has found it to be satisfactory, based upon appropriate peer expertise.

- It confirms that institutions and SPs have processes in place to meet changes in thinking within the academy and in the public's expectations.

- It assists with transfer of credits among institutions or admission to graduate school, with student mobility more likely to be successful among accredited institutions as compared to unaccredited institutions.

Today, accreditation is considered an essential tool not only to promote the recognition of qualifications issued in different countries, but also the quality of SPs.

In most European countries, SPs are regularly subjected to external review and accredited by a QA agency. It is quite evident that, in order of the international recognition of the accreditations, also the accrediting agencies should be internationally recognized.

The European Quality Assurance Register for Higher Education (EQAR) is a register of such agencies, including those that have demonstrated their substantial compliance with the common set of principles for QA laid down laid down in the ESG.

But in authors' opinion another important condition for a successful internationalization of HE is that accreditation procedures should assess not only the presence of an effective QA system, but also the consistency of the SP learning outcomes with those shared at international level.

A good example of accreditation procedure that fulfil these requirements is the EUR-ACE system of accreditation of engineering SPs.

EUR-ACE system of accreditation of engineering study programmes

EUR-ACE (EURopean ACcredited Engineer) is the label awarded to engineering SPs at Bachelor and Master level, listed by the European Commission among the 'European Quality labels'.

The EUR-ACE label is run by the European Network for Accreditation of Engineering Education – ENAEE (www.enaee.eu).

Wider objective of ENAEE is the mutual recognition of engineering qualifications awarded by accredited SPs. Currently ENAEE has 17 full members and 5 associate members. The agencies authorized to award the EUR-ACE label are 13, the SPs accredited are more than 1.600, not only in Europe.

The EUR-ACE standards for accreditation are defined in the document' EUR-ACE Framework Standards and Guidelines' (EAFSG, http://www.enaee.eu/publications/european-framework-standards/) in terms of student workload requirements, programme (learning) outcomes and programme management.

The **student workload requirements** are described using ECTS credits:

- a minimum of 180 ECTS credits at Bachelor level;
- a minimum of 90 ECTS credits (60 in some educational systems) at Master level;
- a minimum of 270 ECTS credits (240 in some educational systems) for Master SPs that are integrated and that, normally, do not include the award of a Bachelor Degree.

Programme Outcomes describe the knowledge, understanding, skills and abilities that an accredited engineering SP must enable a graduate to demonstrate. They are intended to be applicable to the full range of Bachelor and Master SPs in all branches of engineering offered in European HEI's and have to be considered as the 'minimum threshold' defined by the ENAEE community and to be fulfilled in order to assure the quality of engineering SPs.

The Programme Outcomes are described separately for both Bachelor and Master Degree programmes with reference to the following eight learning areas:

- Knowledge and understanding;
- Engineering Analysis;

- Engineering Design;
- Investigations;
- Engineering Practice;
- Making Judgements;
- Communication and Team-working;
- Learning.

Programme management standards specify the key areas of programme management that an agency must evaluate in order to be authorised to award the EUR-ACE label and that SPs must fulfil in order to be accredited.

They are five, fully consistent with the ESG:

1. Programme Aims

   The aims of accredited programmes must reflect the needs of employers and other stakeholders. The programme outcomes must be demonstrably consistent with the aims.

2. Teaching and Learning Process

   The teaching and learning process must enable engineering graduates to demonstrate the knowledge, understanding, skills and abilities specified in the Programme Outcomes. The programme curriculum must specify how this is to be achieved.

3. Resources

   The resources to deliver the programme must be sufficient to enable the students to demonstrate the knowledge, understanding, skills and abilities specified in the Programme Outcomes.

4. Student admission, transfer, progression and graduation

   The criteria for student admission, transfer, progression and graduation must be clearly specified and published, and the results monitored.

5. Internal Quality Assurance

   Accredited engineering degree programmes must be supported by effective quality assurance policies and procedures.

The guidelines that follow the standards are not prescriptive, but are intended to assist agencies and HEIs in meeting the standards. Programme managers are free to satisfy the standards in accordance with their own traditions and resources.

5. EQUASP project and conclusions

The EQUASP project (http://equasp.tstu.ru/) is a Tempus project (Tempus Project 543727-TEMPUS-1-2013-1-IT-TEMPUS-SMGR) that was proposed also to promote the international recognition of technological SPs of Russian Federation. Indeed, its overall broader objectives are

the introduction of an internal QA system focused on the definition of learning outcomes and consistent with the ESG, and the definition and implementation of an on-line documentation system of the QA of SPs (the project title is "On-line Quality Assurance of Study programmes").

According to the EQUASP approach, in order to assure its quality a SP must comply with the national standards and requirements and:

- establish 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;
- design and implement an educational process adequate to achieve the learning outcomes, which embeds a student-centred learning approach, ensure a correct assessment of students' learning, keep under control its development and establish appropriate regulations for students' admission, recognition, progression and attestation;
- have teaching staff, facilities, student support services, partnerships with businesses, research institutions and other higher education institutions, and financial resources adequate to achieve the learning outcomes and keep them under control;
- monitor the results of the educational process;
- adopt an adequate and effective management system able to assure the SP quality and its continual improvement, and guarantee public access to the information on the SP.

These five principles, which should inspire the design, development and control of every SP, constitute the five 'EQUASP standards' for the QA of SPs. It is evident their full consistency with the EUR-ACE programme management standards (but the EQUASP standards were established before the revision of the EUR-ACE framework standards).

For each EQUASP standard, the EQUASP approach identifies the processes to be considered fundamental for a management for quality of SPs.

Then, the 'EQUASP requirements for quality', i.e. the needs or expectations for quality, associated to each identified process are established, with the activities to be managed for their accomplishment.

Furthermore, for each identified quality requirement, the information and data to be documented by the SPs in order to provide evidence of the quality of the educational service provided, and therefore to assure its quality, are established and described.

The whole of standards and quality requirements, with the associated expected activities for their accomplishment and information and data to be documented, constitute the 'EQUASP Standards and Guidelines for the internal quality assurance of study programmes (EQUASP Model)' (http://equasp.tstu.ru/public/reserved_area/EQUASP%20S&G%20Rev%206.pdf) that

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represents the fundamental outcome of the EQUASP project. EQUASP standards, quality requirements, information and data for QA of SPS are shown in the Appendix.

The EQUASP System – i.e. the EQUASP Model and the associated EQUASP Software for the on-line documentation of the information and data for the QA of SPs, whose implementation is in progress – can be considered a powerful instrument in order to:

- promote the design of student-centred SPs, focused on the definition of learning outcomes consistent with the needs of stakeholders;

- bring the QA process of SPs into line with the ESG;

- enhance quality of SPs and increase their comparability and transparency, in order to enhance mutual trust in the quality of SPs;

- provide the documentation necessary in any quality assessment and accreditation process.

In other words, to promote the international recognition of SPs.

Appendix - EQUASP Standards, Quality Requirements and Documentation for QA of SPs

Quality Requirements	Documentation
Standard A - Needs and Objectives The study programme should identify the educational needs of the labour market of reference and other stakeholders, establish educational objectives coherent with the mission of the institution the study programme belongs to and the identified educational needs, and learning outcomes coherent with the established educational objectives.	
A1 - Educational needs of the labour market and other stakeholders The study programme should identify the educational needs of the labour market of reference and other stakeholders. The educational needs should be identified in terms of professional profiles and/or functions/roles/activities expected for the graduates and associated required competences.	Organisations/employers consulted and Methods and schedule of consultation Identified educational needs of the labour market Identified educational needs of other stakeholders
A2 - Educational objectives The study programme should define educational objectives in terms of professional profiles of the graduates and/or functions/roles/activities students are to be prepared for and associated key competences to be developed and obtained by the students during the learning process, consistent with the mission of the institution the study programme belongs to and the identified educational needs.	Educational objectives
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.	Learning outcomes Comparison with learning outcomes of other SPs of the same typology
Standard B - Educational Process The study programme should assure students educational activities able to achieve the established learning outcomes through contents, methods, workload and times adequately designed and planned, promote a student-centred teaching and learning approach, assure a correct assessment of students' learning through suitable assessment methods and criteria. The study programme should also define appropriate rules covering student admission, recognition, progression and attestation and keep under control the development of the educational process.	
B1 - Design and planning of the educational process The study programme should design a curriculum and characteristics of the course units and of the graduation exam consistent with the established learning outcomes. The curriculum should embed a student-centred learning and teaching approach. The study programme should also define assessment methods and criteria able to	Curriculum Characteristics of the course units Characteristics of the graduation exam Suitability of the curriculum to the

ensure a correct assessment of the students' learning. Furthermore, the study programme should plan the development of the educational process in order to enable students to achieve the learning outcomes in the expected time, according to a gradual process and through coherent and coordinated educational activities.	achievement of the learning outcomes Calendar and timetable of course units and exams
B2 - Admission, recognition, progression and attestation The study programme should establish rules covering all phases of the student 'life cycle' and in particular student admission, recognition, progression and attestation.	Admission Recognition Progression Attestation
B3 - Realization of the educational process The study programme should realise the educational process coherently with the designed and planned development and keep under control its development, in order to resolve any urgent and immediate problem and to check the adequacy of the assessment tests and of the final work/thesis to the learning outcomes and the correctness of the evaluation of the students' learning.	Control of the development of the educational process Control of the assessment tests and of the final work/thesis
Standard C - Resources The study programme should have at disposal teaching staff, facilities, student support services, partnerships and financial resources adequate for the achievement of the learning outcomes and able to make easier the students' progression in their studies.	
C1 - Teaching staff The study programme should have at disposal teaching staff, including teaching support staff, quantitatively and qualitatively adequate for the achievement of the established learning outcomes by students. The teaching staff should be assigned according to pre-definite criteria of choice or selection and the programme should offer the teaching staff the opportunity to improve their teaching skills and the use of new technologies.	Teaching staff Teaching support staff
C2 - Facilities and support staff The study programme should have at disposal facilities (lecture and study rooms, laboratories, libraries), with the associated equipment, and technical-administrative staff quantitatively and qualitatively adequate for the development of the established educational activities as designed and planned and able to allow the application of the established educational methods.	Lecture rooms Study rooms Laboratories Libraries Other resources and special initiatives
C3 - Student support services The study programme should have at disposal student support (orienteering, tutoring and assistance) services relevant to the educational process and able to make easier students' learning and progression in their studies.	Student administrative office Orienteering service for incoming students Tutoring service Service for carrying out training periods outside the University Mobility service Job placement service
C4 - Partnerships The study programme should have partnerships with national and/or international businesses, research institutions and other Higher Education Institutions quantitatively and qualitatively adequate for carrying out students' external education and mobility.	Partnerships for carrying out training periods outside the University Partnerships for carrying out mobility periods
C5 - Financial resources The study programme should have at disposal financial resources adequate for the development of the educational process according to the designed and planned activities.	Needs of financial resources Availability of financial resources
Standard D - Monitoring and Results The study programme should monitor the results of the educational process, at least with respect to incoming students, students' learning, students' progression in their studies and graduates' placement, the students' opinion on the educational process and the employed graduates' and employers' opinion on the graduates' education, in order to check the adequacy and effectiveness of the educational service provided.	
D1 - Incoming students The study programme should monitor the incoming students in order to check its attractiveness.	Assessment of the possession of the admission requirements *(only first cycle and integrated second cycle SPs)* Enrolments at the first course year
D2 - Students' learning	Students' learning

The study programme should monitor the students' learning in order to check the effectiveness of the course units.	Further monitoring
D3 - Students' progression in their studies The study programme should monitor the students' progression in their studies (in particular: dropouts, number of credits acquired at the end of each course year, time to graduation) in order to check the effectiveness of the educational process.	Enrolments at the different course years Dropouts Credits acquired by the students Graduation time
D4 - Students' opinion on the educational process The study programme should monitor the students' opinion on the educational process in order to check the perceived adequacy and effectiveness.	Students' opinion on the course units Students' opinion on the training periods outside the University Students' opinion on the periods of mobility Opinion of the final year students on educational process and support services
D5 - Graduates' placement The study programme should monitor the graduates' placement in order to check the demand of the granted qualification and the correspondence of the educational objectives and learning outcomes of the study programme to the educational needs of the labour market.	Graduates' job placement Prosecution of the studies in the second cycle programmes *(only for first cycle graduates)* Prosecution of the studies in PhD programmes *(only for second cycle graduates)*
D6 - Employed graduates' and employers' opinion on the graduates' education The study programme should monitor the employed graduates' and employers' opinion on the graduates' education in order to check the correspondence of the educational objectives and learning outcomes of the study programme to the educational needs of the labour market.	Employed graduates' opinion on the education received Employers' opinion on the graduates' education
Standard E - Management System for Quality The institution the study programme belongs to should have a public quality assurance policy and an effective organization for the quality assurance of study programmes. The policy should be put into practice by the study programme through the definition and adoption of an appropriate and effective management system, able to assure the quality of the study programme and the continual improvement of the effectiveness of the processes for the study programme management and of the associated results.	
E1 - Policy and organization for quality assurance of study programmes The institution the study programmes belongs to should have a public policy and an effective organization for the quality assurance of study programmes, and effective decision-making processes.	Policy for quality assurance Organization for quality assurance
E2 - Management system of the study programme The study programme should implement an appropriate and effective management system, through the identification of the quality assurance processes and the definition of a relevant organisational structure.	Management system of the study programme
E3 - Review The study programme should periodically review needs and objectives, educational process, resources, results and management system, in order to guarantee their constant adequacy and effectiveness and promote the improvement of the effectiveness of the processes for the study programme management and of the associated results. Students and representatives of the labour market of reference should be involved in the review process.	Management of the review process Results of the review process
E4 - Publicly availability of information The study programme should make publicly available full, up to date, easily acquired information, both quantitative and qualitative, on study programme objectives, educational process, resources, results and management system.	Publicity of the documentation for the QA of the SP