# Estándares de calidad en la enseñanza virtual de postgrado

# Quality Standards in Virtual Postgraduate University Teaching in Spain

Isabel Pascual-Gómez
Departmento de Psicopedagogía y Educación Física
Facultad de Documentación
Universidad de Alcalá
isabel.pascualg@uah.es

Cecilia Ruiz-Esteban
Departamento de Psicología Evolutiva
Facultad de Educación
Universidad de Murcia
cruiz@um.es

Mercedes Sánchez-Báscones
Departamento de Ciencias Agroforestales
Escuela Técnica Superior de Ingenierías Agrarias
Universidad de Valladolid
msanchez@agro.uva.es

Miguel Alcaide-García
Departmento de Agronomía
Escuela Técnica Superior de Ingenieros Agrónomos y de Montes
Universidad de Córdoba
malcaide@uco.es

Iñaki Periañez-Cañadillas
Departamento de Economía Financiera II
Facultad de Ciencias Económicas y Empresariales
Universidad del País Vasco
inaki.perianez@ehu.es

Diego P. Ruiz
Departamento de Física Aplicada
Facultad de Ciencias
Universidad de Granada
druiz@ugr.es

**Resumen:**

El objetivo de este artículo es ofrecer en primer lugar una panorámica en cifras de la nueva oferta de enseñanza de posgrado universitario adaptada al EESS en las enseñanzas de carácter virtual o semipresencial así como una visión sobre el cumplimiento de los criterios y referentes de evaluación de calidad propuestos por el programa de verificación de títulos de la Agencia Nacional de Calidad y Acreditación (ANECA)[1] en este tipo de enseñanzas. Estos estándares pueden servir para identificar las características de las acciones formativas virtuales de calidad.

---

[1] Basados en Real Decreto 1393/2007 así como así como en los Criterios y Directrices para la garantía de la calidad en el Espacio Europeo de Educación Superior, desarrollados por la European Association for Quality Assurance in Higher Education (ENQA).

**Palabras clave:** Estándares de calidad, Educación virtual, Enseñanza Universitaria de Postgrado.

**Abstract**:

The aim of this study is to provide a panoramic view of the new offer of postgraduate, EHEA-adapted university teaching in Spain, whether of a virtual or mixed-mode nature. It also offers an overview of the degree to which such studies comply with the quality criteria and assessment benchmarks proposed by the degree program verification scheme of the National Quality and Acreditation Agency (Agencia Nacional de Calidad y Acreditación— ANECA).[2] The application of quality standards may help to detect strengths and weaknesses in this kind of university studies as well as identify the features of quality virtual educational actions. In connection with this, during the process of assessing quality, weaknesses were detected in the teaching planning in the study programs and in the application of the material and human resources proper to studies of this kind.

**Keywords:** Quality standards, Virtual education, Postgraduate university teaching, Accreditation process, TIC assessment processes, E-learning

## 1. Introduction

The origins of higher education distance-learning go back as far as nineteenth-century South Africa where the University of the Cape of Good Hope examined by correspondence. Later, the system was adopted in western European countries and then spread to other parts of the world.[3] The system won most esteem in the more developed countries where it was backed up by constant technological advances (García, 2008). Today, two kinds of organisational set-ups may be identified: those offering campus-based, open and distance courses, and those offering exclusively the latter.

By distance-learning we mean a mode whereby cognitive information and educational messages are transmitted through channels which do not require any relationship of physical contiguity in particular locations (Guédez, 1984).

By mixed-mode learning we mean the one which is carried out by means of the incomplete or irregular attendance of students and lecturers, unlike campus-based or face-to-face learning which presupposes the constant and full participation of both parties. It is a variant of distance learning in that it does not require a periodic contact between learners and teachers.

We now offer a summary of the main differences between both types of study based on Rivera's comparison:

---

[1] Based on Royal Decree 1393/2007 and on the Criteria and Guidelines for Guaranteeing Quality in the European Higher Education Area devised by European Association for Quality Assurance in Higher Education (ENQA).

[3] France, former USSR, other African countries, England, Spain, Japan, Israel, Canada, Iran, Pakistan, Netherlands, Australia, West Germany, China, Thailand, Costa Rica and Venezuela.

**Table 1.** Differences between campus-based and mixed-mode learning (Rivera, 2008).

| MIXED-MODE TEACHING | CAMPUS-BASED TEACHING |
|---|---|
| - Lecturer and students do not have to be always physically present in the same space or time, but only at particular moments.<br>- For there to be communication, it is necessary for mediating elements to be created between teacher and student for both face-to-face and non-face-to-face moments.<br>- Eliminates the rigid space-time frontier which the traditional class paradigm imposes.<br>- Shows that participants can learn without being grouped together in the same place and time. | - Lecturer and students are always physically present in the same place and time during classes.<br>- The fundamental communication is carried out in the presence of both; it is always direct, although some mediating elements are also used.<br>- The predominant paradigm is that of the traditional class where students and teachers work together.<br>- A good part of the knowledge is stored on paper. |

The virtual learning mode, understood as a system of learning in which lecturer and student only have to be physically present in the same space and time at particular junctures of the teaching-learning process, has a marked presence in new official master programs.

Among Spanish institutions offering solely the open, distance system are to be found the Open University of Catalunya, the National Distance Learning University and the Distance University of Madrid. At the time of writing, practically all the other Spanish universities offer mixed-mode or distance courses, in response to the demand of students who cannot attend class on a regular basis.  More than at other levels of education, postgraduate students are often workers or have other commitments too. For that reason, the tendency exists to modify attendance requirements and introduce flexibility so that study can be combined with other duties.

The concern for quality has always been an issue in Spanish higher education, but in recent years has become so crucial as to constitute one of the axes of the internal and external politics of the university system. In fact, today, the organigrams of most Spanish universities include units dedicated specifically to quality.

One of the central questions which quality studies address is how to devise assessment procedures which enable the evaluation of the degree of compliance with the standards that define the quality of the system.  Through its verification process (the prior evaluation of degree programs, as regulated by Royal Decree 1393/2007, and a precondition of the introduction in Spain of EHEA –adapted undergraduate and postgraduate programs), ANECA attempts to analyse all the elements of which the provision is composed, including matters related to management and others related

directly to the praxis of teaching itself. At a time when there is concern for university quality, part- and distance-learning courses are naturally liable to ANECA evaluation.

This article has three parts. After a theoretical framework providing a brief description of some distance learning evaluation programs from Europe and Latin America, we then offer a survey of the impact of the verification process of this kind of studies in Spanish universities, before concluding with a description of the guideline UNE 66181, regarding it as a complementary quality standard for non-regulated virtual learning.

## 2. Theoretical framework

The impact of e-learning and the European Union's education programs on curriculum development is expected to increase the contribution of the accreditation and evaluation process (Barron, 2000; HECTIC Report, 2002). Due to the Bologna process (Bologna Report 1999) and increasing partnerships between higher education institutions, researchers are increasingly focusing on this subject. The Bologna objectives (e-Bologna) are bound to be a core approach in most courses and curriculum. The European Council in Lisbon in March 2000 set an ambitious target for Europe to become within ten years "*the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*" (SEC, 2003).

E-learning helps us to meet this target as it represents an opportunity for increased quality, convenience, diversity and effectiveness. In January 2005, the EADTU (European Association of Distance Teaching Universities) set up the E-excellence project with the support of the e-learning program of the European Commission; it objective is to create standards of excellence in e-learning in terms of assessment, improvement and accreditation excellence tools. MENU (Model for a European Networked University for e-learning) encompasses two national virtual universities in Finland and Norway, together with six national partners (Ure, 2003). In many universities e-learning projects rely on a decentralised accreditation strategy accreditation. Divergent national systems have been cited as a drawback when developing translational e-learning modules, while the chief obstacle encountered in the thematic development of e-learning projects in universities is the lack of independent expertise for the assessment of commercial e-learning platforms. Due to the harmonization and equivalence of education for adaptation throughout the world, the demand for a system of e-learning accreditation has set researchers an important task.

The assurance and enhancement of the growing number of e-learning courses in campus-based universities has become an ever-bigger concern for higher education practitioners and managers. There is much discussion about the appropriateness for assuring e-learning provision of the existing internal quality assurance and enhancement procedures in place in campus-based institutions. Literature largely supports the view that these procedures require some modification if they are to be applied to e-learning courses, a position based on the identification of distinctive features of e-learning courses which distinguish them from campus-based and traditional distance learning courses.

During the last decade campus-based universities have been expanding their use of learning technologies for the delivery of courses. This increasing use of technology has raised wide concerns about the quality of this mode of provision, and has led to a search to identify suitable ways to assure and enhance its quality (Oliver, 2005 and Parker, 2004).

A range of literature supports the view that the use of e-learning necessitates some adaptation of the quality assurance and quality enhancement procedures designed for on-campus courses (Connolly, M., Jones, N. y O'Shea. J., 2005; CVCP, 2000; Harvey, 2002; Hope, 2001; Selwyn, 2007). The main arguments supporting this view are based on an analysis of the differences between e-learning and campus-based learning. Four important factors have been identified:

• *disaggregated processes*: in e-learning courses the processes involved (e.g. design, delivery, assessment) are often the responsibility of separate teams, in contrast with conventional campus-based courses where these tasks are responsibility of one team;

• *distribution of teams*: academic staff do not work in isolation; staff need to work collaboratively, interacting with other professionals, and in the case of e-learning courses these people may well be located in different sites;

• *distant location of students*: staff have less direct access to students than with campus-based learning; and

• *openness to review*: in e-learning courses student (and tutor) activities in using technology for learning can be monitored in greater depth, and more continuously and unobtrusively than in campus-based learning or traditional distance learning.

These features of e-learning courses represent a challenge to the way quality assurance and enhancement is managed, and in particular to the collection of student feedback. A review of 129 institutional audit reports produced by the QAA (The Quality Assurance Agency for Higher Education) between 2003 and 2006 (Jara and Mellar, 2008) showed that modifications to on-campus strategies for collecting feedback from students in e-learning courses were reported by just 11% of the institutions. A number of audit reports admitted that student feedback on e-learning courses was not always collected methodically; where it was collected two main modifications were applied to the standard procedures:

• adaptation of forms to suit the special features of the e-learning courses (i.e. adding or modifying questions),

• a move to online surveys and the creation of discussion forums as strategies for collecting feedback – changes intended to improve on the low response rates to traditionally administered questionnaires.

Although there were no mentions of any modification to the procedures for student representation, several of the audit reports showed recognition of the difficulties encountered with implementing student representation in e-learning courses.

This review of audit reports showed that although higher education institutions may be aware of the need to adapt current quality assurance and enhancement procedures for their e-learning courses, changes to existing practice – at least in the case of the strategies for establishing student views – are not widespread. So, in order to get a clearer picture of the relationship between the features of e-learning courses and these procedures as effective mechanisms for the assurance and enhancement of the courses we carried out a series of case studies.

Research carried out by Daly (2008) looking at embedded forms of evaluation for mixed mode courses is a practical contribution in this area. This approach, which has been successfully applied in online courses (Potter, 2008), consists in embedding evaluation tasks as part of the activities of the e-learning course, encouraging students to think about their own learning and how the course design, materials and/or activities have supported them (or not) in this process. By posing questions designed to prompt students' to reflect on their own learning, this strategy offers the opportunity to explore students' experiences and the possibility of identifying difficulties and responding to them while students are still on the course. Course leaders need to explicitly assign responsibilities for quality assurance, facilitating in this way the collection of feedback and its use for the enhancement of the quality of the e-learning courses.

As Moussa and Moussa (2008) said, quality assurance should involve several issues such as quality of institution, teaching body, curricula, administration, students and alumni.

In 2002, the Mexican Ministry of Education produced a document enumerating the following ten basic points deserving particular attention in distance programs: policy integration, quality guidelines and standards defined for higher education as a whole and for a given course, the design of identity projects for distance learning, the formation of a multidisciplinary professional team, interactive tutor-student communication, quality of educational resources, supporting infrastructure, quality assessment of ongoing education, setting up agreements, publishing information about distance graduate courses, and budgeting for the maintenance of distance learning. Most of these points are present in the criteria of the program used for the organisation of official university degree programs in Spain (the VERIFICA program).

For its part, the European Report on School Education Quality has at its main objective the reaching of agreement concerning a series of quality indicators for school education aimed at facilitating the evaluation of systems at the national level. These indicators may be used to decide which matters require deeper consideration and also allow EU countries to learn from each other by comparing the results obtained. The report proposes a limited series of sixteen indicators under four heads. The first has to do with the level achieved in various easily-evaluated subjects (mathematics, Reading, TIC handling, foreign languages, etc), as well as others such as "learning to learn" and civic education which are more difficult to assess. The second has to do with the evaluation of success and transition, determining, in other words, students' capacity to complete their studies. The third focuses on verifying the participation of the parties involved in education systems by means of the evaluation and supervision of the educational process. Finally, the fourth is concerned to analyse resources and structures, paying particular attention to student expenditure on educational material, the education and

training of teaching personnel, attendance rates at infant-school level, and the number of students per computer.

Although the report is not written with distance learning in mind, many of the indicators it puts forward are perfectly applicable to this mode of learning as will be demonstrated in the data analysed on the basis of the criteria used in the VERIFICA program.

### 3. Analysis of the offer of mixed-mode and distance masters verified in Spanish universities

In 2005, and once RD 56/2005 had been passed whereby official university postgraduate studies were regulated, the so-called Official Postgraduate Programs were approved in all Spanish universities, among which there was one or several official master programs designed in accordance with the structure specified by the Decree.

The approval in October 2007 of RD 1393/2007 was followed by the commencement in September 2008 of the verification process for official degree programs in Spain in accordance with the guidelines set out in that decree, guidelines which represented a substantial change with respect to the former system.  For that reason, a shortened procedure was established for verifying master programs already being taught as official degree programs (such programs had to be adapted to the system of RD 1393/2007), and a verification process was set in motion for new degrees.

Between September 2008 and November 2009, 91 non-campus (mixed mode, distance, virtual) degree programs were presented for verification; of these, 87% were proposed by public universities, the remaining 13% by private ones.

**Figure 1. Distribution in percentage terms of mixed-mode degree programs presented for verification, distinguishing between public and private universities**
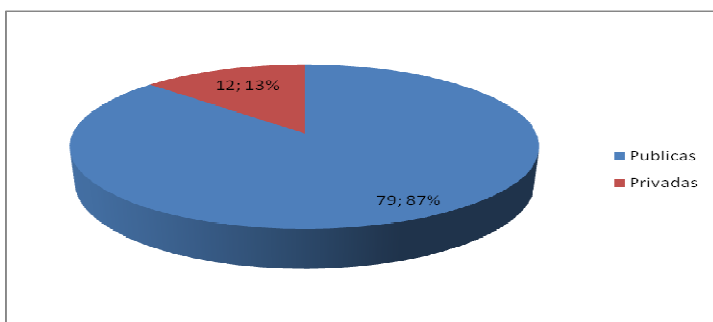


In relation to the distribution of degree programs presented in this same period, the Social and Legal Sciences area of knowledge stands out, with 48 programs presented, followed by Engineering and Architecture, with 19 programs.

**Table 2. Distribution of degree programs presented for verification by type of university and knowledge area**

|  | Universities | |
|---|---|---|
|  | Public | Private |
| Social and Legal Sciences | 40 | 8 |
| Health Sciences | 8 | 1 |
| Sciences | 8 | 2 |
| Arts and Humanities | 4 | 1 |
| Engineering and Architecture | 19 | 0 |

**Figure 2. Distribution in percentage terms of mixed-mode degree programs presented for verification by knowledge area**
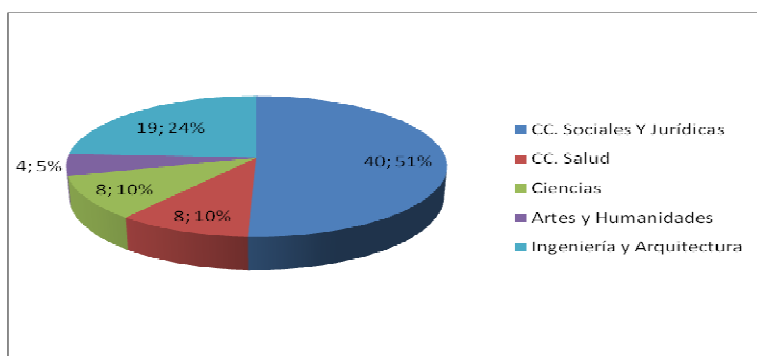


Arts and Humanities programs barely figure in the new non-campus offer: only four programs were presented, with figures which represents only 5% of the courses in this mode.

Finally, it should be mentioned that 92% of the degree programs presented in this period obtained a favourable final verification.

### 2.1 Criteria and General Guidelines used in evaluation

What follows offers a list and brief description of the guidelines which form the basis of the verification process.[4] This is followed by some observations on the results of this evaluation in the new postgraduate studies offer in Spain.

Guidelines[5]

- Relevance of the justification of the degree program. The proposed program must be duly accounted for before society, the public administrations and the

---

[4] Based, in turn, on those developed by the European Association for Quality Assurance in Higher Education (ENQA)
[5] Taken from the ANECA Protocol for the Verification of Official University Degrees (ANECA 2008)

university institution itself. The references or justification accompanying the proposed degree must present arguments which support it in academic, scientific or professional terms. Equivalences may be presented with programs in other countries. As far a master programs with a professional or research profile, the proposal must be related to the state of R+D+i in the professional sector.

- The appropriateness of the general goals and competences. The general goals of the degree program must be in line with the academic, professional, specialist or other profile aspired to by the degree. The competences to be acquired by the student must be measurable and coherent.

- The clarity and adequacy of the systems regulating student access and admission. Prior to matriculation, new students must be given information about the characteristics of the degree, thus aiding their incorporation in the university and the degree.

- The coherence of the foreseen planning. The plan of studies must have a structure of modules, subjects and credits which is coherent with the stated general goals and competences and is supported by mechanisms of teaching coordination. Contents, training activities, the method of evaluation, and the prerequisites stipulated for each module or subject must be geared towards favouring achievement of the competences ascribed to that module or subject. The programming and timing of the contents must enable there to be coordination between modules or subjects and fit between the real dedication of the student and the foreseen.

- The suitability of academic and support staff, and of material resources and services. The academic staff involved in the degree must be sufficient in number and have a level of dedication, qualification and experience adequate to the carrying out of the plan of studies proposed. As a general rule, the material means must be such that the functioning of the services corresponding to the subjects taught is guaranteed (thus, for example, enabling foreseen group sizes or teaching-learning methodologies to be respected). As far as non-campus courses are concerned, attention is paid to the need for resources proper to distance learning such as systems and means of contact between tutors and students. In such courses, greater weight is placed on the evaluation of resources enabling student access to virtual spaces or platforms.

- The forecast efficiency in relation to the outcomes expected. The proposal must include a group of indicators relating to the degree's foreseen outcomes (rates of efficacy, efficiency and abandonment), such estimates being justified on the basis of the recommended entry profile, the type of students who enrol in the program, the proposed goals, the level of student dedication to the degree, and other contextual elements deemed appropriate.

- A quality assurance system entrusted with reviewing and improving the plan of studies. The degree conferring institution--where relevant, the university--must have in place procedures related to quality assurance and formal mechanisms for the approval, control, periodical review and improvement of the degree.

- The appropriateness of the planned implementation calendar.

## 2.2  Application of assessment criteria in non-campus-based mode

The following analysis of indicators is based on the study of the 10 criteria laid down in the VERIFICA program and includes only those standards which have particular weight in the verification process for non-campus-based courses:

In the *Description of Degree*, particular attention has been paid to whether or not the degrees presented for verification specify clearly the kind of virtual mode and the regulations regarding attendance proper and specific to a course of such characteristics.

In the *Justification of Degree*, the suitability to the degree under consideration of the mixed-mode or distance mode is evaluated.

Under no circumstances should the virtual mode hinder or be incompatible with the achievement of the *Goals* and the *acquisition* of all the degree's *competences*. For that reason, certifying the acquisition of the latter is the chief quality standard on this point.

As for the *Student access and admission* procedure, there is verification of the inclusion of a detailed description of systems of  support, monitoring and tutoring for students opting for this mode, as opposed to a mere mention of such systems. There is evaluation of the ready availability and easy access to the institution website, to information regarding courses (programs of study, admission, matriculation). The opportunity for students to receive training in the use of the necessary tools and the offer of courses and virtual training is also positively evaluated.

The *Planning of the course* is of great importance for any type of course, but it is particularly so in this kind of education where the students require greater information in order to plan their learning correctly. This is the section which is given greatest weight, with especial attention being paid to the description of the design of the study plan (which should be as complete as possible) and to such aspects as:

 a) The training activities and assessment procedures, described coherently with information about the teaching mode and with a variety of proposed activities adapted to different learning strategies.

b) A statement of which modules and subjects are to be taught in one or in both modes (campus-based and on-line).

c) Management of the production of materials for these two modes, what they are and where the students can find them.

d) Technical guarantees for the on-line platform used, particular with regard to user identification and the proper checking of student identity in assessment processes, with a view to ensuring the security, integrity and privacy of the stored data.

e) The control of practical experience in those masters with a professional profile, above all in regard of guaranteeing the acquisition of the associated competences when they are not taught face-to-face.

f) Clarity regarding whether or not student mobility (both of visiting students and of own students) is to be campus- or non-campus-based, and the procedures to be adopted.

Positive evaluation is given when *Academic and support staff* are specialists in the teaching mode as well as their dedication to the program, bearing in mind the number of students to be admitted.

As far as *Available material resources and services* are concerned, in addition to the list of resources there has also been evaluation of: the use of standard, open technologies; accessibility to the platform according to user needs and preferences; the help and support tools available; the guarantee of technical maintenance for information systems; and the technical customer service provided.

Finally, in the development of the Quality Assurance System, particular attention has been paid to such issues as the giving of information to students in advance regarding the technological requisites for pursuing an on-line course or the system's conditions of use and data privacy system.

### 2.3   Results of the evaluation for the degree programs presented for verification

In the light of the above, it might be useful to reflect here on the weaknesses detected in this kind of course after the verification process.

Analysis of the memoranda presented for verification permits the following observations:

a) Most of the time the statement that a course is mixed-mode means no more than, once the new methodology is applied, part of the credit load is assigned to independent work on the part of the students (in these terms, all master programs would be mixed-mode as none of them is 100% campus-based).  In very few programs is there any sign of any special methodology or planning for a subject not taught in the conventional way. However a minority did have the option of, for example, an average of 65% on-line teaching, spelt out for each subject.

b) The current norm is a course combining face-to-face and virtual teaching. Practically all universities have a virtual platform or something of the sort allowing this kind of interaction with the student, such platforms therefore no longer being the preserve of distance or on-line education. Thus, on this point, there are no serious shortcomings.

c) As for support systems, most of them assign a tutor to each student, but not so much for reasons to do with face-to-face teaching as as a means of support for any matriculated student.

d) As for the identity of students involved in evaluation processes, continuous non-campus assessment is combined with on-campus examinations, these latter guaranteeing identities.

e) As for teaching staff, none of the degree programs studied distinguished between the two modes or specified whether some staff were specialised in this kind of teaching or whether teaching materials had been adapted.

f) Support staff who maintains platforms and websites is rarely specified.

## 4. The virtual training quality standard UNE 66181:2008

Together with the quality analysis of good practice carried out in the field of virtual university courses, it is also of great interest to consider the systemised information available from the first non-regulated on-line training quality standard. Although most of the information it handles and the factors it analyses should be included in the verification memoranda and, therefore, in the criteria of the VERIFICA program analysed, it is no less true that it includes some quality indicators and factors which show this information clearly and, consequently, facilitates comparison. Thus, the systematisation afforded by the norm contains some interesting points to be born in mind in subsequent monitoring or accreditation processes or, simply, by the suppliers of virtual education as part of their quality process and the continuous improvement of their teaching.

The norm in question is UNE 66181:2008. This aims to be a guide to identifying the characteristics of on-line training activities so that on-line customers, users and students may choose the products that best suit their needs and expectations and increase their level of satisfaction. Although in principle conceived for non-regulated virtual education, it is equally applicable to regulated education.

The norm is rooted in a conceptual framework according to which virtual education is offered in the market to students who choose the educative offer that best squares with their needs and situation (capacity, financial circumstances, and so) so that the level of satisfaction will increase or decrease in accordance with the degree to which the education they receive meet their expectations. In effect, the aim is that there should be no significant difference between expectations and offer, so that the level of satisfaction is maximised.

In this analysis the information on the basis of which students form their expectations at the outset is crucial, for their level of satisfaction will be related to the expectations they build on the basis of that information. In order to comply with this norm and determine the evaluation, four key aspects have to be born in mind when assessing satisfaction levels:

Minimum General Information, which, according to the norm, includes a description of the educative action, information about cost, forms of contact, student dedication, hardware and software requirements, goals, prerequisites and type of course (distance learning, self-study or a combination of the two).

### 4.1 Quality levels

- EMPLOYABILITY or capacity to enter the labour market or improve previous circumstances. This is evaluated by attending to two key factors: the market demand and the recognition of the course, whether by the authorities, the labour market or the body delivering the course.
- EASE OF ASSIMILATION of the contents by the students. Here the interactiveness and tutoring of the training action is evaluated. The better they are, the more motivated the students will be, the more agreeable their period of study and, therefore, the higher their satisfaction.

- ACCESSIBILITY, that is to say, the ease of use and the efficacy of the on-line course for anyone. The key factors are the employment of hardware, software and contents which comply with the accessibility requirements for web technologies and the distribution of e-contents which are accessible following the manufacturers' recommendations.

The norm graduates these satisfaction factors into five quality levels, with a scale from 1 ("basic") to 5 ("excellent").

Using the information provided by this norm, potential students can form a global estimate of the level of satisfaction the course proposed can give them, as well as truthful information about the course itself and its quality levels in terms of employability, ease of assimilation, and accessibility. This way, students can select the course which best matches their needs and expectations.

## 5. General recommendations and conclusions

At the height of the process of developing and introducing of the quality culture, new elements play leading roles. The introduction and increasingly common use of Information and Communications Technology (ICT) is one more element to be born in mind when evaluating the quality of a university service. There can be no doubt that in the last few years new information technologies and, in particular, Internet have become basic ingredients of proper accomplishment on the part of universities of their research and teaching missions.

The growing interest for the tailoring of university teaching to the individual and the learning of competences in harmony with a concern for quality oblige us to review the current state of affairs in Spain.

If, from a managerial point of view, it does not seem especially difficult to evaluate the contribution to improved service made by ICT, the situation changes when considering its impact on the learning process it.

The impact of ICT and all it involves is felt by all the key elements in the teaching-learning process (teaching staff, materials, forms of communication, environments). And if that impact on those elements is decisive, it is even more so on what underpins the whole process, namely, the model on which learning is built.

The learning model implicit in a distance-learning approach must be constructivist and centred on the student as the core site of the cognitive processes and, therefore, of the teaching-learning process. This process raises a number of crucial issues:

- The meaning of mixed-mode learning needs to be defined and a distinction drawn between mixed-mode and distance learning.
- Once that definition is established, it needs to be reported to all sections of a memorandum (guaranteeing tutorial action, practical work, special needs, attendance requirements, mobility, student identity, work experience, and so forth), so that there is one model of memorandum for mixed mode and distance degrees and another for conventional campus-based ones.

- The implicit nature of the disciplines involved needs to be born in mind, together with their coherence with the mode of teaching used. In some Science or Health Science degrees (e.g. mathematics) there may be problems attached to offering a mixed-mode or distance course.
- The practical work for professional distance-learning master programs needs to be rigorously controlled.
- How exactly mobility is to be achieved needs to be clearly defined as do the rules regarding permanence in the case of on-line learning.
- Finally, the complete acquisition of the competences to be achieved needs to be guaranteed and their compatibility with distance or on-line learning.

While we have faith in the tremendous potential of the new education technologies to revolutionise university learning and teaching (Selwyn, 2007), we nonetheless also believe that studies which are not only instrumental should be conducted urgently — that is based on the development of operational competences (Gutiérrez and Orozco, 2007), but that also enable us to know more about the way knowledge is approached, and concepts are perceived, interpreted, transferred, constructed and reconstructed when the starting point are elements determined by pedagogical and educational designers, and to verify whether the use of such technologies favours those processes (Ávila, 2004).

Fin de redacción del artículo: 1 de marzo de 2011

Pascual, I. et al.(2011) Estándares de calidad en la enseñanza virtual de postgrado. *RED, Revista de Educación a Distancia.Sección de Docencia Universitaria en la Sociedad del Conocimiento Número 26.* 15 de mayo de 2011. Consultado el [dd/mm/aaaa] en  http://www.um.es/ead/reddusc/3/

## Bibliography

AENOR (2008). *UNE 66181:2008, Gestión de la calidad. Calidad de la Formación Virtual.* Madrid: Asociación Española de Normalización y Certificación.

ANECA. (2008). *Protocolo de evaluación para la verificación de Títulos Universitarios Oficiales (Grado y Máster).* Madrid: ANECA.

Asociación Nacional de Universidades e Instituciones de Educación Superior (2002, June). *Indicadores de calidad para la educación a distancia.* 3ª Reunión Nacional de Educación Superior a distancia. México.

Avila, M. P, (2004). La educación a distancia, una revisión al proceso. En M. Mena (comp). *La educación a distancia en América Latina.* Buenos Aires: Editorial La Crujía / Unesco.

Barberà, E., Mauri, T. y Onrubia, J., (2008). Sentido y finalidad de la evaluación de la calidad educativa de la enseñanza y el aprendizaje con TIC. En E. Barberà, T. Mauri, y J. Onrubia (coord.). *Como valorar la calidad de la enseñanza basada en las TIC.* Barcelona: Graó.

Barberà, E., Mauri, T. y Onrubia, J., (coord.) (2008b) *Cómo valorar la calidad de la enseñanza basada en las TIC*. Barcelona: Graó.

Baron, T., (2000) *The Future of Digital Learning. e-Learning*. 1, (2), 46-47.

Berger, P. y Luckmann, T. (1967). *The social construction of reality*. Nueva York: Allen Lane.

Coimbra Group of Universities, (2002) *European Union Policies and Strategic Change for e-learning in Universities.* (Report of the project 'Higher Education Consultation in Technologies of Information and Communication' (HECTIC)), Brussels: European Union.

Connolly, M., Jones, N. y O'Shea. J. (2005). Quality assurance and e-learning: Reflections from the front line. *Quality in Higher Education, 11,* (1), 59–67.

Comisión Europea (2000). *Informe Europeo sobre la Calidad de la Educación Escolar*. Bruselas: Unión Europea.

CVCP. (2000). *The business of borderless education: UK perspectives. Analysis and recommendations.* London: The Committee of Vice-Chancellors and Principals of the Universities of UK.

Daly, C. (2008) Evaluation for new learning contexts – How can it be fit for purpose? *Reflecting Education, 4,* (1), 127–138.

No, J. (2005). «Planificación de la enseñanza semipresencial: una experiencia con posgrado» En: DUART, Josep M.; LUPIÁÑEZ, Francisco (coords.). *Las TIC en la universidad: estrategia y transformación institucional. Revista de Universidad y Sociedad del Conocimiento (RUSC). 2,1*, UOC. [Fecha de consulta: 22/11/09]. http://www.uoc.edu/rusc/dt/esp/no0405.pdf

García, L (2001). *Educación a distancia. De la Teoría a la práctica*. Barcelona. Ariel

García, V. (2008). El Sistema de Educación Abierta y a Distancia (SEAD), de la Universidad Juárez Autónoma de Tabasco, la transición de lo presencial a lo bimodal. Ponencia en Congreso Virtual Educa. Argentina.

Guedez , V. (1984). Las perspectivas de la educación a distancia en el contexto de la educación abierta y permanente. *Boletín Informativo de la Asociación Iberoamericana de Educación Superior a distancia, Num 3*. Madrid

Gutierrez, G, Y Orozco, J.C. (2007) Políticas Tecnológicas en un escenario de gestión del conocimiento en Educacion. *Revista Iberoamericana de Educación, 45*, 71-88

Harvey, L. (2003). Student feedback. *Quality in Higher Education, 9,* (1), 3–20.

Harvey, L. (2002). The end of quality?. *Quality in Higher Education, 8,* (1), 5–22.

Hilera, J.R. (2008). UNE 66181:2008, el primer estándar sobre calidad de la formación virtual. *Revista de Educación a Distancia, Número monográfico VII*. [Fecha de consulta: 19/11/10]. http://www.um.es/ead/red/M7/hilera.pdf

Hope, A. (2001). Quality Assurance. En: G. Farrell. *The changing faces of virtual education*. Vancouver: The Commonwealth of Learning.

Jara, M. y Mellar, H. (2007). Exploring the mechanisms for assuring quality of e-learning courses in UK higher education institutions. *European Journal of Open and Distance Learning, I.*

Jara, M. y Mellar, H. (2008). *Report on quality assurance procedures for e-learning courses in QAA institutional audits 2003–2006: Pathfinder Network Project Quality Assurance and Enhancement in E-learning (PREEL 2)* Institute of Education, University of London. [Fecha de consulta: 22/11/09]. http://www.lkl.ac.uk/research/qa-elearning/

Marcelo, C. y Zapata-Ros, M. (2008, Diciembre). Cuestionario para la evaluación: "Evaluación de la calidad para programas completos de formación docente a través de estrategias de aprendizaje abierto y a distancia". Metodología de uso y descripción de indicadores . RED, Revista de Educación a Distancia. Número monográfico VII.- 30 de Diciembre de 2008. Número especial dedicado a la evaluación de la calidad en entornos virtuales de aprendizaje.Revisado en http://www.um.es/ead/red/M7/ el 22/11/2009

Middlehurst, R. (2001). «Quality assurance and accreditation for virtual education: a discussion of models and needs». En: *Global Forum on Quality Assurance, Accreditation and the Recognition of Qualifications in Higher Education*. Unesco. Studying Abroad Program. Experts Meeting (10-11 September 2001: Paris).http://www.unesco.org/education/studyingabroad/highlights/global_forum/pres entations/middlehurst.doc

Moussa, N. y Moussa, S. (2009) Quality assurance of e-learning in developing countries. *Nonlinear Analysis: Theory, Methods & Applications. 71*, (12), 32-34.

Oliver, R. (2005) Quality assurance and e-learning: Blue skies and pragmatism, *Journal Research in Learning Technology, 13*, (3), 173–187.

Parker, N.K. (2004) The quality dilemma in online education. En T. Anderson y F. Elloumi (Eds.), *Theory and practice of online learning*, USA: Athabasca University.

Potter, J. (2008), Re-designing an MA module to foster agency, engagement and production in online social software. *Reflecting Education, 4*, (1), 72–80.

PREAU (2002). *Quelle modèle de qualité pour la e-formation?: les normes qualités existantes répondent-elles aux besoins des acteurs de le e-formation?* París. [Fecha de consulta: 01/09/10]. http://www.preau.ccip.fr

Rivera, E., Orbea, T. (2008) Cómo seleccionar la formación .com. UNE*: boletín mensual de AENOR, 228*, 14-19.

Selwyn, N. (2007). The use of computer Technology in university teaching and learning: a critical perspective. *Journal of Computed Assisted Learning, 23*, (2), 83-94.

Sangrà, A. (2002*). La calidad en las experiencias virtuales de educación superior*. UOC. [Fecha de consulta: 05/03/11]. http://www.uoc.edu/web/esp/art/uoc/0106024/sangra.html

SEC (2003) *eLearning: Designing Tomorrow's Education. A Mid-Term Report*, Brussels: 905, Commission Staff Working Paper.

Silvio, J. (2006). «Hacia una educación virtual de calidad, pero con equidad y pertinencia». *Revista de Universidad y Sociedad del Conocimiento (RUSC) [artículo en línea]. Vol. 3*, n.° 1. UOC. [Fecha de consulta: 05/12/09]. http://www.uoc.edu/rusc/3/1/dt/esp/silvio.pdf

Terin, A. (2009). Accreditation in e-learning: North Cyprus higher education case. *Procedia Social and Behavioral Sciences, 1,* (1), 2077-2080

Ure, O. B., (2003) External Evaluation Report: A contribution to the Intermediate Report on the e-learning action plan: Executive Summary, Appendix C. *eLearning :Designing Tomorrow's Education: A mid-Term Report*, Brussel: European Comission.

Vinet Huerta, R. (2002) *Indicadores y Estándares de calidad en la Educación Virtual*. Universidad de Valparaíso. [Fecha de consulta 1/1/2010] http://www.uvalpovirtual.cl/archivos/simposio2004/Raul%20Vinet%20-%20Indica(cdores%20y%20Estandares%20de%20Calidad%20en%20la%20Educacion%20Virtual.pdf