IMPLEMENTING AND USING QUALITY ASSURANCE: STRATEGY AND PRACTICE

A SELECTION OF PAPERS FROM THE 2ND EUROPEAN QUALITY ASSURANCE FORUM

ENQA
EUROPEAN ASSOCIATION
FOR QUALITY ASSURANCE
IN HIGHER EDUCATION

EURASHE

eSU
european students' union

EUA
European University Association

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Education and Culture

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Edited by:
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FOREWORD AND ACKNOWLEDGEMENTS

The idea of a European Quality Assurance Forum was proposed by EUA to the "E4 Group" (ENQA, ESU, EUA, and EURASHE) in 2003. This group has been meeting regularly since September 2001 to discuss ways to develop a European dimension for quality assurance. It was responsible for developing the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" and for designing the structure and processes of the European Register for Quality Agencies.

The first European Quality Assurance Forum took place in 2006 at the Technical University of Munich and focused upon internal quality processes. The second Forum, hosted by the Sapienza Università di Roma, was focused upon "Implementing and Using Quality Assurance: Strategy and Practice" and attracted over 500 participants: academics, QA agencies and students. Thus, by the time registration for the second Forum closed, it became clear that this event had become the premier conference for quality discussions in Europe.

This publication gathers a representative sample of the contributions to the Forum. Some of the keynote presentations are included as well as a few of the many excellent papers that contributed to lively discussions in the parallel sessions. The keynotes discuss quality from a conceptual, historical and policy perspective. The papers are mostly focused on institutional case studies and show the variety of ways that higher education institutions and QA agencies ensure quality.

The Forum Organising Committee hopes that this collection of papers will inspire higher education institutions, academic staff, students and QA agencies to reflect upon ways that quality can be ensured while respecting the need for diversity and innovative practices in research and education.

On behalf of the Forum Organising Committee, I wish to thank the following for their support of this activity: the Sapienza Università di Roma which hosted the Forum with a great sense of organisation and hospitality, the 70 authors who submitted papers to the Forum, the Socrates Programme which funded it partially, and Harald Scheuthle, EUA, who spearheaded the organisation on behalf of the E4.

The European Quality Assurance Forum will be offered again on 20 - 22 November 2008 at Corvinus University in Budapest and will focus on an examination of current trends in quality assurance. We hope to repeat the success of the first two Forums and look forward to welcoming you then.

Henrik Toft Jensen
Chair, Forum Organising Committee

4. ASSESSMENT OF QUALITY ASSURANCE MODELS

University institutional evaluation and academic achievement

Samuel Fernández, J. Esteban Fernández and Alberto Álvarez[1]

Because of the scope of our activity, university institutional evaluation and the control of the teaching-learning process, we are especially *interested in finding out what influence official degree evaluation has had on the outcomes of university education. We are also interested in the effects of any improvement policies resulting from recommendations made in evaluation reports.* Therefore*, the present paper attempts to appraise the effects of institutional degree evaluation on student achievement.*

We approach the issue from the perspective of university institutional research. This is a field that has obtained scarce recognition from Spanish educational and academic institutions, despite its increasing international resonance, and regardless of the abundance of contributions it has generated.

University institutional evaluation and quality assurance

By university institutional evaluation we understand an analysis of all the activities of a university, carried out with the aim of getting to know the value of its contributions to society. In particular, of the way it provides professional instruction and produces academic research. The purpose, therefore, is to facilitate information about strategy development as well as about the economic and managerial effects on aim fulfilment and not to assess directly the teaching or research methodologies (ENQA, 2001).

The main mechanism of institutional evaluation consists in providing the management of the institution with information about the strengths and weaknesses of the unit under analysis with the aim of improving its outcomes (Lloret i Mir, 2007). Other desired effects are accountability, information transparency and the possibility of establishing comparisons between different organisations.

The control criteria do not contain specific requirements or standards that institutions must necessarily meet. In this respect, the references for analysis are considered guidelines and the evaluation describes the functioning of the organisation by comparing what was appraised by the participants from within the institution or by external experts either using a set of clearly stated purposes and objectives, official guidelines or knowledge derived from other similar institutions.
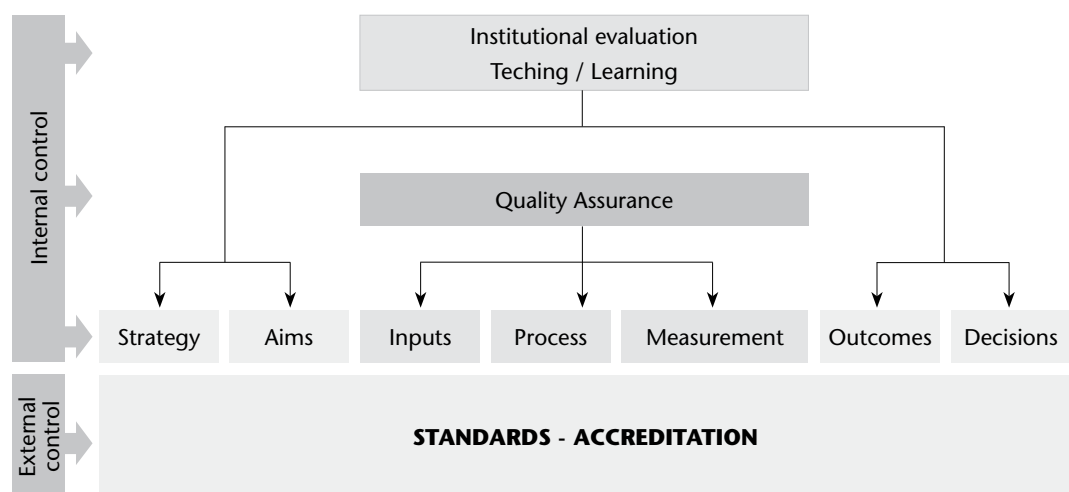
Graph 1. Evaluation, Quality Assurance & Accreditation

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Institutional evaluation is frequently confused with quality control or quality assurance and accreditation. The main reference for the evaluation of a university unit is the overall coherence between the principles stated as aims and the achieved outcomes, while quality control or assurance is more the functioning of those processes and procedures. Frequently some of the conclusions of institutional evaluations point to the need to improve process control in order to achieve greater efficiency of the assessed unit.

The purpose of accreditation, in turn, is to certify that an organisation or programme fulfils specific organisational and achievement requirements. This is a formal decision and has a number of consequences, either on the continuation of the educational centre or programme or on financial policies, or even on the social recognition of the institution and its degrees.

All of these – institutional evaluation, quality control, assurance and accreditation – follow similar procedures, with the writing of an internal report by a team within the unit under examination and an external appraisal carried out by experts in the proposed evaluation model. The differences are in whether or not the unit is obliged to meet specific parameters. Therefore, since institutional evaluation is not based on norms or standards, it does not require a statement concerning criterion fulfilment. Rather, the mere reflection about relevant references within the sector by either of the teams is considered sufficient. Quality control or assurance, as well as accreditation, however, demand such a statement, since in both cases the institution or programme is measured against standard criteria, which in the case of quality control relate to a set of minimums of management processes and procedures and for accreditation purposes, also refer to the established level of process organisation and achievement.

Self-assessment has the purpose of encouraging teacher reflection and is supported by visits by an external committee. This model may be an efficient tool to motivate individuals to participate (Foucault, 1977; Spender, 2000), but it generally has an important disadvantage in the reluctance of staff to get involved in the setting up of improvement measures (HEQC, 1995).

The certification model with its emphasis on procedure fulfilment, however, may have the side-effect of increasing bureaucratisation and causing process compliance, with a view of professionalism based on lists of skills and achievements to be determined externally and this might exclude reflection (Smith, Armstrong and Brown, 1999).

Seeking achievement improvement by means of institutional evaluation:
methodology and outcomes

The study we have carried out aims at estimating the effect of degree evaluation in terms of the improvement of student academic performance.

The alternative hypothesis of this study can be established from the basis that degree institutional evaluation is associated with a consistent increase of performance rates because it can be a remarkable opportunity for reflection and this allows the drawing up of a list of strengths and weaknesses that can then form the basis of specific improvement measures.

In order to appraise the impact of evaluation on the degrees of the University of Oviedo (Spain), we have analysed the students' academic performance rate – i.e. the relationship between the number of students who have obtained a pass in their compulsory subjects and the number of students who enrolled for those subjects.

The independent variable to be considered is the set of improvement measures carried out from the academic years 2000-01 to 2005-06 within the evaluation framework of the National Plan for University

Quality Evaluation. This was operative during the first two years of the period and was followed by the University Quality Plan whose methodological principles were applied in the two subsequent years. The Institutional Evaluation Plan then followed. These measures are characterised by actions concerning the evaluation criteria of the model used.

Therefore, this is an exploratory analysis of the degrees of the University of Oviedo based on a "Recurrent institutional cycle design" (Campbell and Stanley, 1982) with two combined approaches: a diachronic approach with a set of improvements within a given time period; and a synchronic approach where the analysis focused on the two groups into which the degrees can be classified each year (those to which improvement measures were applied / and those with no improvement measures applied). These groupings were made with the help of the evaluation programmes. The findings discussed below are based on descriptive statistics and on the contrast of hypotheses.

The information was obtained from the University's databases and from the reports generated during the evaluation and improvement processes, which are managed by the Quality Division of the Vice-chancellorship of Quality, Planning and Innovation.

The evaluation process
The evaluation process was carried out following steps and tasks according to guidelines from the Council of Spanish Universities and occurred in three stages: self-evaluation, external evaluation and final report.

The information analysed by the committees stemmed from a variety of sources. Some came directly from lecturers, students and administration staff, as well as from professionals and graduates while other information was collected from the relevant administrative units of the university and of the faculty/college itself. Yet other data came from internal surveys written by the committees and applied to the different sample groups.

The methodology applied under the Institutional Evaluation Programme has maintained this force and, in the case of the University of Oviedo, it has allowed us to comply with the pre-established six-year-period programme for degree evaluation.

Degree improvement process
In line with Brennan and Shah's insights about the consequences of quality evaluation (2000: 99), it is worth pointing out the possible inherent contradiction between evaluation and improvement. If the outcomes of evaluations are linked either to rewards or penalties, they could provoke a "system of complicities", so that the potential benefits of analysis and self-criticism could be disallowed. If, however, quality control has no consequences, we could wonder why it should be taken seriously at all.

Since improvement measures are considered the lasting solution targeted by any form of evaluation (Coba, 2003) and, assuming that the institutional context has overcome the naïve idea that improvements are derived directly from the evaluation process (Mateo, 2000: 222), the University of Oviedo Quality Area, with its Technical Unit, has established a support process for the development of measures proposed in the evaluation reports.

In this perspective of adaptation to the context, and with the purpose either of achieving everything possible or of promoting measures that could actually be endorsed by the persons in charge of the university centres, the procedures put into practice for improvement measures conform to a simpler procedure than the one devised by other authors (Rodríguez et al, 2002).

The typology of improvements put into practice according to the current criteria of the Institutional Evaluation Programme allows us to appreciate the distribution of the improvement measures carried out, which have been reported by the persons in charge of the degrees and of the funds devoted to financing the process.

Criterion / sub-criterion	Amount of proposals	Amount of improvement measures carried out	Cost (%)
TRAINING PROGRAMME			
Aims of the training programme	4	6	0.77
Syllabus and its structure	11	15	8.74
Subtotal:	**15**	**21**	**9.51**
EDUCATIONAL ORGANISATION			
Direction and planning	1	13	10.87
Management and organization	12	15	7.44
Subtotal:	**13**	**28**	**18.31**
HUMAN RESOURCES			
Academic staff	13	13	4.66
Administration and services staff	4	4	0.28
Subtotal:	**17**	**17**	**4.94**
MATERIAL RESOURCES			
Classrooms	5	7	6.84
Working spaces	3	5	2.52
Laboratories, workshops, experiment rooms,..	4	4	3.90
Library and documentation	1	2	1.55
Subtotal:	**13**	**18**	**14.81**
EDUCATIONAL PROCESS			
Student attention and integral education	24	46	24.13
Teaching-learning process.	7	15	4.42
Subtotal:	**31**	**61**	**28.55**
OUTCOMES			
Outcomes of the educational programme	14	16	7.73
Outcomes for graduates	11	13	12.67
Outcomes for society	8	9	3.38
Subtotal:	**33**	**39**	**23.78**
TOTAL	**122**	**184**	**99.90**

Table 1. Improvement Funding

Each centre with evaluated degrees received financial support for improvement measures during the three years following the evaluation. As can be seen, each proposal materialises in one or two measures, and the average cost of each improvement measure is about 1,400€.

Most of the initiatives were devoted to the educational process (33%) by circulating information about the educational offer, in improving student reception and tutorial actions, in the reinforcement of information and communication with students, the use of new technologies and multimedia support equipment, in the implementation of study-skill courses and peer support to foster class attendance. The improvement and distribution of class notes, student follow-up and the increase of external work-placements and student exchange programmes were also part of this activity.

Twenty per cent of the interventions were devoted to improving achievement. They involved gathering students' and graduates' opinions, getting to know the graduate employment rates, promoting and improving the relationship with professional associations and supplying information about the degree as well as about university research, by organising events amongst other things.

Fifteen per cent of the measures were related to educational organisation. Many aimed at getting to know the experiences and communicate the outcomes as well as giving information about subjects, improving web information and developing strategic plans and processes to be certified.

Eleven per cent of the measures concerned material resources and included the improvement of teaching spaces and tools, safety measures in laboratories and access to specialised information, as well as the development of protocols for use of equipment in support of the learning process.

The educational programme and human resources made up the remaining 21 per cent, with a preponderance of proposals involving the analysis of degree goals and objectives and the training of lecturing staff. Other measures tackled the analysis from a social perspective, as well as the plan to revise study fields and develop specialisation programmes.

The frequency of these actions is due in part to the orientation towards improvement that the Vice-chancellorship of Quality, Planning and Innovation promoted amongst previously evaluated centres.

Effects of the evaluation processes on student performance and degree improvement
The table below shows the achievement rates of the assessed and not-assessed degrees. We can thus observe the increase in the amount of degrees assessed and the differences in the values for average achievement between the two groups in each academic year.

Evaluation	Variables	1999	2000	2001	2002	2003	2004	2005
No	*Degrees*	45	31	27	24	18	18	11
	Achievement rate	**54,94**	**53,70**	**53,86**	**55,87**	**54,26**	**56,08**	**54,60**
Yes	*Degrees*	5	19	23	26	32	32	39
	Achievement rate	**52,71**	**52,79**	**52,79**	**52,94**	**54,80**	**54,74**	**56,25**
Total	*Degrees*	50	50	50	50	50	50	50
	Achievement rate	**54,56**	**53,17**	**53,16**	**53,84**	**54,73**	**54,93**	**55,95**

Table 2. Achievement rates of assessed and not-assessed degrees

As can be observed, the achievement rate tends to increase with the number of degrees participating in evaluation and institutional improvement programmes.
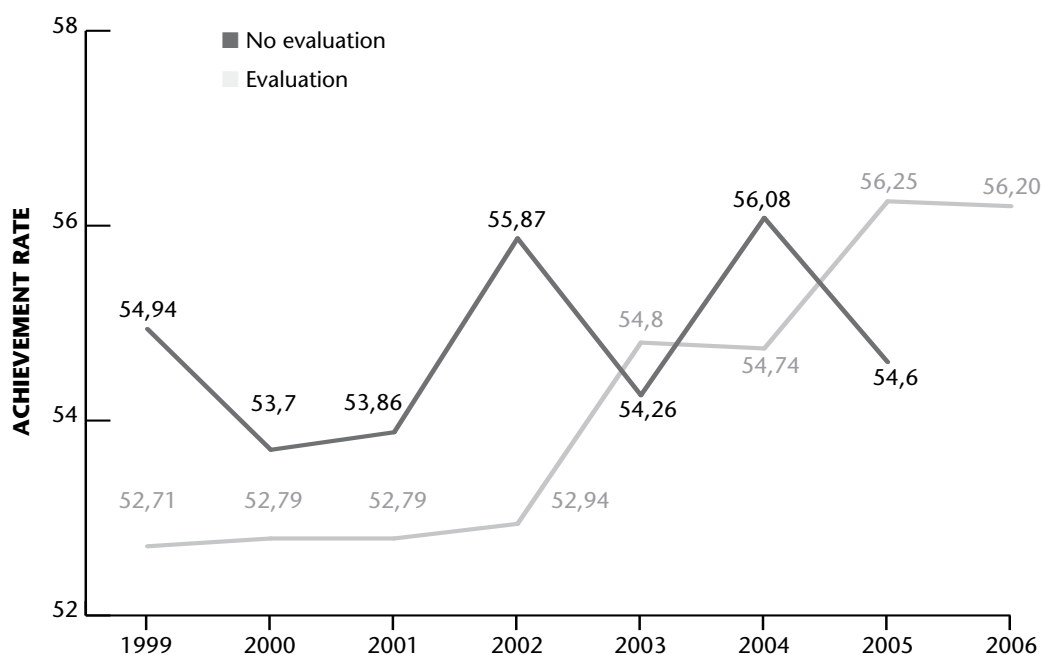
Graph 2. Evolution of the achievement rate

In order to establish the extent to which this trend can be linked to the improvement measures applied, we will analyse the values concerning the 26 degrees whose evaluation cycle and the three-year period of improvement measures planned in the programme have been completed so far. In order to do this we have compared the achievement rates of each degree in the year in which the evaluation took place and during the three following years, when the improvement plan was put into practice.

Evaluation (A) and Improvement (I)	1999-00	2001-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
5 degrees	A	I	I	I				
14 degrees		A	I	I	I			
4 degrees			A	I	I	I		
3 degrees				A	I	I	I	
6 degrees					A	I	I	I
4 degrees						A	I	I
7 degrees							A	I
7 degrees								A

Table 3. Schedule of Evaluation and Improvement

As a result, we obtain a design with one factor, which we will call "time-period", and four levels (the years of the evaluation and improvements) as well as a dependent variable, the achievement rate, which reflects the rate of students who passed as compared with the number of students who enrolled.

We have used a *one-way ANOVA with repeated measures*, because it requires fewer experimental subjects and can better control the differences between degrees assessed in different circumstances. We assume an intrinsic wash-back effect (improvement continuity) owing to the interest of the evolution of the achievement rate associated with the desirable accumulation of effects.

The following tables show the values for achievement rates as well as the statistics offered by the SPSS programme for this test.

	Average	Typical ...	N
Evaluation year	54,25	12,12	26
Year 1 (improvement measures)	52,86	12,03	26
Year 2	52,48	11,99	26
Year 3	52,33	11,34	26

Table 4. Descriptive statistics

Effect		Value	F	Hypothesis GI	Error GI	Significance Si
factor1	Pillai's Trace	,255	2,621(a)	3,000	23,000	,075
	Wlilks' Lambda	,745	2,621(a)	3,000	23,000	,075
	Hotelling's Trace	,342	2,621(a)	3,000	23,000	,075
	Roy's Largest Root	,342	2,621(a)	3,000	23,000	,075

a. Exact statistics b. Design: Intercept; Intra-subject Design: factor1

Table 5. Multivaried contrasts

The outcomes of this test show no relevant differences (p=0.075). In other words, *the improvement measures implemented in the degrees during the three years after the evaluation have not resulted in any variation of the achievement rates*. However, as we have seen in the previous table, the trend allows a degree of optimism because it can be expected that in the future, we will be able to demonstrate a clear link between these two variables.

Research conclusions

Relevance of the process and of the management of the education programme
Even though the analysis of the outcomes remains the dominant perspective in institutional research (Schalock, R.L. 1995), reflecting on process effectiveness allows the identification of elements which must receive further attention and improvement (Lloret i Mir, 2007). In this respect, we have been able to ascertain that the evaluation procedure generates little improvement within university educational centres and thus any improvement plans generated this way do not manage to achieve significant changes in degree achievement rates. In spite of that, many improvement measures are focused on the teaching-learning process, but probably without an efficient deployment of activities.

Going back to the arguments used in the present study concerning evaluation approaches, the approach of the institutional evaluation of a given educational centre or degree must firstly be considered an initial stage within a recurrent improvement process, rather than an aim in itself. The evaluation effort should last no longer than six to eight months of the academic year. *The greatest effort should be devoted to defining and implementing a detailed improvement plan, which ought to be operative and involve achievement responsibilities for the management of the different faculties and departments*. It should also involve a deep reflection about the attitudes required within the teaching-learning process as well as by the management of the educational programme resources, since these are the most influential variables in student satisfaction and achievement.

In our opinion, improvements should be linked to responsibilities and competences of the management of faculties and departments, which should set in their annual plans the objectives directly related to the main indicators of academic achievement, administration and management as well as teaching performance.

The need for teaching improvement measures
The narrow link between educational organisation and the analysis of academic activity itself has been evident in the pedagogic reflections about quality education within our field (Tejedor, 2007, Mateo, 2000), in spite of the fact that the term "quality education" has not yet been operationally defined (Mateo et al. 1996).

The launching of general pedagogic training measures, both for the initial and for the continuing training of lecturers, is the first step for teaching quality improvement. Developing specific educational training measures, together with quality improvement plans for the different educational centres, is a complement to the general measures and contributes to maintaining up-dated teaching processes.

		EFFECTIVE PEDAGOGICAL APPROACH			
		Active Learning	Problems Solving	Technical Resources	Tutorial System
SUPPORT VALUES	Proposal of teaching connected with professional initiatives				
	To promote the publication of learning support document				
	Promoting publications and documents to support the learning				
	Adapting the teaching to the student's learning styles and needs				

Table 6. Quality Improvement Plans

Academic improvement associated with a student-centred teaching approach demands the application of a variety of educational methodologies and didactic techniques (De Miguel, 2006). It also asks, however, for the organisation of a model of university community which links study programmes, infrastructure, social and residential resources in order to achieve the learning goals, thus emphasising the importance of the direct relationship between lecturers and students. *In this respect, the teacher/student ratio in each degree should be established in such a way that it allows constant and efficient personal communication.*