

# AN EVALUATION MODEL OF THE TEACHING ACTIVITY OF ACADEMIC STAFF

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## **Abstract:**

European policies on higher education are giving increasing importance to improving the quality of education on offer. Consequently, the evaluation of teaching activity is especially relevant for the universities, inasmuch as it helps define efficient plans to guarantee quality. In this paper, an evaluation model of teaching activity based on a numerical index and a series of qualitative reports is presented. These elements consider three evaluation dimensions (planning, development and results) based on the criteria of adequacy, satisfaction, efficiency, and predisposition to teaching innovation. The objectives of the model are: improvement in the quality of the teaching-learning process, the recognition of teaching activity and the design of educational policies at an institutional level.

## **1. Introduction**

In the European Higher Education Area there has been a marked trend to improve the quality of the programmes and courses that universities offer. Statements issued by the European ministers who signed the Bologna Declaration have been directed at assuring and demonstrating the quality of the educational offer in the face of a fast growing, international demand for higher education, which calls for ever greater investment.

Nowadays, universities are assuming greater responsibility for contracting and controlling their teaching staff, consequently, they need to develop procedures for the evaluation of their performance, training and stimulus, thus guaranteeing their professional skills and teaching competence. The evaluation of teaching activity is especially important for universities, as guaranteeing the quality of their studies means assuring not only the professional skills of their teaching staff but also the quality of the teaching-learning.

It is understood that the teaching activity which is the object of evaluation is the teaching-learning process as a whole, carried out both inside and outside the classroom, and which aids students' learning with respect to the objectives and aptitudes defined in study curricula. Teaching activity implies the coordination and management of teaching, the deployment of teaching methods, learning and evaluation activities, and finally the later revision and improvement of the procedures carried out. Consequently, the staff's teaching activity implies different procedures aimed at organizing, coordinating, planning and teaching the students, as well as evaluating their learning. These procedures are deployed in response to the training objectives and competences that are intended to be developed by students. An evaluation of teaching activity must take into account all of the procedures carried out and evaluate their magnitude and quality, quantitatively and qualitatively (Aleamoni, 1999) (Beran y Violato, 2005) (Centra, 1993).

The evaluation of teaching activity is understood to be an internal evaluation that the university carries out on its teaching staff to guarantee that teaching objectives are met. This evaluation is based on a desire to engender an organizational culture based principally on dedication and its members' accomplishments (Schmeiser y Welch, 2006).

In the process of assurance and improvement in the quality of teaching, the Valencia University of Technology (UPV) in Spain, decided to participate in DOCENTIA (Support Program for the Evaluation of Teaching Activity) of the National Agency of the Evaluation of Quality and Accreditation (ANECA). The fruit of this participation is the model developed by the UPV for the evaluation of the teaching staff's activities. It considers the planning, development and results of teaching, encompassing all the UPV's teaching staff, with an obligatory character and annual periodicity.

## 2. Reference Framework

The evaluation model presented in this work is on one hand, based on European and national recommendations and guidelines and on the other, on the institutional policies for the evaluation of teaching staff at the university where it was developed.

### International

- The document "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ENQA, 2005) drafted by the European Association for Quality Assurance in Higher Education (ENQA) establishes in section 1.4 concerning the quality assurance of teaching staff that, "Institutions should have ways of satisfying themselves that staff involved with the teaching of students are qualified and competent to do so. They should be available to those undertaking external reviews, and commented upon in reports."

### National

- The Spanish Law of Universities (*Ley Orgánica de Universidades* (LOU)), in article 33.3 concerning the function of teaching, establishes that, "The activity and the teaching dedication, as well as the training of teaching staff in Universities are relevant criteria, that should be evaluated to determine their efficiency in the development of their professional activity" (LOU, 2001).
- The Teaching Performance Assessment Programme (DOCENTIA), initiated in 2006 by the National Agency for the Evaluation of Quality and Accreditation (*Agencia Nacional de Evaluación de la Calidad y Acreditación* ANECA) which, "tries to satisfy the demands from the universities and also to provide the educational system with patterns and procedures that ensure teaching quality and foster teachers' development and recognition", as well as, "responding to the requisites of current legislation on the obligation to evaluate teaching, research and managerial activities of university teaching staff" in accordance with the Spanish Law of Universities.

### Institutional Policies

- The UPV's statutes establish in Article 106, "Evaluation of teaching and research staff's activity", "The Governing Council will establish the evaluation criteria for teaching, research and managerial activities of its teaching and research staff, as well as the

minimal activity required, taking the three activities cited into account jointly". (UPV, 2009 ).

- The Strategic Plan UPV 2007-2014, formed by 5 Strategic Focal Points (Training and Learning; Research, Technological Development and Innovation; Social Commitment and Values; People and Organization), 16 Strategic Objectives, 38 Strategic Lines and 52 Plans of Action. One of the plans of action that is being developed, included in the Strategic Focal Point: Training and Learning, has the promotion of teaching excellence as an objective: "To define the indicators of teaching activity according to the existent reference criteria using the revision of the present-day evaluation mechanisms as a starting point" (UPV, 2007).

The model that is described below is based on all of these recommendations, guidelines and reference criteria.

### **3. The model**

The evaluation of teaching activity can be defined as *the systematic evaluation of teaching performance according to the professional role and contribution required to reach the objectives of the course in question taking into consideration the institutional context.*

Teaching activity can be defined as *the group of procedures that are carried out both inside and outside the classroom, destined to favour the learning of the students with respect to the objectives and guidelines defined in the curriculum and a determined institutional context.* Therefore, teaching activity implies the planning and management of teaching, the deployment of teaching methods, learning and evaluation activities, and finally the revision and improvement of the procedures carried out.

The staff's teaching activity implies different procedures aimed at organizing, coordinating, planning and teaching the students, as well as evaluating their learning. These procedures are deployed in response to the teaching objectives and guidelines that are designed to aid the students. Therefore, the evaluation of teaching activity must recognize the group of procedures that the teacher develops as his professional duty (quantitative dimension), but also include the global evaluation of such activity relating to the objectives of the qualifications of the awarding institution (qualitative dimension).

In order to evaluate the teaching activity of the UPV's teaching staff quantitatively a parameter that incorporates the different dimensions of the developed teaching activity has been defined. This parameter is called the Teaching Activity Index (TAI) and is evaluated using a point system (TAI points), so that personalized and institutional (centre or department) evaluations can easily be obtained.

Additionally, the result of the evaluation of the staff's teaching activity could be classified into categories through satisfying given standards determined in terms of TAI points.

The proposed TAI point system has two characteristics that should be highlighted:

- a) It is a summative system, which does not a priori limit the number of points that can be gained.
- b) Ordinary activities carried out are recognized via the corresponding TAI points, but the scores obtained can be increased, in terms of the level of results achieved.

The dimensions, criteria and indicators of the evaluation model are established below.

### **Dimensions, criteria and indicators of the model.**

The evaluation model of teaching activity considers three general dimensions for the analysis and evaluation of the teaching staff's performance:

- Planning
- Development
- Results

The teaching activity evaluation criteria that underlie the evaluation model are:

1. **Adequacy:** The teaching activity must respond to the requisites established by the university and the centre concerned, in relation to the organization, planning, and development of the teaching and the evaluation of student learning. Such requisites must be aligned with the teaching objectives and guidelines included in the curriculum and with the institution's objectives.
2. **Satisfaction:** The teaching activity must generate a favourable opinion from the rest of the agents implied, especially students, colleagues and academic heads.
3. **Efficiency:** Considering the resources at the teacher's disposition, teaching activity must foster the attainment of the anticipated results, in terms of the objectives and guidelines outlined in the curriculum.
4. **Predisposition to innovation in teaching:** teaching activity must include a point of view that favours the training of the teaching staff through self-training or training regulated by other authorities. It should be developed from a predisposition to introduce changes that improve the teaching-learning process and, therefore, influence the manner in which teaching is planned and developed or results are evaluated.

In order to respond to these criteria, a group of indicators have been established in each of the dimensions considered that reflect the different aspects of teaching activity correlated to each of them. The indicators considered are described in section 4.

### **Objectives of the model**

The objective of the teaching evaluation model proposed is to provide the university with a tool to measure teaching activity and a system of evaluation that means:

- Improvement in the quality of teaching
- Acknowledgment of teaching activity
- Design of training programs and innovation in teaching
- Use as a tool to introduce elements of objectivity, equity and transparency in the definition and fulfilment of the teaching staff's policies, such as training or promotion, and especially in all of the processes that require an evaluation of the teaching activity of the staff and academic units.

- Having quantitative indicators of teaching activity comparable to the system of indicators of research activity, that will, together with the indicator of management activities, permit integration into a general indicator of the academic personnel's activity.
- Assigning economic resources and paying incentive bonuses.

### **Elements**

The evaluation model is comprised of quantitative evaluation with TAI and qualitative evaluation through reports.

- Quantitative evaluation of teaching activity (TAI): is the numerical value calculated with the measurement system explained in the following section, taking into account institutional data bases, information provided by the teacher and student opinion questionnaires.
- Qualitative evaluation through reports:
  - o Teacher self-report: once the TAI value is obtained, the teacher has the opportunity to carry out a qualitative personal evaluation of his teaching performance to complement the quantitative evaluation.
  - o Report by the academic heads of departments and centres. The academic heads of departments and centres in which the teacher carries out his activity can provide an evaluation report.

### **The evaluation process**

The process begins with the calculation of the TAI score for all of the teachers. This process is carried out automatically using the information available in the institutional data bases. The teacher can see a detailed report of his evaluation through a computer application, with the possibility to add missing information or correct any errors. Once this process is finished and the definitive evaluation is obtained, the report stage is initiated: self-reports and reports from the academic heads of departments and centres. This process is also computerized.

A Teaching Evaluation Committee is assigned to manage this process, appraise each teacher's results and make decisions. This committee issues the Initial Evaluation Report starting with the numerical value obtained in the TAI and the reports from the teacher and academic heads. From the analysis and evaluation of these sources a personalized global evaluation is given (*very favourable, favourable, or unfavourable*). After informing the applicant of the resolution of the teaching evaluation process, he has two weeks to request a revision of the evaluation carried out. Once any appeals have been resolved, the Committee issues the Annual Report.

### **Consequences and decisions resulting from the measurement of teaching activity**

The teaching activity measurement model has been designed to provide relevant information to different groups: teachers, managers and university management. On the basis of the results obtained a series of decisions have been taken and future actions have been planned. These will now be briefly described.

- In line with the criteria of the European Association for Quality Assurance in Higher Education (ENQA) the UPV provides teachers with opportunities to improve their abilities through the design of individualized Improvement Plans, adapted to the needs detected and in terms of the dimension requiring improvement (Planning, Development or Results). These plans establish needs for specific training, proposals

for the application of innovative teaching methods, etc. The Teaching Evaluation Committee carries out the monitoring of the different actions designed in the Improvement Plans that result from the teaching evaluation.

- The data from the measurement of TAI provides a clear image of the situation of the teaching activity of the UPV's teaching staff. This information is available, at different levels, to university managers and to the members of the management team, being a useful tool in the design of policies, motivation for determined activities related to teaching and the implementation of improvement plans.
- The results obtained in the teaching activity indices and also in an equivalent system which the university has at its disposal to measure research activity, are used to award economic bonuses to the teaching staff.
- The satisfactory development of teaching activities for five years constitutes recognition at a curricular level. The system of indicators and the teaching activity index is used for the awarding of these merits.

#### **4. Way of measuring**

In response to the criteria presented, a group of indicators that reflect the different aspects of teaching activity associated with each of the three dimensions envisaged has been established. Each of the indicators is evaluated in TAI points, calculated in terms of the activities covered by the indicator. The detailed evaluation in points for each indicator can be found at [http://www.upv.es/entidades/VCEAA/menu\\_722363c.html](http://www.upv.es/entidades/VCEAA/menu_722363c.html).

##### **1. Planning:**

1.1. Training: This indicator reflects the preparation of the teacher to deal with his teaching activity, by means of training activities, in pedagogic and educationally innovation terms as well as relating to the subjects taught and with the experience of the teacher acknowledged by the student questionnaires. This indicator is indexed to a period of five academic courses.

Over the period of five academic courses a total of 600 hours of participation in training activities is considered to be adequate (120 hours annually). The teacher's experience is considered to be accredited with a result above 6 out of 10 points in the student questionnaires.

1.2. Curriculum: This indicator refers to publication in the web of the curriculum for each subject taught. In which the organization and planning of teaching-learning is outlined.

1.3. Posting information about tutorials and study groups: This indicator is basic for the students, who need to know about the types and times of their tutor's study groups and tutorials, as well as the teachers that teach the different courses, before the start of the academic course.

1.4. Teaching material: This indicator reflects the teacher's activity in relation to the production of teaching materials and resources. It includes teaching publications and e-materials.

$TAI_p$  = sum of the points obtained in the four sections of the dimension.

2. Teaching Development: Teaching Development is assessed in terms of number of hours, which are then converted to TAI points, with 25 hours corresponding to 1 TAI point.

2.1. Teaching delivered: This indicator totals the number of hours of teaching delivered by the teacher in the subjects imparted, taking into account the experience acquired in each of them according to the year of delivery (first year, second or third and so on, equalling of 40, 30 and 20 hours respectively). If teaching is given in Valencian, English or another foreign language the number of corresponding hours is multiplied by 1.5.

2.2. Tutorials carried out: This indicator reflects the number of hours the teacher devotes to tutorials.

2.3. Evaluation: This indicator reflects the activity of the teacher in relation to the evaluation tasks or actions realized.

2.4 Other teaching activities: This indicator includes all of the other teaching-type activities that the teacher realizes in the performance of his functions that are not necessarily directly related to the subjects imparted. Among others, the following are considered: supervision of final projects, doctoral theses, membership of academic boards, participation in teaching improvement and renewal activities in other universities, teaching in other universities...

$TAI_D$  = sum of the points obtained in the four sections of the dimension

### 3. Results

3.1. Student opinion questionnaire on the teaching performance ( $K_1$ ): This indicator considers the opinion of the students on the teacher's performance, especially in those aspects relating to the development of teaching; given that it is in this dimension that teacher-student interaction occurs, permitting a more fundamental opinion.

3.2. Academic performance ( $K_2$ ): This indicator reflects the degree to which teaching objectives are satisfied on the part of the students in a determined subject of study, in the context of the awarding of qualifications, in the course, and in the type of subject (core, obligatory, optional).

3.3. Fulfilment of tutorials ( $K_3$ ): This indicator reflects the fulfilment of the tutorial schedule on the part of the teacher during the academic course.

3.4. Meeting grade report deadlines ( $K_4$ ): This indicator reflects the fulfilment of established deadlines for the delivery of grade reports.

$$K_{res} = 0,60 \cdot K_1 + 0,30 \cdot K_2 + 0,05 \cdot K_3 + 0,05 \cdot K_4$$

The result indicators have an overall multiplier effect on the weighted value obtained in the two previous indicators:

$$TAI_x = (0.30 \cdot TAI_p + 0.70 \cdot TAI_D) \cdot K_{res}$$

Where the x indicates the year of evaluation

The personalized evaluation of teaching activity for the year is obtained by weighting the index of teaching activity in the last four years, according to the following expression:

$$TAI = TAI_x + 0.75 \cdot TAI_{x-1} + 0.50 \cdot TAI_{x-2} + 0.25 \cdot TAI_{x-3}$$

## 5. Conclusions

In this paper a model has been presented for the evaluation of teaching activity based on international recommendations in a national and institutional context. The evaluation model is complete, precise, adequate, universal and easy to measure.

Evaluation models of teaching activity, such as the one presented are extremely useful tools for university managers to control the quality of teaching and to design continuous improvement plans. On the other hand, the increasing need to design acknowledgement plans for the teaching staff's activities means that the application of models such as this one is increasingly necessary.

Finally, it should be noted that the use of teaching activity evaluation systems leads the teaching staff to increasingly take into account the criteria that these systems consider. In this way the teaching staff is encouraged to reflect on adequacy, satisfaction, efficiency and innovation in teaching, creating a quality culture with regard to teaching activity.

## 6. References

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