AN EVALUATION MODEL OF THE TEACHING ACTIVITY OF ACADEMIC STAFF

UPV CASE (Valencia University of Technology)

J.J. Cano-Hurtado
J.M. Carot-Sierra*
M.A. Fernández-Prada
F. Fargueta

Conference on Quality of teaching in higher education. Istanbul. 12-13 October 2009
THE MODEL

UPV- Valencia University of Technology

Criteria

- Adequacy
- Satisfaction
- Efficiency
- Predisposition to innovation in teaching

Dimensions

- Planning
- Development
- Results
**THE MODEL: OBJECTIVE**

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
- Having quantitative indicators of teaching activity for integration into a general indicator of the academic personnel's activity.
- Assigning economic resources and paying incentive bonuses.
THE MODEL: ELEMENTS

- **Quantitative evaluation of teaching activity (TAI):**
  is the numerical value calculated taking into account institutional data bases, information provided by the teachers and student opinion questionnaires.

- **Qualitative evaluation through reports:**
  - **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.
  - **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 MODEL: PROCESS**

- TAI
- Reports
- Teaching Evaluation Committee
- Global evaluation
THE MODEL: CONSEQUENCES

- 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 (P-D-R)
- The data from the measurement of TAI provides a clear image of the situation of the teaching activity of the UPV's teaching staff
- The results obtained in the TAI 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
- In a collateral way, the concern of the teaching staff to pay more attention to these aspects
THE WAY OF MEASURE

Planning → Teaching Development → Results

http://www.upv.es/entidades/VCEAA/menu_722363c.html
THE WAY OF MEASURE: PLANNING

- Training
- Curriculum
- Posting information about tutorials and study groups
- Teaching material

\[ TAI_P = \text{sum of the points obtained in the four sections of the dimension} \]

http://www.upv.es/entidades/VCEAA/menu_722363c.html
**THE WAY OF MEASURE: PLANNING**

- Training
- Curriculum
- Posting information about tutorials and study groups
- Teaching material

Preparation of the teacher to deal with his teaching activity, by means of training activities, in pedagogic and educationally innovation terms

\[ TAI_P = \text{sum of the points obtained in the four sections of the dimension} \]

http://www.upv.es/entidades/VCEAA/menu_722363c.html
THE WAY OF MEASURE: PLANNING

- Training
- Curriculum
- Posting information about tutorials and study groups
- Teaching material

This indicator refers to publication in the web of the curriculum for each subject taught

\[
\text{TAI}_P = \text{sum of the points obtained in the four sections of the dimension}
\]

http://www.upv.es/entidades/VCEAA/menu_722363c.html
THE WAY OF MEASURE: PLANNING

- Training
- Curriculum
- Posting information about tutorials and study groups
- Teaching material

$$TAI_p = \text{sum of the points obtained in the four sections of the dimension}$$

http://www.upv.es/entidades/VCEAA/menu_722363c.html
THE WAY OF MEASURE: Teaching development

- Teaching delivered
- Tutorial carried out
- Evaluation
- Other teaching activities

\[ TAI_D = \text{sum of the points obtained in the four sections of the dimension} \]
THE WAY OF MEASURE: Teaching development

- Teaching delivered
- Tutorial carried out
- Evaluation
- Other teaching activities

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 and the language.

\[ TAI_D = \text{sum of the points obtained in the four sections of the dimension} \]
The way of measure: Teaching development

- Teaching delivered
- Tutorial carried out
- Evaluation
- Other teaching activities

This indicator reflects the number of hours the teacher devotes to tutorials

TAI_D = sum of the points obtained in the four sections of the dimension
The way of measure: Teaching development

- Teaching delivered
- Tutorial carried out
- Evaluation
- Other teaching activities

This indicator reflects the activity of the teacher in relation to the evaluation tasks or actions realised

\[ TAI_D = \text{sum of the points obtained in the four sections of the dimension} \]
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...

\[ TAI_D = \text{sum of the points obtained in the four sections of the dimension} \]
**THE WAY OF MEASURE: RESULTS**

- K1: Student opinion questionnaire on the teacher’s performance
- K2: Academic performance
- K3: Fulfilment of tutorials
- K4: Meeting grade report deadlines

\[
K_{res} = 0.60 \cdot K_1 + 0.30 \cdot K_2 + 0.05 \cdot K_3 + 0.05 \cdot K_4
\]
The way of measure: Results

- 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.

\[ TAI = TAI_x + 0.75 \cdot TAI_{x-1} + 0.50 \cdot TAI_{x-2} + 0.25 \cdot TAI_{x-3} \]
**The way of measure: Sources**

**Planning**
- T
- C
- T
- M

**Teaching Development**
- T
- T
- E
- O

**Results**
- $K_1$
- $K_2$
- $K_3$
- $K_4$
THE IMPLEMENTATION OF THE MODEL

2006

- DOCENTIA

2007

- Feb: Creation of a Committee in order to define a model
- November: approval of the model by the UPV
- December: approval of the model by ANECA

2008

- Measurement of teaching activity during 2007/2008

2009

- Measurement of teaching activity during 2008/2009
The implementation of the model: 07/08

- Only TAI
- The 100% of the faculty was evaluated: 2746 teachers
- 5784 subjects
- An accessible application software was developed through the intranet of every teacher
THE IMPLEMENTATION OF THE MODEL: 07/08

- General results
Global Evaluation

The value obtained in TAI was used to defined three categories

- Very Favourable
- Favourable
- Unfavourable

But TAI depends on the “Teaching Load Duties”

“Teaching load Duties” = (number of credits specified in the contract) – (reductions)
Relation TAI / TLD
Global Evaluation Limits

\[ y = -0.0147x^2 + 2.0846x + 28.458 \]

\[ y = -0.013x^2 + 1.3717x + 5.8678 \]
The implementation of the model: 07/08

Results

<table>
<thead>
<tr>
<th>Global Evaluation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Favourable</td>
<td>12 %</td>
</tr>
<tr>
<td>Favourable</td>
<td>85.5 %</td>
</tr>
<tr>
<td>Unfavourable</td>
<td>2.5 %</td>
</tr>
</tbody>
</table>

Teachers with unfavourable evaluation

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Number</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Part time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASO-3 hours</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>ASO-4 hours</td>
<td>13</td>
<td>61</td>
</tr>
<tr>
<td>ASO-5 hours</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ASO-6 hours</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
Tipology of teachers

- 8 clusters (defined by P/D/R and TLD)
- Plans and decisions for each cluster
Satisfaction survey

P1 I consider necessary to evaluate teaching activity

P2 The computer application to manage the TAI is efficient

P3 It seems appropriate that the results of the evaluation of teaching activity are taken into account for the recognition of specific allowances and incentives

P4 Regardless of the limitations which may affect it, I understand that the evaluation model of UPV teaching activity should be considered as a good model

<table>
<thead>
<tr>
<th></th>
<th>Satisfacción</th>
<th>Actitud</th>
</tr>
</thead>
<tbody>
<tr>
<td>P4</td>
<td></td>
<td>4,66</td>
</tr>
<tr>
<td>P2</td>
<td></td>
<td>4,14</td>
</tr>
<tr>
<td>P3</td>
<td></td>
<td>3,30</td>
</tr>
<tr>
<td>P1</td>
<td></td>
<td>3,28</td>
</tr>
</tbody>
</table>

The Implementation of the Model: 07/08

An Evaluation Model of The Teaching Activity of Academic Staff
THE IMPLEMENTATION OF THE MODEL: 07/08

- **Difficulties**
  - Databases
  - Computer application
  - Solving incidents
  - Validity and Reliability
  - Resistance to the evaluation
THE IMPLEMENTATION OF THE MODEL

Academic year 2008-2009: News

- Limits for some indicators
- Improvement in some indicators definition
- Qualitative reports of academic heads and self-report
- Performance of the Committees:
  - Teaching Evaluation Committee
  - Guarantee Committee
- Use of results for defining policies
CONCLUSIONS

- Evaluation models of teaching activity are extremely **useful tools for university managers** to control the quality of teaching and to design continuous improvement plans.

- 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.

- The use of teaching activity evaluation systems leads the teaching staff to increasingly take into account the criteria that these systems consider (adequacy, satisfaction, efficiency and innovation in teaching) creating a **quality culture** with regard to teaching activity.
AN EVALUATION MODEL OF THE TEACHING ACTIVITY OF ACADEMIC STAFF

UPV CASE (VALENCIA UNIVERSITY OF TECHNOLOGY)

J.J. Cano-Hurtado
J.M. Carot-Sierra*
M.A. Fernández-Prada
F. Fargueta

Conference on Quality of teaching in higher education. Istanbul. 12-13 October 2009