

EDUCATION OFFICIAL DATA UNIVERSITY ASSESSMENT WITHIN THE SCHOOL OF CIVIL ENGINEERING, UNIVERSIDAD NACIONAL DE ROSARIO

PICCO, Alicia María; FERRANDI, María Angélica;
DARUICH, Nora; RITTATORE Ma. Eugenia

Instituto of Transport Research
National University of Rosario,
Argentina

Contact email: aliciapicco@gmail.com

ABSTRACT

Since the 90s, higher education started to be assessed in Latin America as a means to attain quality and excellence, being this considered a public asset, such features have become relevant for the development of qualified professionals and country competitiveness. Information surveys on this subject are mainly performed by institutions which are external to universities or by surveying students, who have become the main assessors. Argentina's Act on higher education, Educación Superior Argentina N° 24.521, defines the mandatory status of internal and external assessments on university education quality, on faculty performance and the excellence of the curricula. In the framework of the Universidad Nacional de Rosario, the School of Civil Engineering of the Exact Sciences, Engineering and Surveying College) (Escuela de Ingeniería Civil de la Facultad de Ciencias Exactas, Ingeniería y Agrimensura) has set up a Commission for Curricula Traceability, for which an assessment is in progress.

INTRODUCTION

Higher education started to be assessed in Latin America as a means to attain quality and excellence, being this considered relevant topics for the development of qualified professionals and country competitiveness. All over the continent, the need for periodic analysis about the quality of teaching has been stated in university policies and bylaws. In some countries, such analyses were set as mandatory, while in others it is voluntary. Information surveys on this subject, which reveal the effective existence of assessment mechanisms, are mainly performed by institutions which are external to universities or by surveying students. Students have become the main assessors, since most of Latin American countries, where the assessment is actually being carried out, it is through them that such information is obtain.

It is vital to take into consideration students' opinions, since they are "potential critics of such activities, being the main affected by teaching consequences and those who set up a daily relationship with the professor, though limited to a short period of contact time (...). Guarantying information confidentiality will be key to obtain significant data from this source." (Lamarra, Coppola, 2008: 144).

There are certain divergences about this topic, since some authors and even educators believe that the student's opinion as the only assessment criterion is not enough. Thus, in certain settings, the educator's opinion and that of the program director's are also surveyed.

Universities are autonomous, i.e., each college has its own standards, bylaws and rules related to calls for professors, promotions, ongoing training, curricula and method of assessment. Therefore, certain differences are seen related to the course appraisal, not only among countries, but also within each country and university.

SITUATION OF UNIVERSITY ASSESSMENT IN ARGENTINA

Argentina's college education is binary and since the early 20th Century it has been formed by two types of institutions: universities and non-university colleges, also called institutions of tertiary level education. Currently, there are 93 universities, out of which 47 are national institutions, 46 are private institutions, 7 are state university institutes, 12 private university institutes, one provincial university (Universidad Autónoma de Entre Ríos), one foreign university (Universidad de Bologna) and another one, which is an international one (FLASCO).

Lately the offer of remote courses has increased; currently, graduate-level, pre graduate-level and pos graduate-level courses as well as professional and pos graduate courses are available. In Argentina, there are 21 universities and public institutes, and 16 private institutions offering this type of studies. Argentina's Act on higher education, Educación Superior Argentina N° 24.521, is the first act that covers both university and non-university institutions, and defines the mandatory status of internal and external assessments on university education quality, on faculty performance and the excellence of the curricula.

In the early 90s, the national government proposed the inclusion of new university management and policy criteria, including, among them, assessment and certification. Between 1993 and 1994, 16 universities signed an agreement with the Ministry of Education to carry out institutional assessment procedures, supported by the Ministry. The Consejo Nacional de Educación Superior (National Board of Higher Education) was created. It was formed by people with academic and scientific backgrounds, highly experienced, whose main role was submitting proposals, suggestions and advice about topics that enhance higher education systematically. In December 1993, the Ministry and the National Interuniversity Board (Consejo Interuniversitario Nacional) signed an act-agreement whereby criteria for creating a body dedicated to university-level institutional assessment were defined. Such agreement was approved when the Ley de Educación Superior was passed in 1995, and gave birth to the CONEAU (Comisión Nacional de Evaluación y Acreditación Universitaria, National Commission for University Assessment and Certification), as the body responsible for university assessment and certification procedures.

The main roles of the CONEAU include:

- to coordinate and carry out external assessment of university institutions, with the involvement of well-known academic peers.
- to grant credit to those grade-level courses of State-regulated professions.
- to grant credit to postgraduate courses, either specialization courses, masters or doctorates.
- to provide an opinion on the consistency and feasibility of the institutional project required to obtain authorization from the Ministry of Education to launch a new national university institution after its legal creation by the National Lower House (Congreso Nacional) or the recognition of a provincial institution.
- to prepare the required reports to grant or decline temporary authorization and permanent recognition to private university institutions, as well as the reports upon which such institutions' temporary operating period is assessed on an annually basis.
- to provide with an opinion on the proposals for the creation of private entities dedicated to university assessment and certification before the Ministry of Education makes a decision on such issue.

Academic excellence assessment has been performed since 1996 in the country, mainly through the CONEAU. Also by private bodies, as authorized by the Act on Higher Education. Such Act states under section 44 that "university institutions should guarantee the execution of internal institutional assessment efforts, aimed at analyzing achievements and areas for improvement regarding the fulfillment of their roles, as well as suggesting measures for improvement. Self-assessments should be complemented with external assessments, carried out at least every six years, in accordance with the goals set by each institution. It will cover the roles of teaching, researching and outreach, and, in the case of national university institutions, institutional management will also be included." The Act also states that the guidelines for institutional improvement derived from such assessments will be public in nature.

The peer-drafted external assessment report is analyzed by the CONEAU -- which usually requires explanations, elaboration or clarifications -- and then is sent for consultation to the institution's dean, for adding the directions or corrections he/she deems necessary. Upon receipt, the CONEAU prepares the final copy and submit it to the dean for his/her opinion, which is published along with the external assessment report.

The university autonomy enables each Higher Education Institution to choose the method of assessment to adopt. In most faculties in Argentina, assessment is student-oriented, and it probes for information related to the knowledge of the subject, the quality of explanations, the educator's performance, enthusiasm, class structure, interaction with students, learning materials used, method of teaching and the assessment system adopted for the subject.

UNIVERSITY ASSESSMENT WITHIN THE SCHOOL OF CIVIL ENGINEERING

Within the above mentioned institution, particularly within the School of Civil Engineering (Escuela de Ingeniería Civil), an internal assessment is carried out regularly by implementing an anonymous survey among students.

A Commission for Civil Engineering Curricula Traceability (Comisión de Seguimiento del Plan de Estudios de Ingeniería Civil) has been set up for tracking and curricula assessment purposes. Among the tasks assigned, the Commission defined 4 key issues:

1. Why should we assess? To improve the quality of study materials, of teaching practices and of interactions (students-educators; students-students), and of available tools.
2. What should be assessed? Study materials, educators' performance and teaching process
3. When should the assessment be carried out? It is performed after completing and passing the subject. Thus, students' opinions based on their experience can be gathered, and a course dynamics analysis can be performed.
4. How should the assessment be carried out? The model used is a training-based one, intended to generate reflexive processes for improvement and ongoing development in terms of study materials, interactions and method of delivery.

Survey-based Goals

As a general goal, the internal assessment survey, which is focused on faculty and curricula and student-oriented, is to enhance academic performance quality at the Civil Engineering School.

Specific Goals

The following are the specific goals for survey implementation:

- To determine the amount of years the student stays within the university.
- To know the socio-economic and cultural features of the students.
- To identify their viewpoints and opinions related to the different subjects included in the curriculum.
- To assess the faculty performance both during theory-based classes and practice-based classes.
- To analyze the quality of the study materials used for each subject.
- To identify problems and difficulties that students may face regarding the contents of the different subjects.
- To know the required schedule or time demand apart from the time spent attending the course.
- To improve some of the curriculum subjects.

INFORMATION SURVEYING TOOLS - PROBING FOR OPINION

Students-oriented opinion surveys are used. Information is required about professors at the School and about all the subjects they teach. The informants are the students. Opinion should be probed from as many of them as possible, so no sampling will be designed. The survey should be carried out at times when they are attending classes so as to get as much involvement as possible.

Target Population

All informants are students attending classes at the time the questionnaire is carried out and willing to respond.

Survey Variables

The survey was divided into 3 sets of questions, each set with particular variables to analyze:

Background information:

- Turnaround time
- Year of entry
- Age
- Gender
- Hours worked
- Hours dedicated to sports or cultural activities
- Hours dedicated to studying each week
- Subjects attended and approved
- Subjects attended and not approved

Information about the Subject attended and approved during the previous semester

- Subject
- Educators
- Clarity of delivery during theory-based classes
- Are practice assignments useful?
- Practice-theory coordination
- Is attention to consultations appropriate?
- Clarity of class notes
- Study material available at the Library
- Learning of key concepts
- Topics' difficulty
- Reason for difficulty
- Hours dedicated to the subject each week
- Level of effort and reward based on the knowledge acquired
- Level of effort and reward based on gradings obtained

Student's contribution to introduce positive changes into subsequent courses

- Course aspects to improve or mirror

Methods

A qualitative and quantitative analysis of the topic is carried out. To survey qualitative information a search for available material is carried out, such as bibliography and articles, about university assessment in different parts of the world, with special focus on Argentinean universities. For quantitative research, a test of proportion comparison is performed.

Questions under analysis

The following variables related to professors' assessment are analyzed:

- ✓ *Clarity of delivery*
- ✓ *Are practice assignments useful?*
- ✓ *Practice-theory coordination*
- ✓ *Clarity of notes*
- ✓ *Attention to consultations*

OUTCOME

The outcome of the student-oriented surveys showed:

- The proportions for the answers “always” from the group interviewed in the first semester of 2011 versus the group interviewed in the second semester of 2012 show a highly significant difference in both groups for the first 4 variables.
- Regarding the question about attention to consultations, there were no significant differences, but we can assume the proportion of students who answered "always" was satisfactory for the interview carried out in the first semester of 2011.

Based on this analysis, we can conclude that professors' job improved for various courses regarding the analyzed variables.

Regarding the number of hours spent studying outside the class schedule, the chart in Figure 1 shows that on average students needed longer studying hours in 2012 compared to 2011 to pass the same number of subjects.

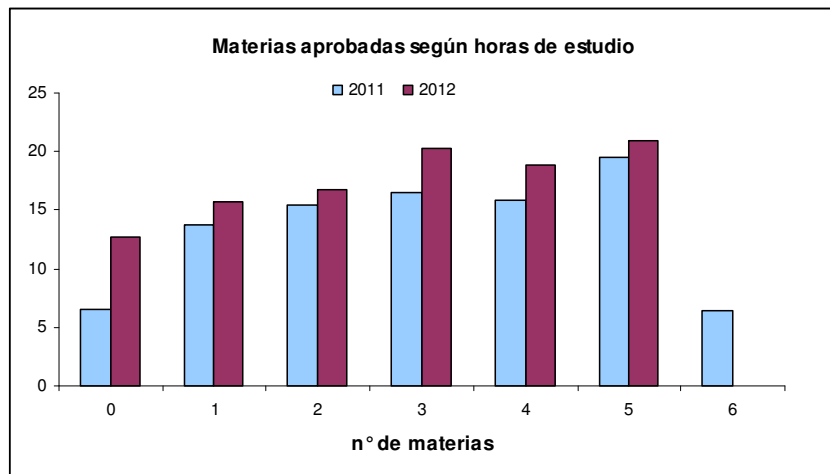


Figure 1 Subjects approved based on hours of studying

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