



Agència
per a la Qualitat
del Sistema Universitari
de Catalunya

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A proposal for a Performance Indicator Model for the Spanish Higher Education System

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Comparative analysis of PI models

Lessons learned from our research

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System



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Introduction

Pool of indicators

Rankings

{ Done by journals, newspapers...
Used by prospective students

PI

{ Done by governments, quality
assurance agencies..
Funding and quality assessment
purposes

Do they inform us about the quality of HE
programs/institutions?

Introduction

Performance indicators vs rankings

- They neither weight nor aggregate individual indicator scores
- They do not offer a single overall hierarchy
- They take into account the discipline and the university
- They have different indicators according to different policies
- They face the same problems as ranking regarding validity and reliability of its indicators: many PIs focus solely on resources, although performance should be assessed by comparing outputs and effects with inputs (Jongbloed, 1994)

Introduction

Factors that are beyond the control of institution (age, gender, ratio teacher/student...)

Factors that are not beyond the control of institution (student support, quality of teaching process...)

PROGRAM / INSTITUTIONAL
OUTCOMES

Personal: student satisfaction, learning and cognitive development, generic skills...

Academic: drop-out rates, progress rates, graduation rates, record average, credentials awarded....

Professional: employment, salary, satisfaction...



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Comparative analysis

	HESA (UK)	DEST (Aus)	HSE (Swe)	NCHE MS (US)	UNEIX (Sp)
INPUT					
Students – gender and age	X	X	X	X	X
Students - origin (foreigners/ethnic group)	X	X	X		
Students – social class (socio-economic status)	X	X	X	X	
Student quality: qualifying grade, way of access, etc.		X			X
Affordability				X	
Total expenditure		X	X		
Teachers: no. of teaching and research staff, gender and others characteristics		X	X		X



Comparative analysis

	HESA (UK)	DEST (Aus)	HSE (Swe)	NCHE MS (US)	UNEIX (Sp)
PROCESS					
Student-staff ratio		X			
Full-time students	X	X	X		X
Teaching quality		X			

Comparative analysis

	HESA (UK)	DEST (Aus)	HSE (Swe)	NCHE MS (US)	UNEIX (Sp)
OUTPUTS					
Personal					
Student satisfaction (overall)		X			
Generic skills		X			
Academic					
Drop-out rates	X	X		X	X
Progress rates		X			X
Graduation rates	X			X	X
Quality: degrees and credentials awarded				X	
Professional					
Graduate salary		X			
Graduate full-time employment / % employment	X	X			
Employment quality index (EQI)					X



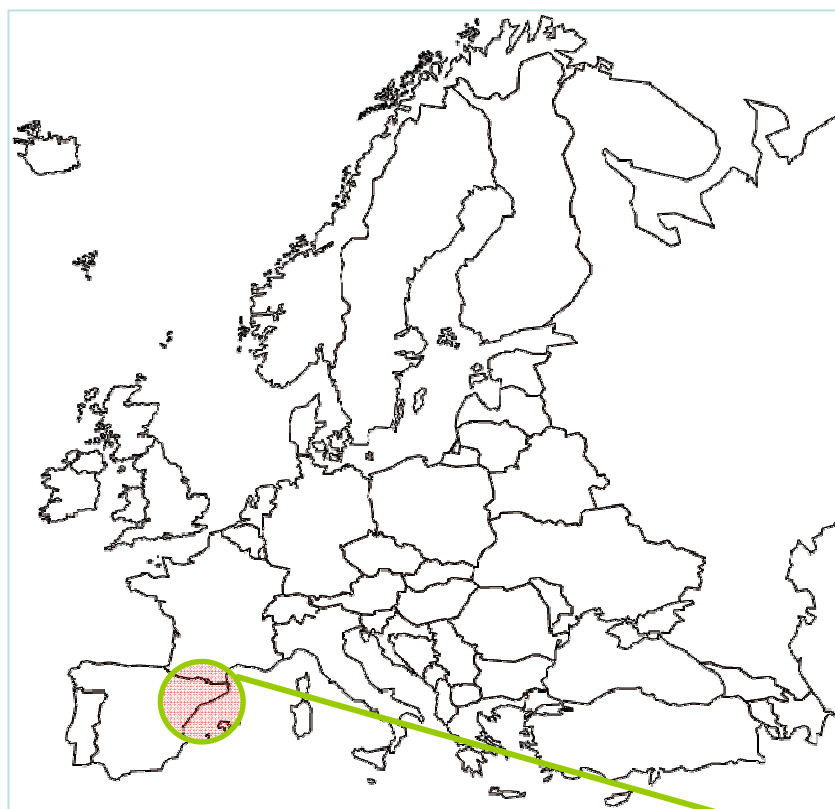
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How does work the
relationship between inputs
and outputs?



Lessons learned of our
research

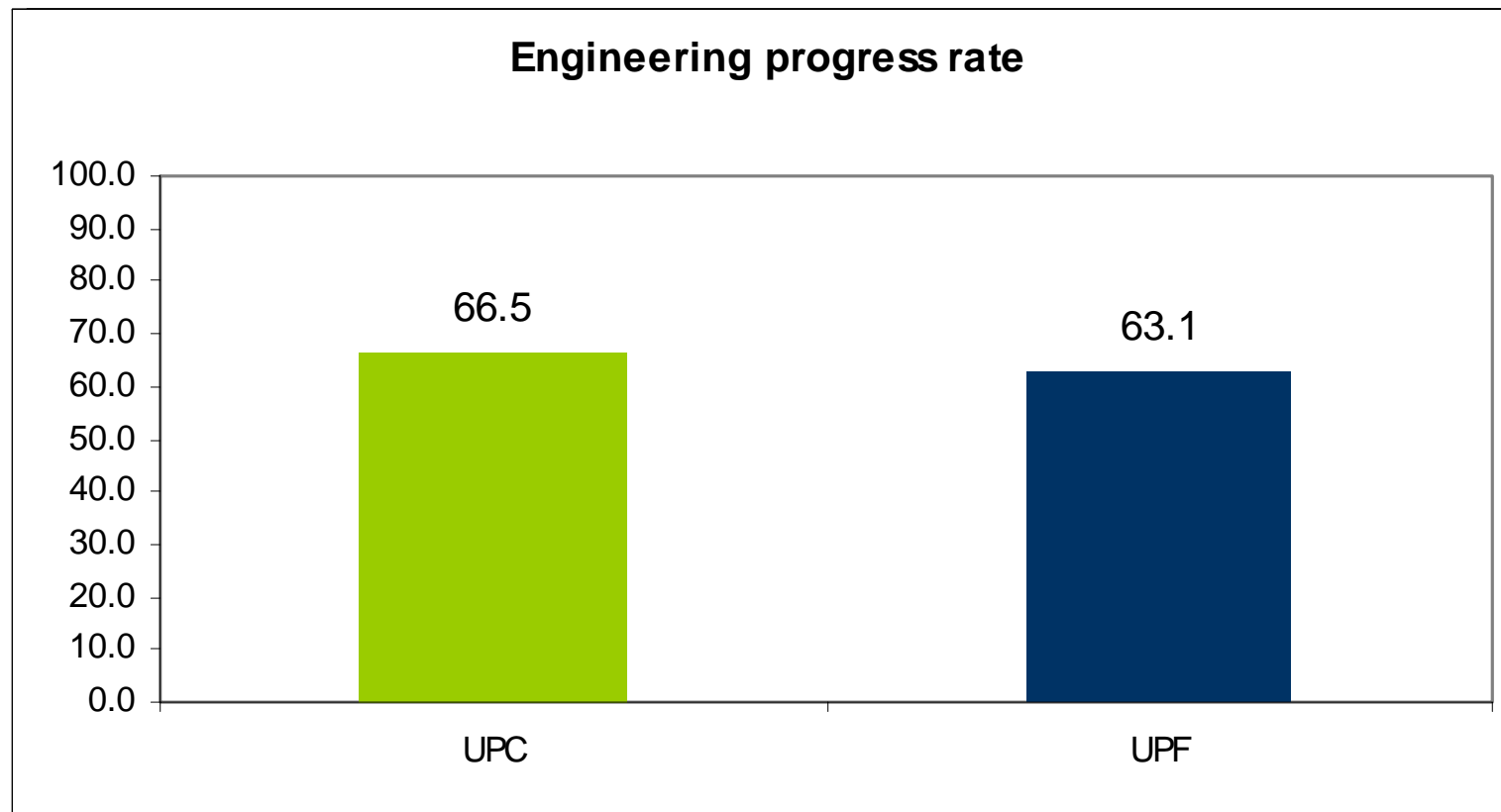
CHARACTERISTICS OF UNEIX



- Includes figures from the 7 public universities of Catalunya
- Indicators definition and calculation methods stem from an agreed glossary developed jointly with the universities
- From 2000-01
- Each year universities send information from all the students who are enrolled (+/- 130.000 students)

Lessons learned (I)

It is incorrect to use global indicators according to universities



Lessons learned (II)

Quality of student income (grades, way of access) may not be related with outcomes

Progress rate: this is defined as the percentage rate of credits that the student obtains out of the total number in which he/she enrolls for.

- There has not been found any relationship between the progress rate and the entry qualifying grade, or between the progress rate and the way of access. So, the quality of incoming students does not affect the progress efficiency.
- The progress rate gives no information on the quality of student progress, but on efficiency in the enrolment strategy.



Is this indicator useful?



Yes, from an economic point of view

The progress rate is an indicator which has economic implications: the lower the progress rate, the more inefficient the system as it comes out of both the student's own pocket and that of the state

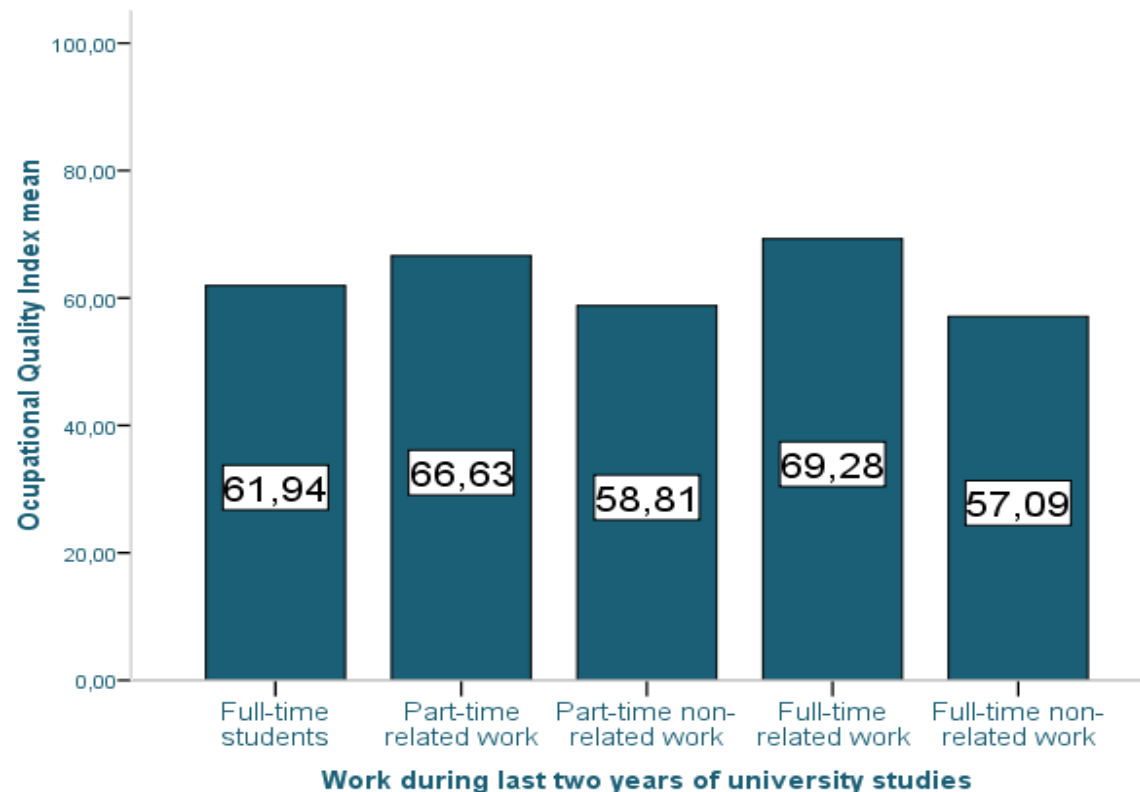


Not much from a quality assurance point of view

Lessons learned (III)

Outcomes may go in opposite directions!

Mean duration of studies, graduation rates and progress rates, may benefit from full-time students, but not the employment quality index



Lessons learned (IV)

Differences between universities are difficult to interpret

University seems to be a determining factor in progress rates; for example, the differences in progress rate range from 93.9% to 62% in Experimental Sciences.

These differences are difficult to interpret, however, because there are other significant differences between universities, such as the entry qualifying grade or the parents' level of studies.



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The proposal

Outcome indicators	Differential variables
<ol style="list-style-type: none"> 1. Progress rate of first academic year 2. Progress rate 3. Mean duration of studies 4. Graduation rate 5. Drop-out rate without re-entry and with re-entry (change, mobility and breaking off) 6. Student record average 7. Employment quality index 8. Student satisfaction 	<p>Gender</p> <p>Parents' level of studies and profession</p> <p>Ethnic/cultural origin</p> <p>Age (mature student group)</p> <p>Entry qualifying grade</p> <p>Way of access and pre-university secondary education courses (<i>batxillerat</i>)</p> <p>Student type (full/part-time)</p> <p>Discipline</p> <p>University</p>



The proposal

Outcome indicators	Differential variables
1. Progress rate of first academic year	Gender
2. Progress rate	Parents' level of studies and profession
3. Mean duration of studies	Ethnic/cultural origin
4. Graduation rate	Age (mature student group)
5. Drop-out rate without re-entry and with re-entry (change, mobility and breaking off)	Entry qualifying grade
6. Student record average	Way of access and pre-university secondary education courses (<i>batxillerat</i>)
7. Employment quality index	Student type (full/part-time)
8. Student satisfaction	Discipline
	University



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The pilot study was made possible by data provided by the Government of Catalonia's Commission for Universities and Research.

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Quality, the assurance of improvement.

Thank you for your attention



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Input – Environment- Outcome Model

INPUTS

Demographic characteristics
Family background
Personal characteristics (skills, abilities, attitudes..)
Academic background

Structural/organizational Characteristics of Institutions

- Faculty-student ratio
- % residential
-

ENVIRONMENT

Institutional culture

Academic integration

Teaching and learning activities

Social integration

Experiences outside of the classroom (part-time work, social activities...)

OUTCOMES

Departure decision (dropout rates), length of studies, progress rates...

Learning and cognitive development

Professional outcomes