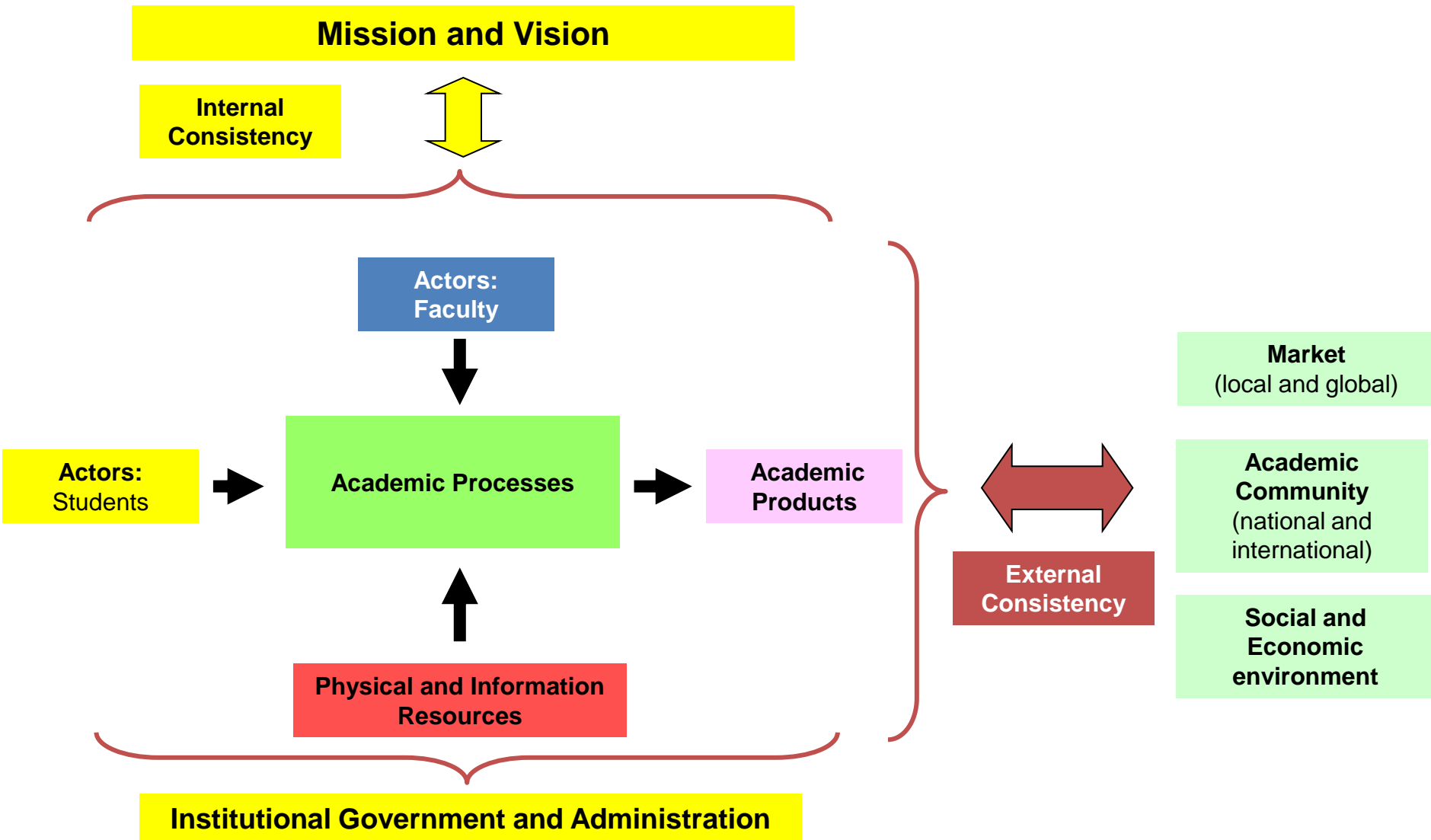


# Resources vs. Processes in Quality Management

José Rafael Toro  
Universidad de los Andes  
Bogota, Colombia  
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# Components of HEI and Quality Definition



# Quality Factors

System components which can affect quality in a significant way once they are affected

## Faculty

- Faculty size and qualification
- Faculty academic production
- Appropriate working conditions:
  - .Competitive salaries
  - .Transparent evaluation procedures
  - .Adequate and balanced incentives for research and teaching

## Curricula

- Appropriate curricula for offered programs.
- Programs aligned with professional market
- Programs aligned with Mission Statement
- Alignment of learning outcomes and competences with required professional profile

## Students

- Quality of high school education
- Admission procedures
- Capacity of students for self regulated study previous to admission.
- Engagement of students with academic activities previous to admission.

## Resources

- Appropriate physical and information resources.
- Use of physical resources which contribute to significant learning of students.

**Level 0 factors :** Concentrate the attention of quality processes in the initial stages, but they can turn up to be the only matter of attention in long term quality processes.

**Level 1 factors :** Not considered explicitly in short term quality plans

## Faculty

- Evaluation procedures aligned with expected learning outcomes
- Alignment of teaching processes with learning categories of a given course.

## Curricula

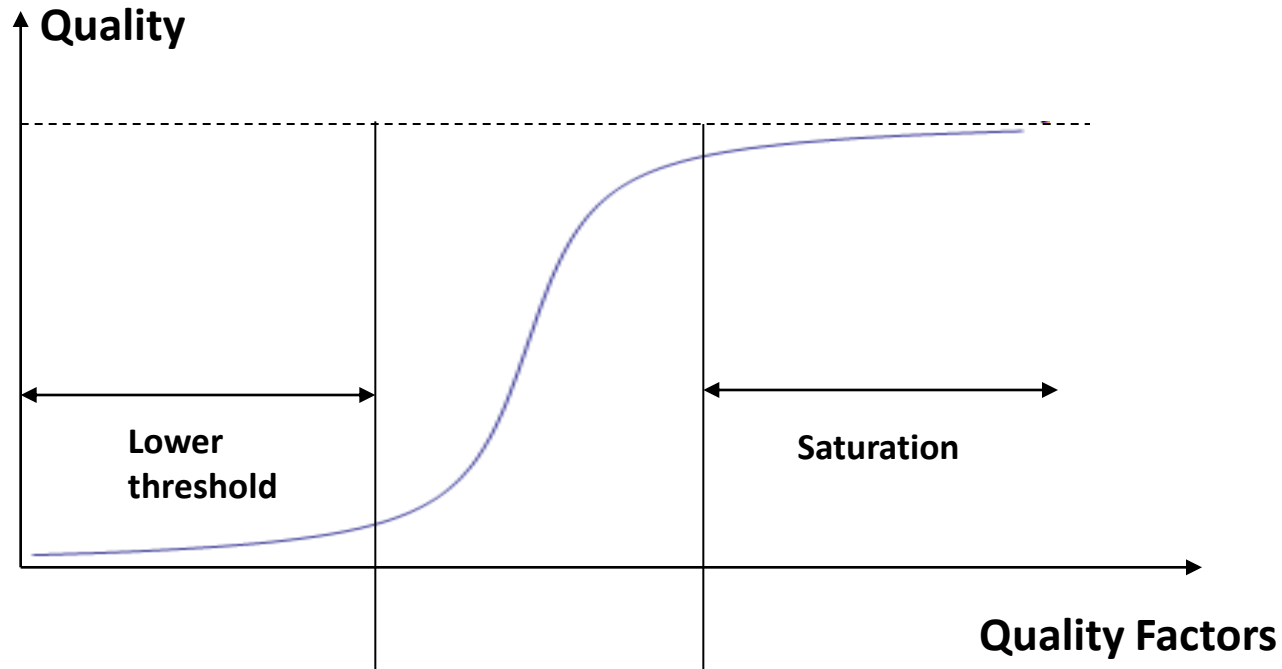
- Alignment of physical and information resources with proposed learning categories and learning outcomes

- Characteristics of classroom activities
- Characteristics of homework activities
- Self-regulated learning capacities of students.
- Engagement of students with academic activities.

## Students

## Resources

## Law of diminishing returns in education

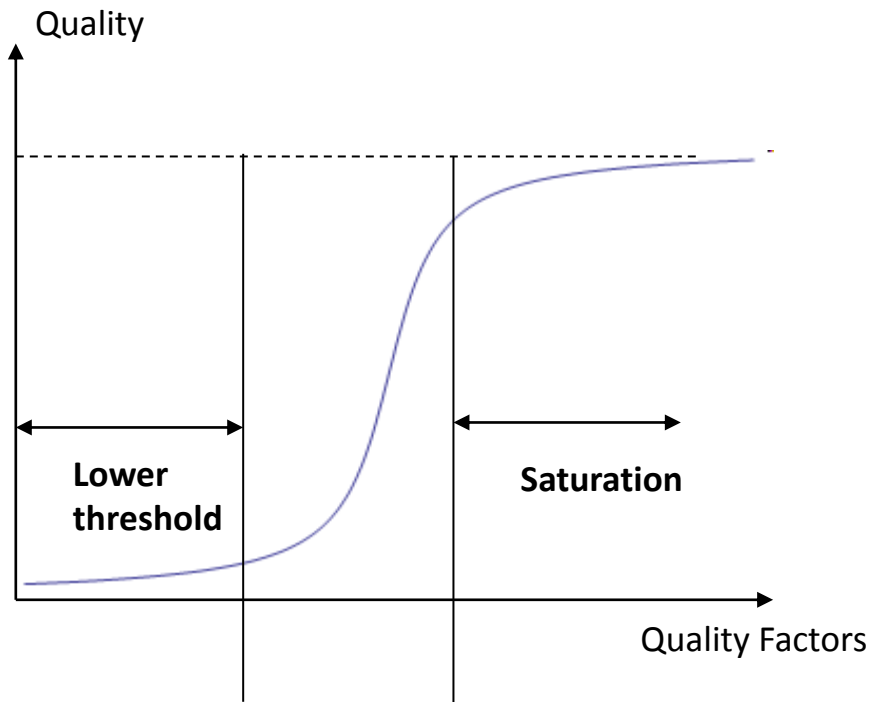


-For quality factors under certain thresholds, no satisfactory quality levels can be achieved.

-Above certain levels of saturation of quality factors, no substantial increase in quality can be achieved .

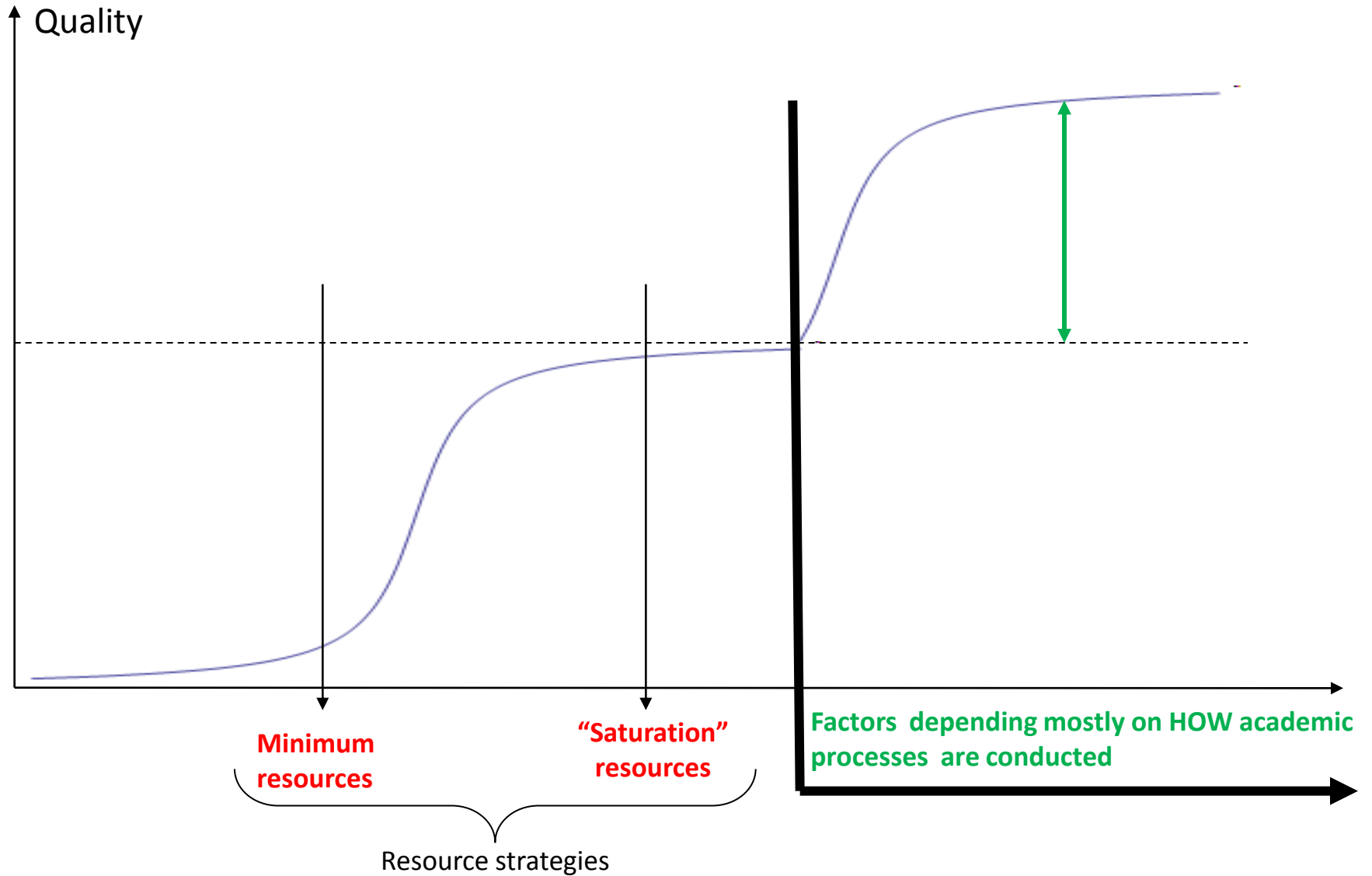
*Investment below threshold levels are ineffective.*

*Investment above saturation levels are inefficient .*

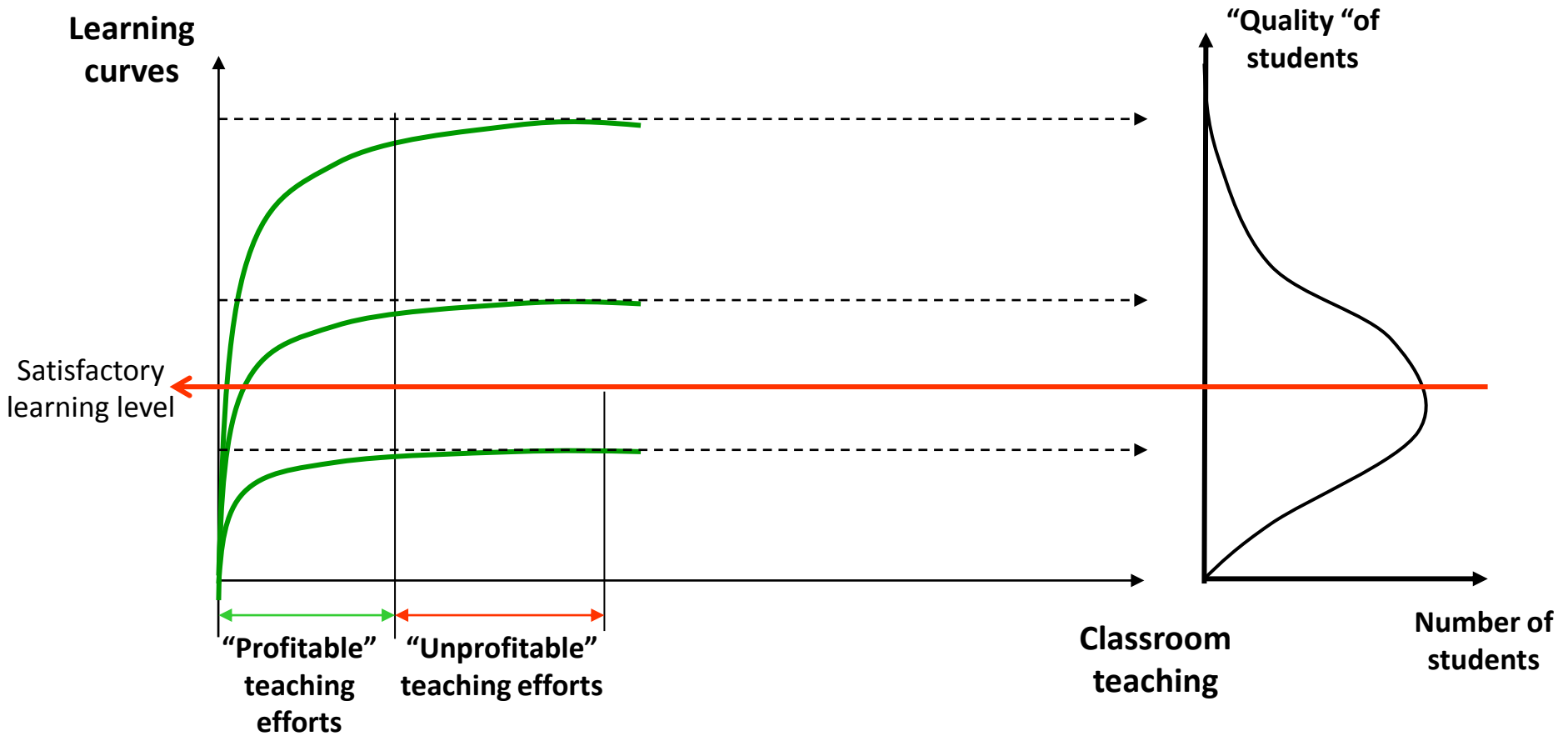


- High drop-rates
- Extremely selective admission procedures
- Low learning achievement as compared with expected learning categories (procedural learning vs. analytical and integrative learning)
- Low academic compromise of students
- Low compromise of faculty with excellence in teaching

How processes are conducted potentiate saturated resources.



A common problem in education :  
Differences in learning rates



*Inclusive education cannot afford selecting students on the basis of different -but perfectly normal - learning rates*

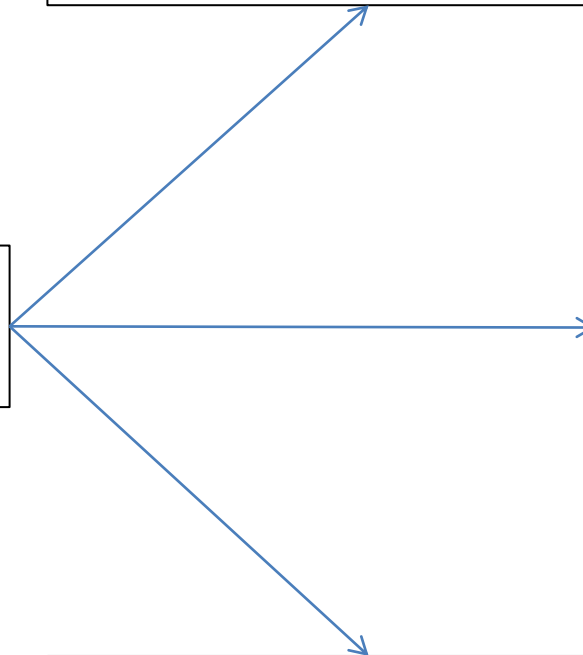
Experimental program in teaching-learning” effectiveness  
Universidad de los Andes , Bogota , Colombia

**Development of IT tools for students work out of class (TIC)**  
How to increase teaching-learning efficiency out of class?

**Students compromise:**  
What is the nature of the “academic life” of students ?

**Study of educational value of evaluation procedures:**  
Evaluation procedures contribute to learning or distract attention from main issues?

**New formats for class work :**  
How to increase the engagement of students during class periods ?



## Study of students “academic compromise”

- Performed on 3 average students of all undergraduate programs , for a period of 3 weeks. (“Shadowing” technique)

How students deal with their academic responsibilities

- How many hours per week students dedicate to each subject..
- How does it differ from one subject to another, and why.
- How students work patterns change along the academic term
- How students handle learning difficulties in a given subject

-The “academic compromise studies” reveal – in most cases - that class work and home work does not engage students in time or intensity as expected by their lecturers. Students operate in a way completely different of what faculty expect.

-Students optimize their time allocations in order to cover properly the different course demands. Such process turns up into a non balanced hierarchy of interests and efforts

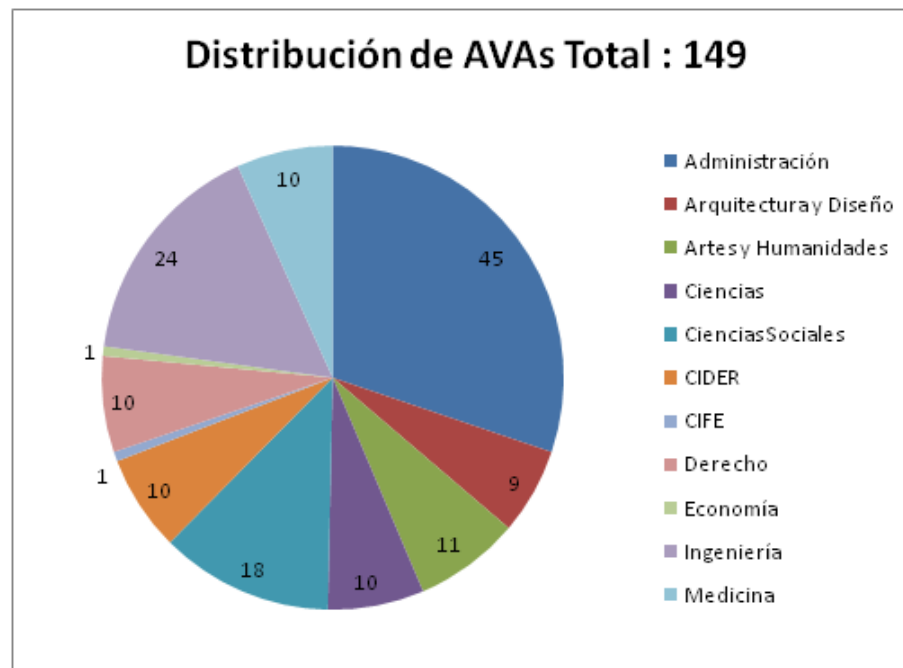
Although this studies are not systematic nor statistically relevant, they are important in the process of formulating strategies which can attack important deficiencies in overall teaching-learning processes.

## Virtual Learning Environments (VLE): 2003-2010

Objective: Construct an enriched learning environment associated to a given subject

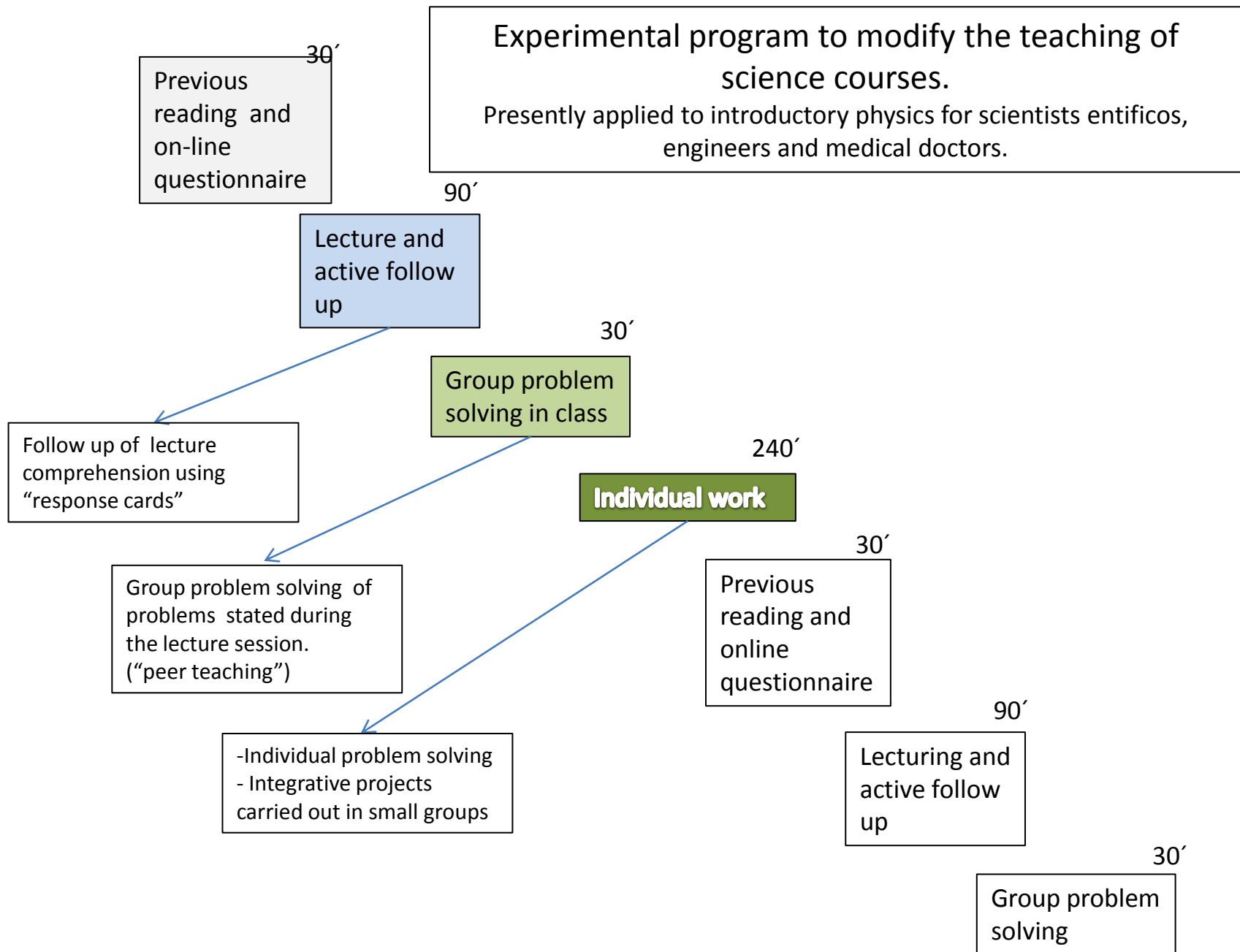
- Increment lecturer-student and student-student interaction
- Access to enriched contents
- Use of simulators and virtual reality for better understanding of contents and/or training in specific abilities.

### Cubrimiento



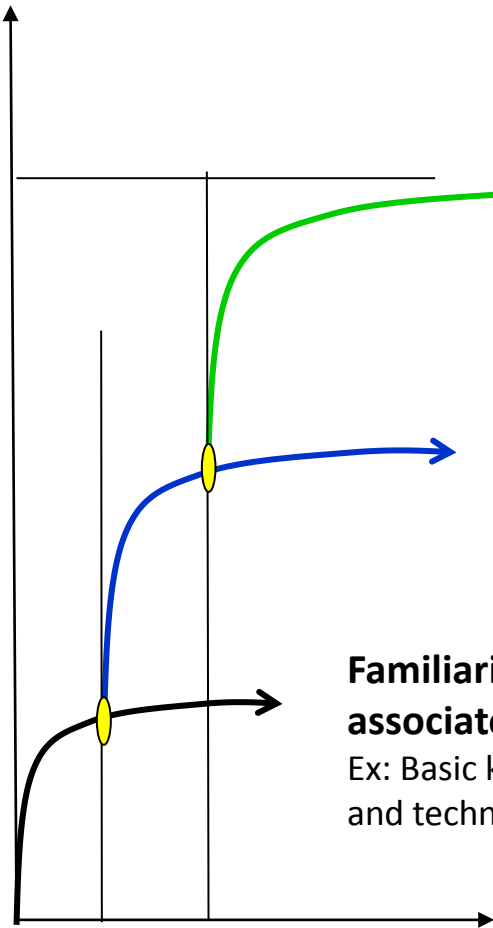
An important by product :

**-Lecturers who contribute to the design of VLE adopt a critical and constructive position about their own teaching practices**



Learning Expectations	Memory	Procedural	Analytic	Integrative and critical
Evaluation				
Memory				
Procedural				
Analytic				
Integrative and critical				

Study of “learning evaluation procedures” carried out in 60 courses of most undergraduate programs reveal that there exists a general lack of correspondence between expected learning categories (and outcomes) and the evaluation procedures.



**Knowledge appropriation**

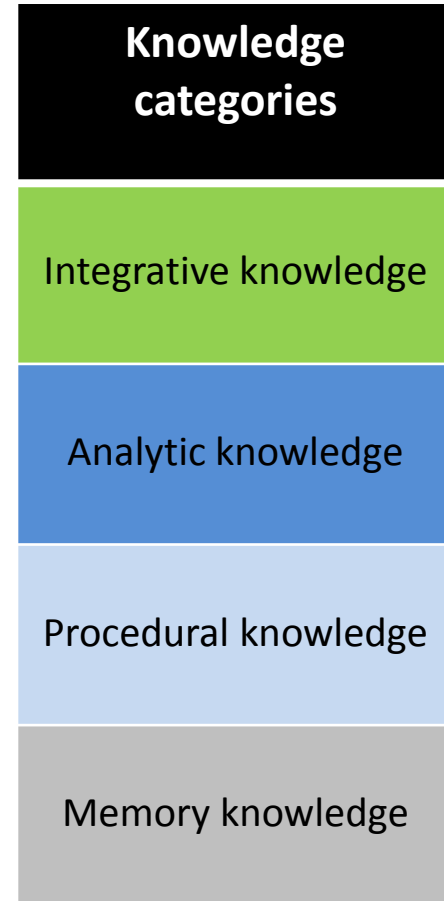
Ex. Making probability knowledge part of your way of thinking and handling problems. (Capstone activities)

**Problem solving within a given theory**

Ex. Solving probability problems with relevant applications.

**Familiarity with a theory and associated techniques**

Ex: Basic knowledge of definitions, theory and techniques of probability theory



**Actors:  
Faculty**

Teachers problems cannot be entirely solved by teachers. Experts in education should help lectures device an efficient way - from the point of view of learning – of handling their duties. Most probably this will change radically the role of the lecturer

**Processes core**

Students should be properly engaged in their academic activities. This requires a better understanding of “how students work”

**Academic Processes**

HEI should have I higher awareness of the alignment between way they expect and what they really achieve in terms of learning of their students

**Academic Products**

**Actors:  
Students**

Physical and information resources should be used to enlarge the learning environment . IT are very well suited for this purpose: But this requires technical expertise in IT , educational expertise, and disciplinary expertise , all collaborating in a common direction.

**Physical and Information  
Resources**

**Resources core**

