

**First EUCEET Association Conference
Patras, Greece. 24-25 November, 2011**

New Trends and Challenges in Civil Engineering Education

Effect of the evaluation of teaching activity in the quality of civil engineering education

**Francisco Javier Martín Carrasco
Luis Garrote de Marcos
Jesús Fraile Ardanuy**

E.T.S. Ingenieros de Caminos, Canales y Puertos
Technical University of Madrid

Objective and contents

- **Objective**

- To analyze, after five years of evaluation of the teaching activity, if the effect of the evaluation itself and the general dissemination of results may improve the quality of teaching.

- **Contents**

- **1.** Introduction: professor's evaluation in Spain at the present.
- **2.** Description of the teaching evaluation method
- **3.** Effect of the evaluation on the professor's rating
 - ▶ Depending on the professor's category
 - ▶ Depending on the professor's age
- **4.** Conclusions

1. Introduction

Professor's evaluation in Spain at the present

- **Professor's activity evaluation in Spain**

- **Teaching activity:** "five years teaching period" (**quinquenio**)
 - Depends on each University.
 - **It is not really relevant for academic career.**
- **Research activity:** "six years research period" (**sexenio**)
 - The procedure is centralized in a national evaluation agency.
 - **It is very relevant for academic career.**

- **Teaching activity evaluation at the Escuela de Ingenieros de Caminos**

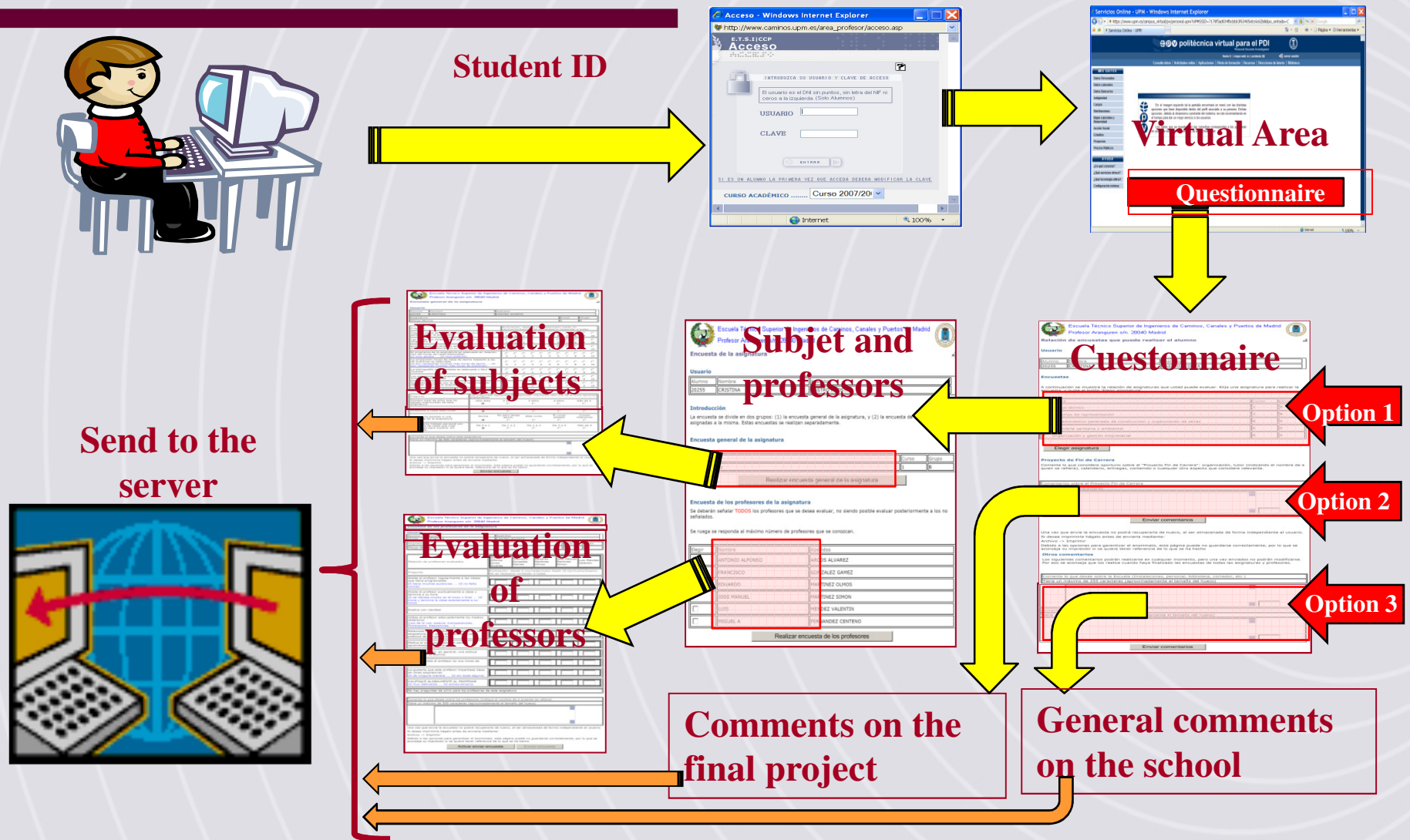
Period	Performed by	Results	Procedure
Before 2004-05	Student unions	Confidential	Paper and pencil
From 2005-06 to 2009-10	Dean of the School	Widely disseminated	On-line
From 2010-11	University general procedure (DOCENTIA)	"Top Secret"	Paper and pencil



**"Surely you were aware when you accepted the position, Professor,
that it was publish or perish."**

2. Description of the teaching evaluation method

On-line student questionnaire



2. Description of the teaching evaluation method

Dissemination of results

- **Problem:**

- To achieve the maximum dissemination within Personal Data Protection Law.

- **According to the Data Protection Law ...**

- Teaching activity results for the professors are considered Personal Data
- Then, only the professor himself is allowed to know his results.

- **... but ...**

- According to other laws, the members of the School and Department Boards are allowed to know the results for all professors within their scope.

- **... so ...**

- Any member of the Department has the right to know the evaluation of all the professors of the Department.
- Any member of the School Board (50 professors, students and administrative personnel) has the right to know the result for all professors of the School.

- **... and finally ...**

- **Each professor knows the results of the evaluation of all professors.**

2. Description of the teaching evaluation method

Data of the evaluation procedure

• Data

- Total surveys: about **18.500** (in five years).
- Professors evaluated: about **300** (professors-subject)
- For this study we use only the results of professors who received at least 10 questionnaires per year, during the **five** year period (about **100** professors).

Academic year	Number of evaluated subjects	Number of evaluated professors	Number of surveys
On-line evaluation			
2009-10	68	266	4,581
2008-09	64	271	4,363
2007-08	68	273	4,801
2006-07	68	256	3,285
2005-06	68	235	1,443
Traditional system: paper and pencil in the class room			
2004-05	48	182	≈ 600
2003-04	59	198	≈ 800
2002-03	No evaluation was conducted		
2001-02	No evaluation was conducted		
2000-01	35	106	≈ 700

3. Effect of the evaluation on the rating of professors

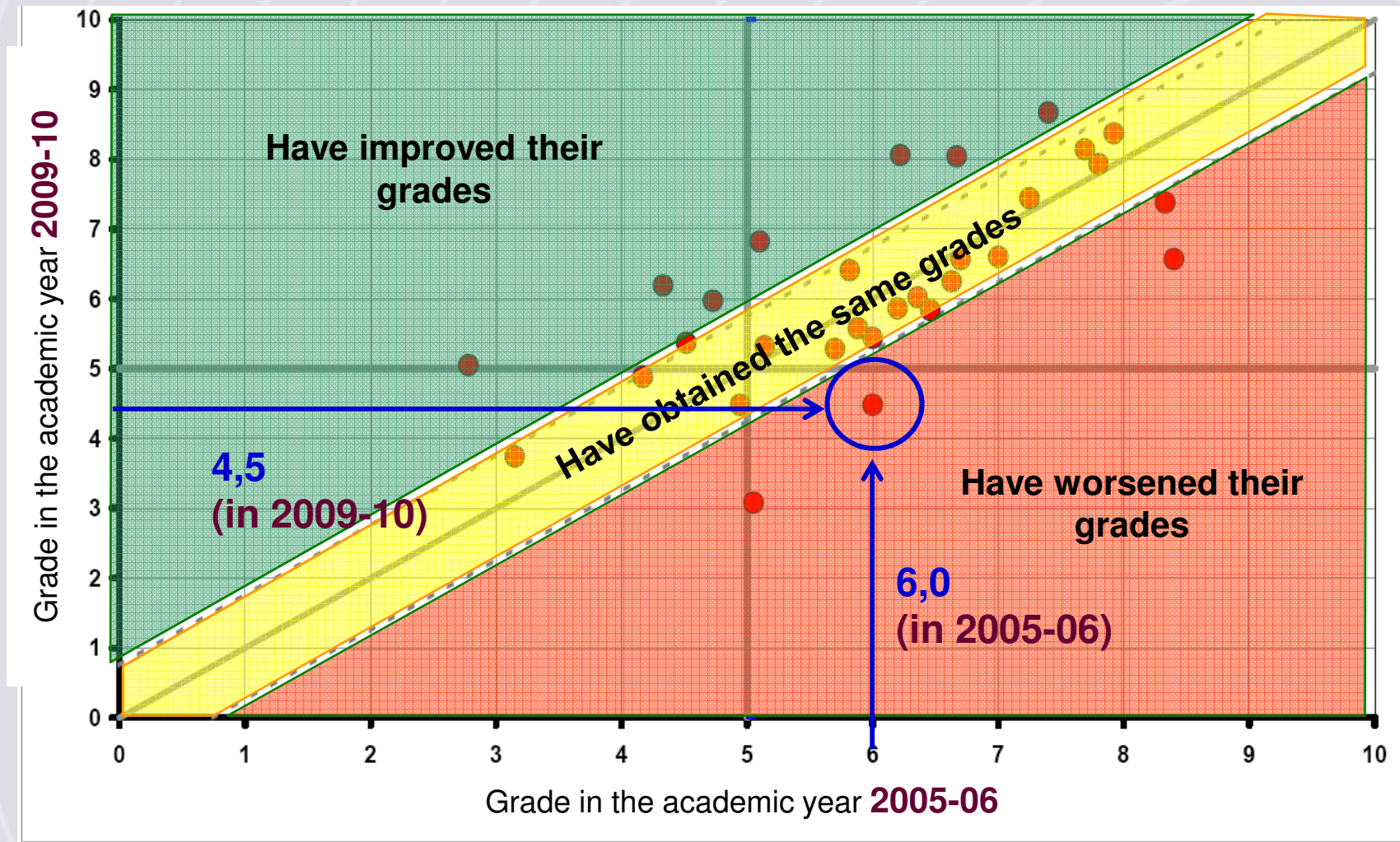
Questions on each professor

- **10 questions:**

- **P1:** Attends to the scheduled lectures.
- **P2:** Begins and ends lectures on time.
- **P3:** Is clear in his explanations.
- **P4:** Uses properly the educational resources: voice, whiteboard, presentations, ...
- **P5:** Links the subject with other subjects or with the practice of engineering.
- **P6:** Motivates students to learn the subject.
- **P7:** Has, in general, a positive attitude toward the students.
- **P8:** Is available in his or her office hours.
- **P9:** You would wish that this professor would teach also other subjects.
- **P10: General evaluation of the professor.**

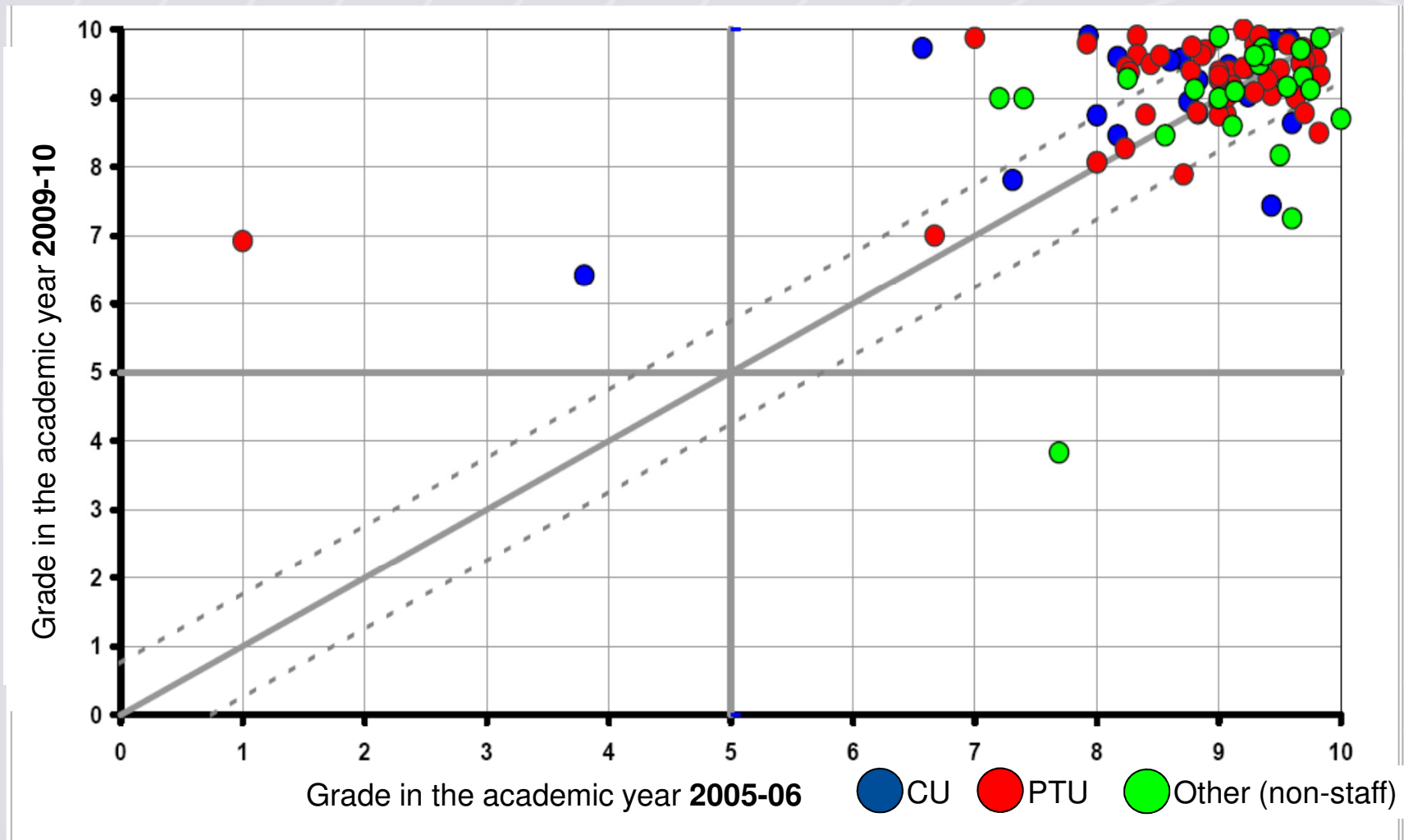
3. Effect of the evaluation on the rating of professors

Interpretation of the graphs



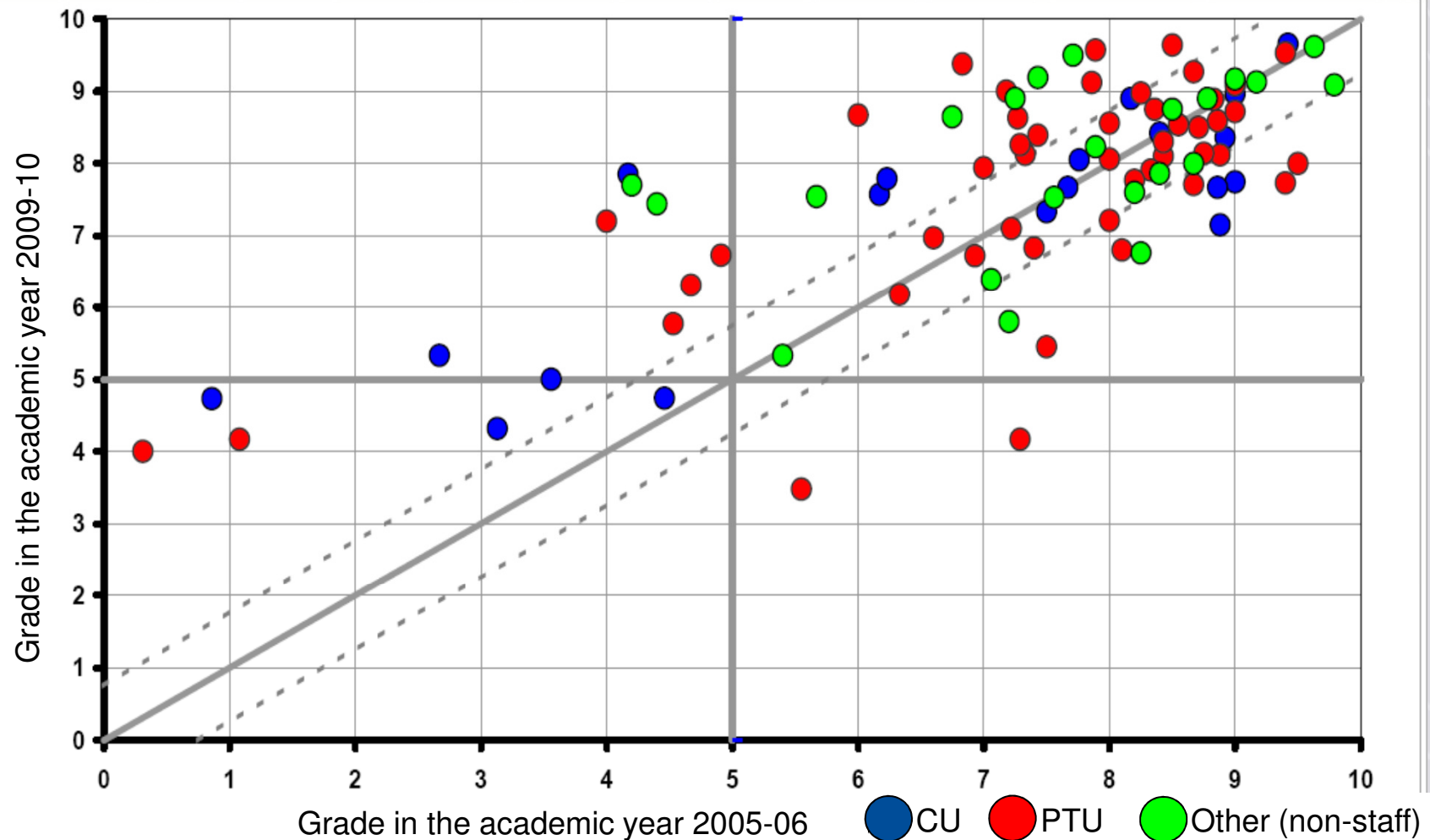
Questions on each professor

P1. [*The professor*] attends to the scheduled lectures.



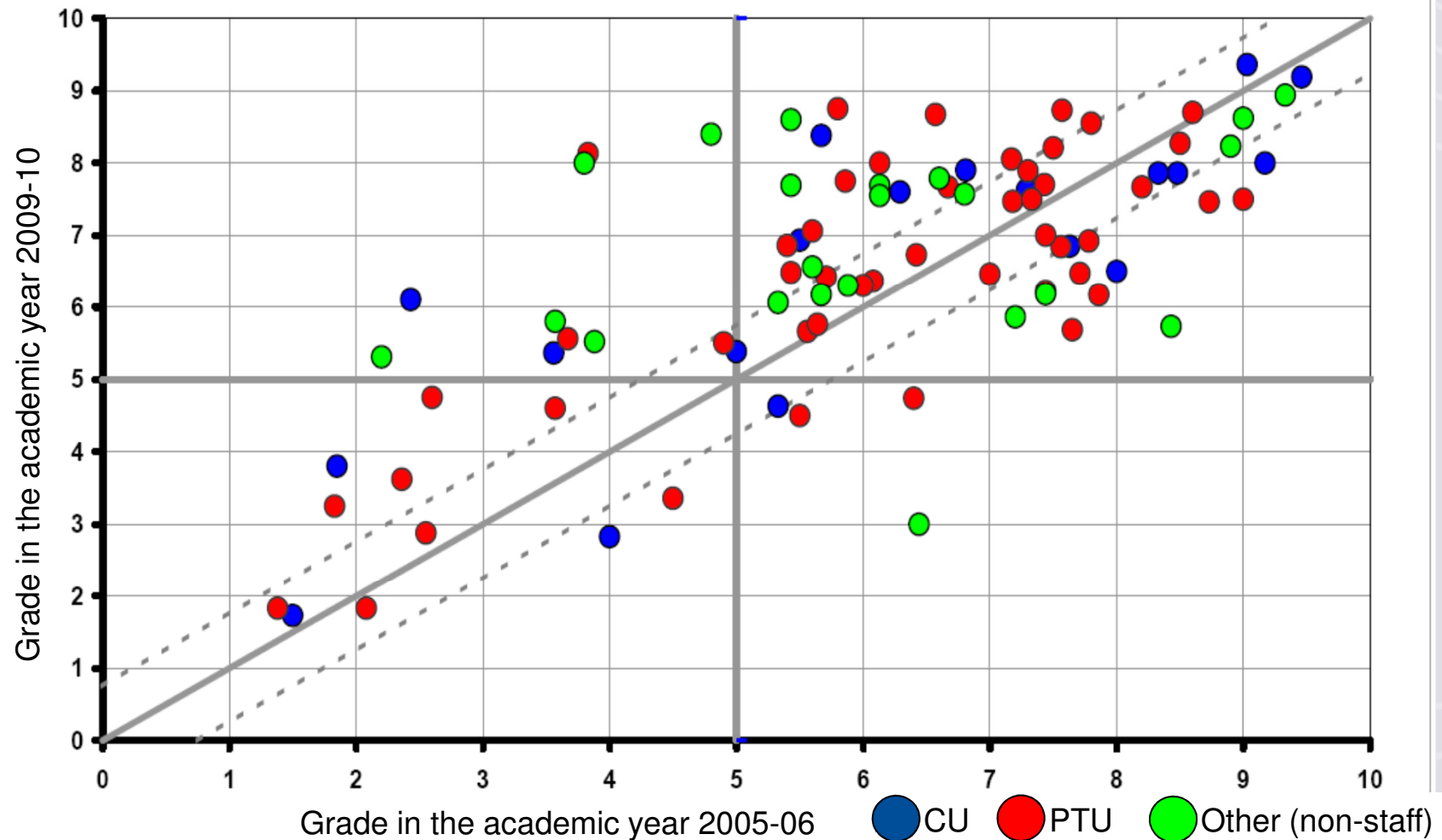
Questions on each professor

P2. Begins and ends lectures on time.



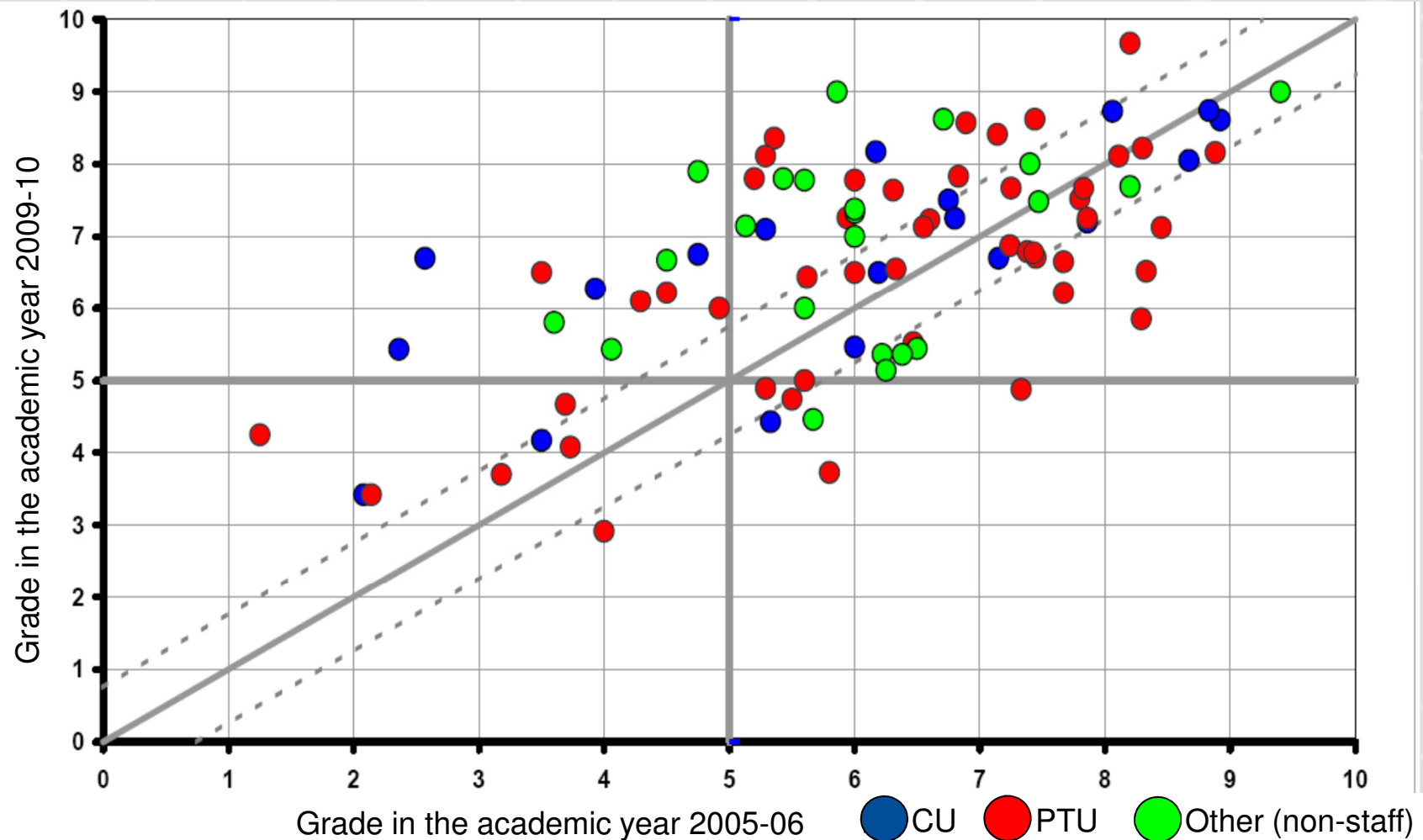
Questions on each professor

P3. Is clear in his explanations.



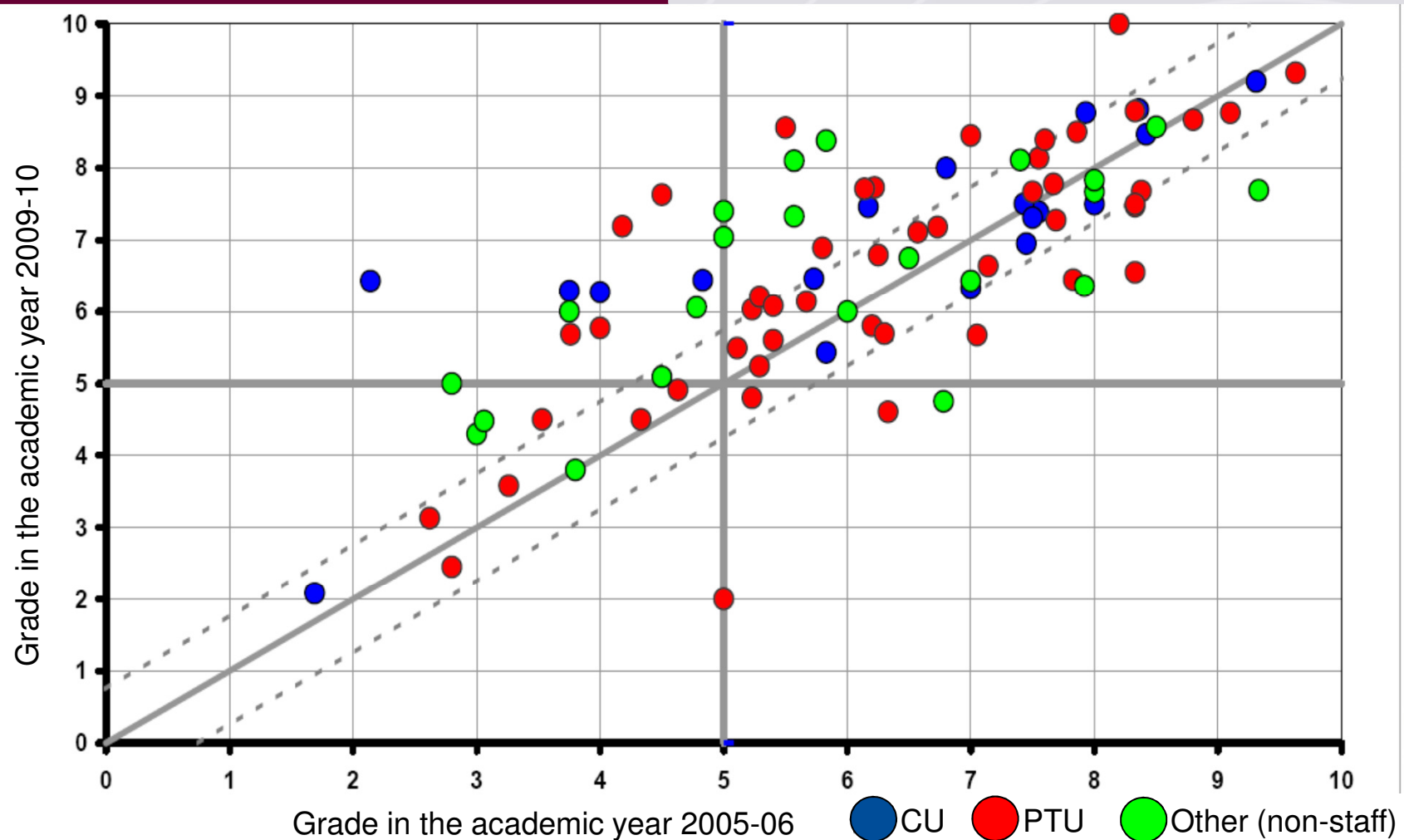
Questions on each professor

P4. Uses properly the educational resources: voice, whiteboard, presentations, ...



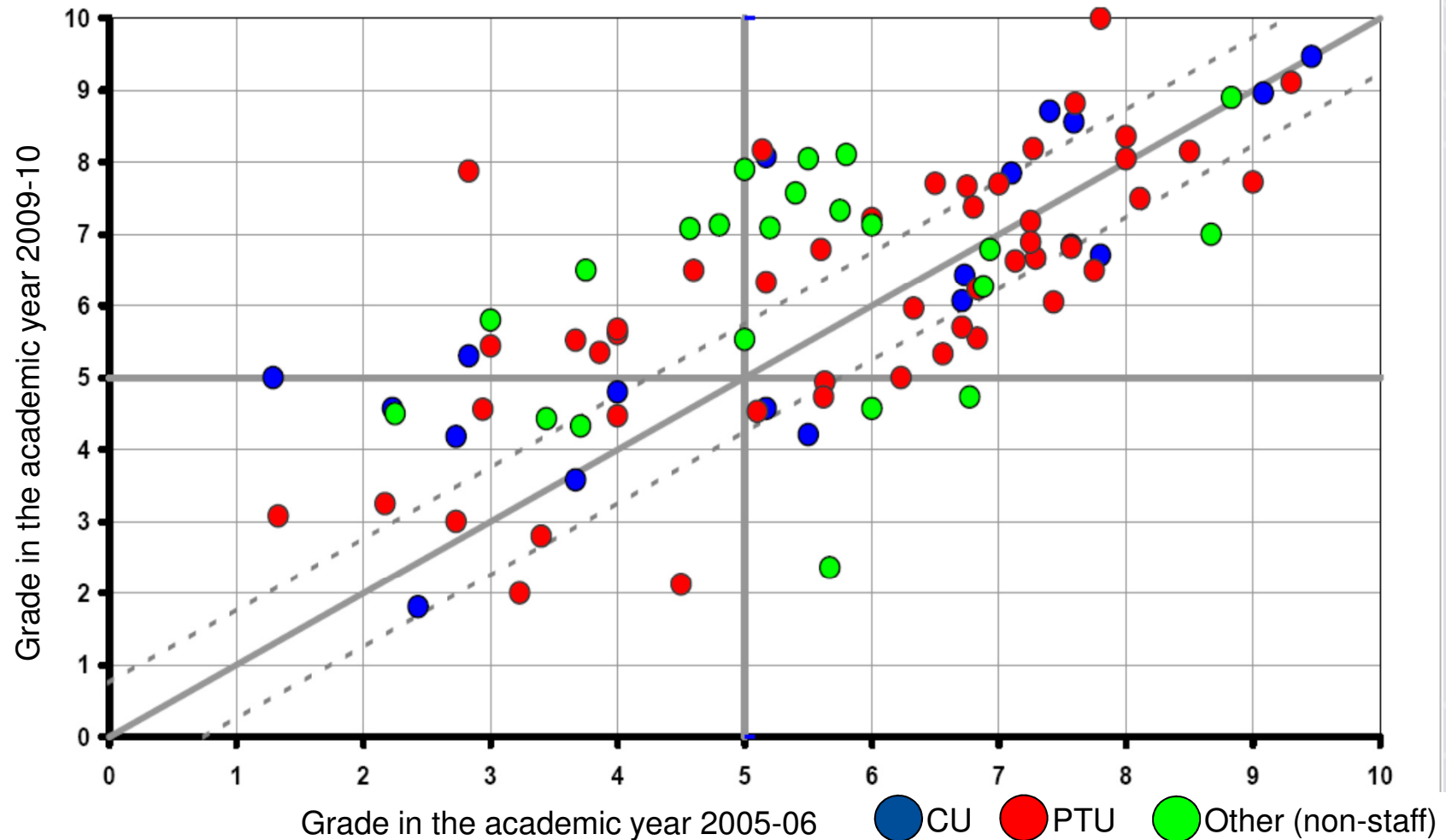
Questions on each professor

P5. Links the subject with other subjects or with the practice of engineering.



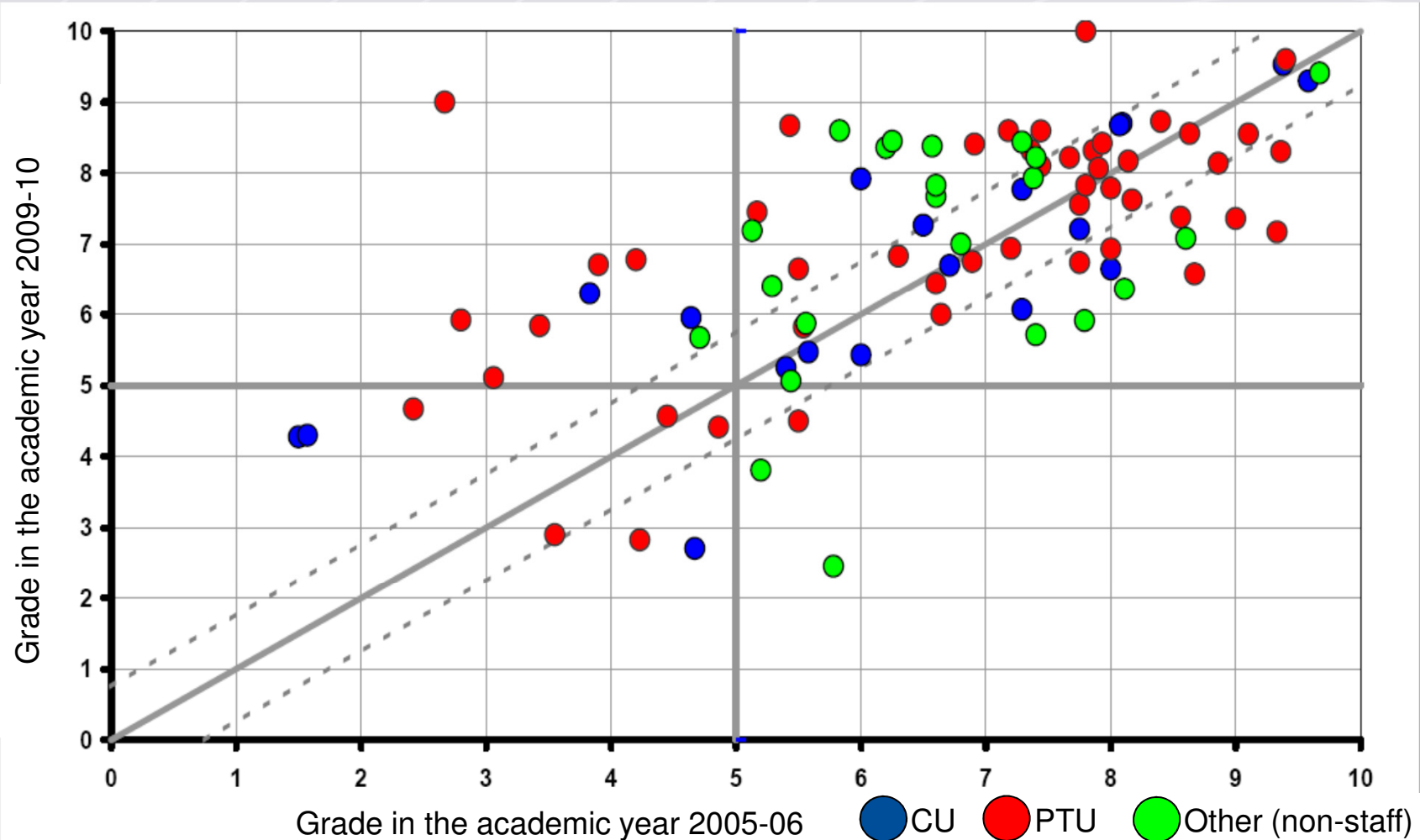
Questions on each professor

P6. Motivates students to learn the subject.



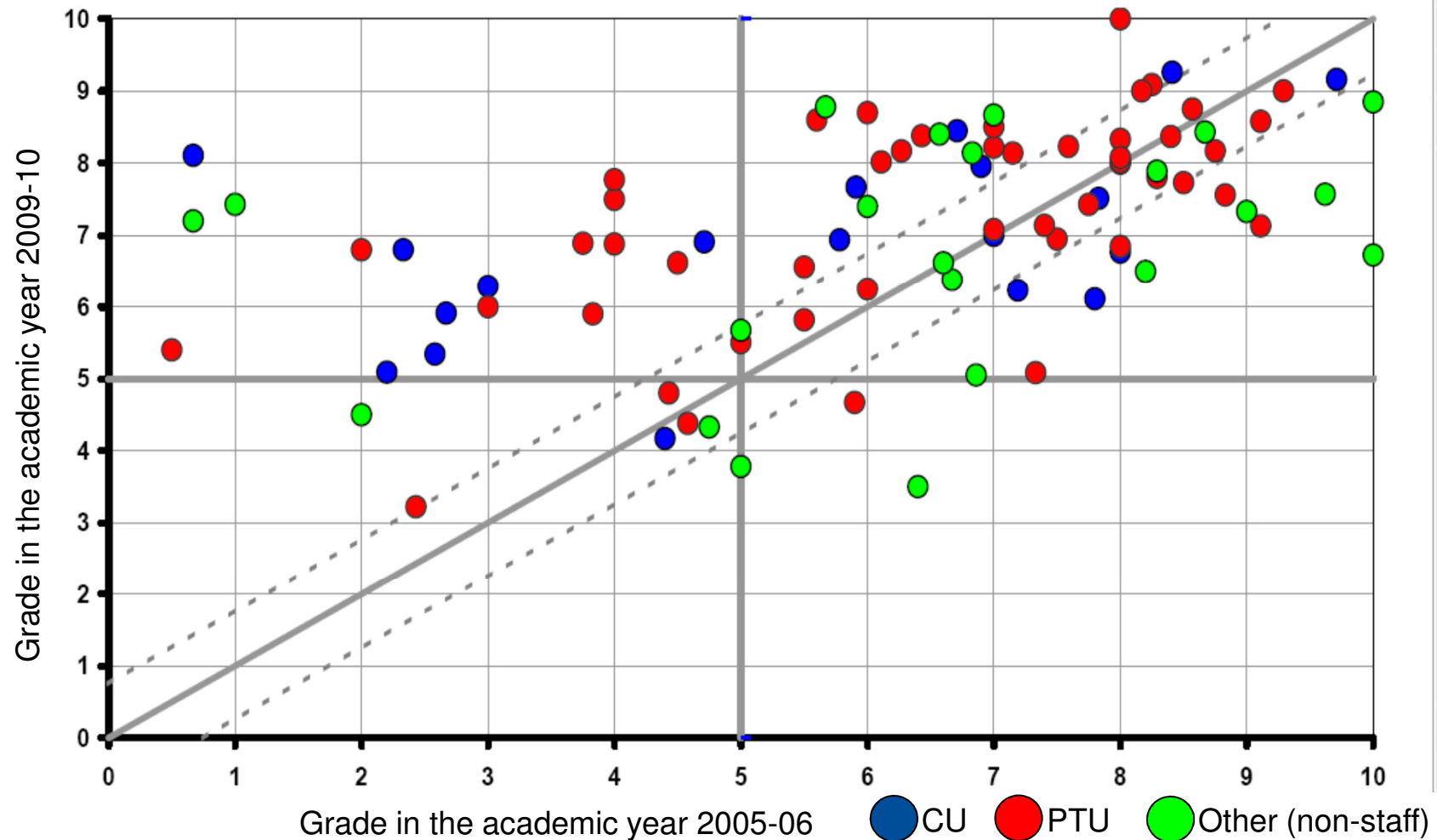
Questions on each professor

P7. Has, in general, a positive attitude toward the students.



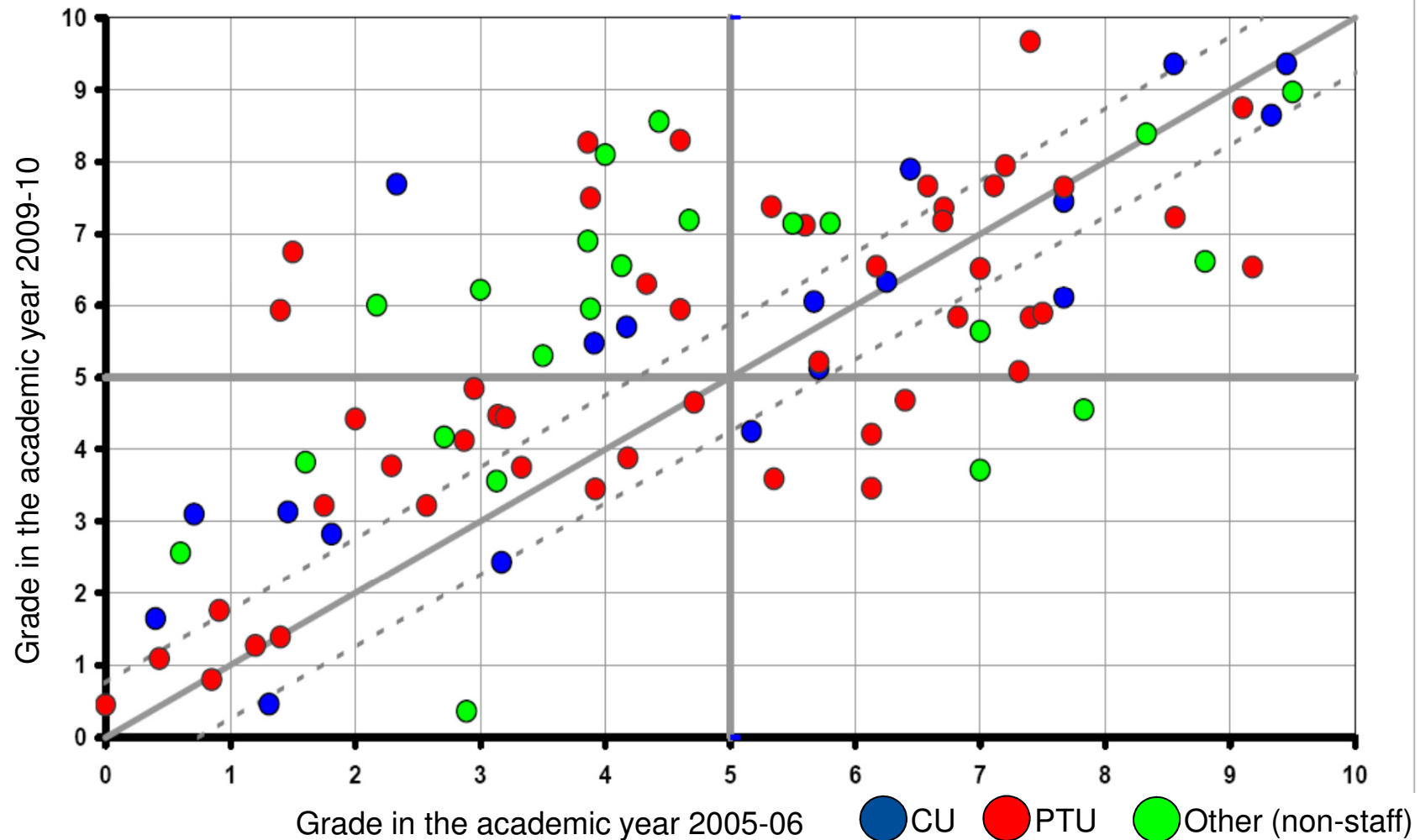
Questions on each professor

P8. Is available in his or her office hours.



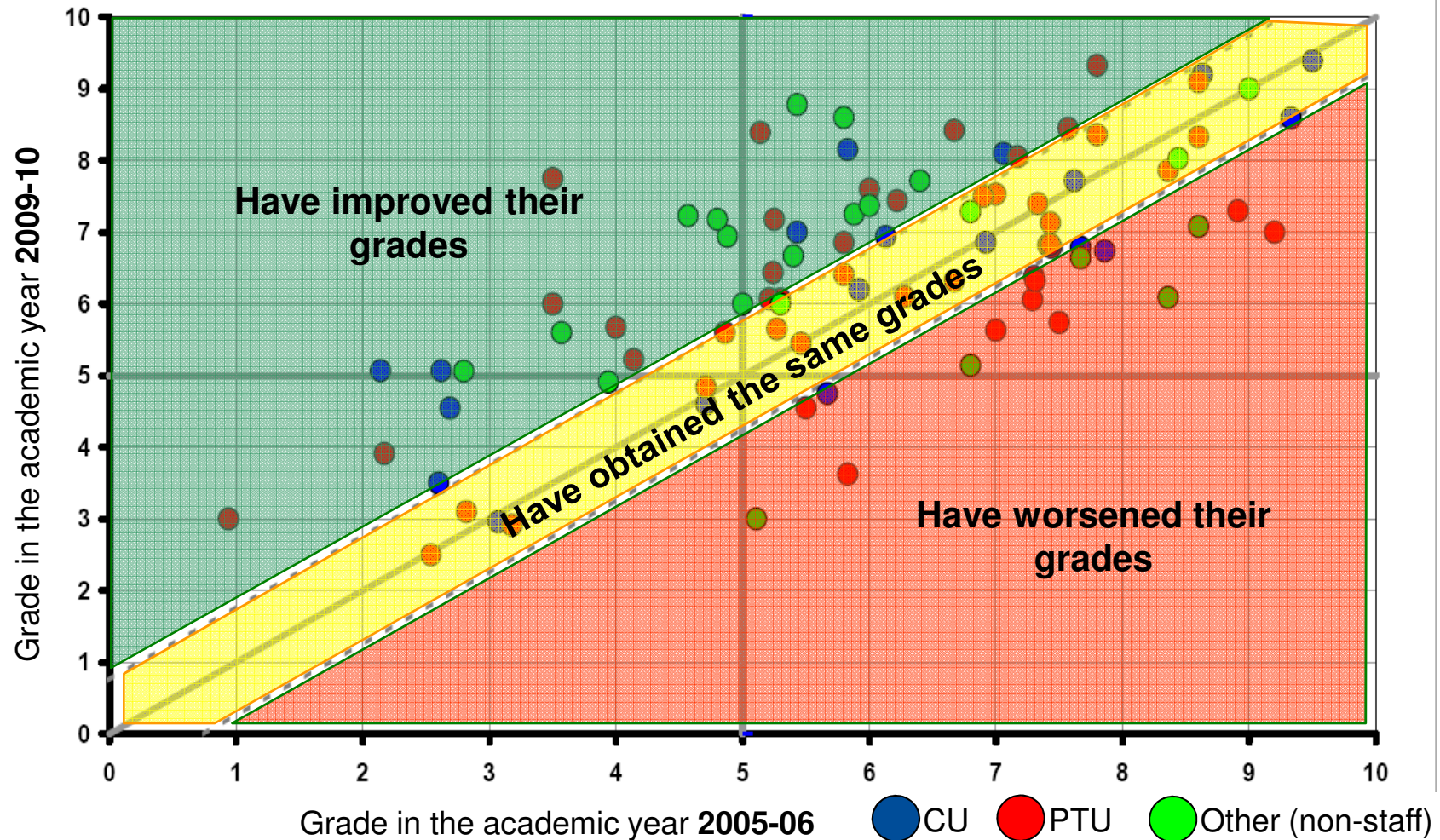
Questions on each professor

P9. You [*the student*] would wish that this professor would teach also other subjects.



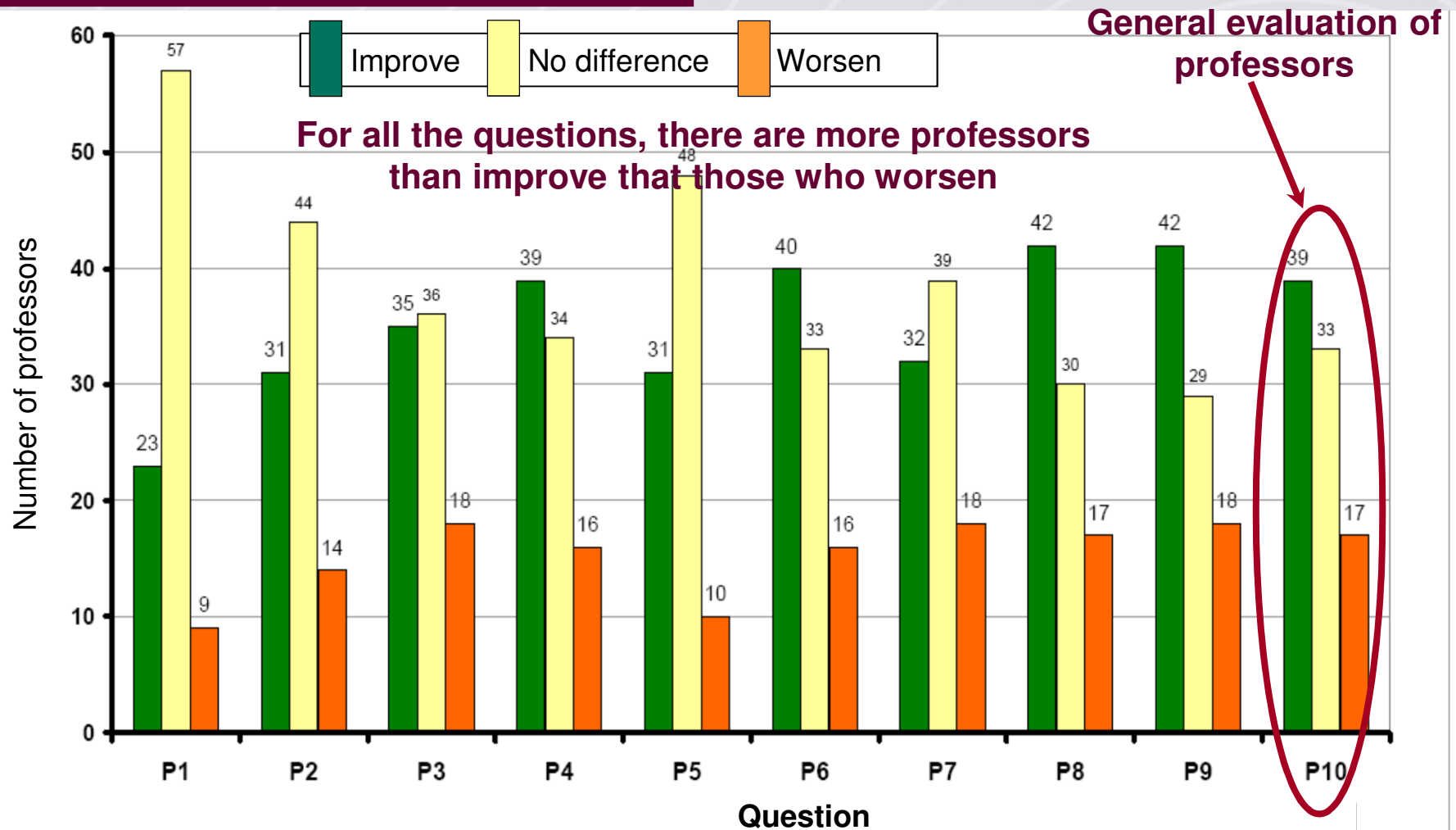
Questions on each professor

P10. [Main question] General evaluation of the Professor.



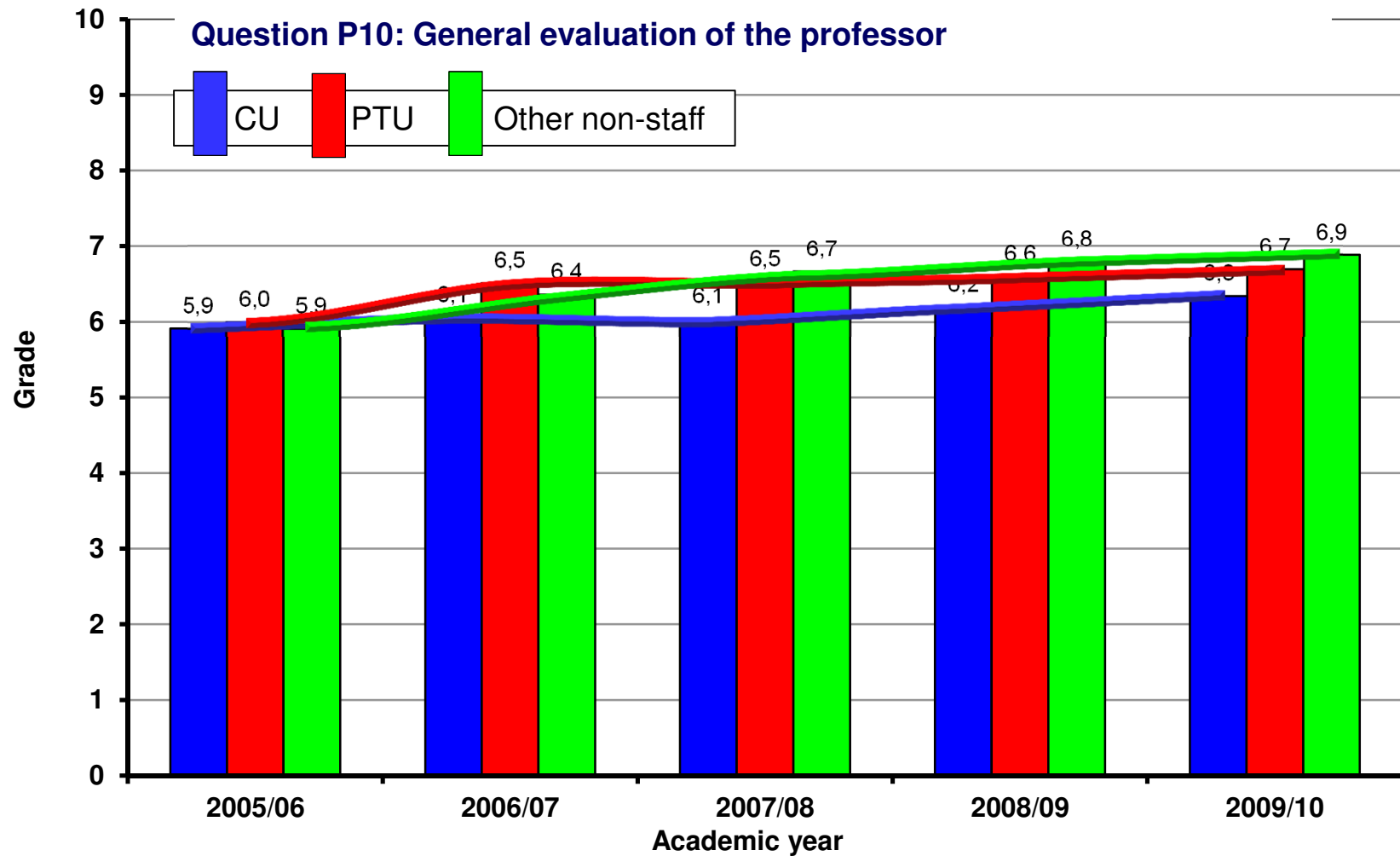
Effect of the evaluation on the rating of professors

Variation in the rating of professors (from 2005-06 to 2009-10)



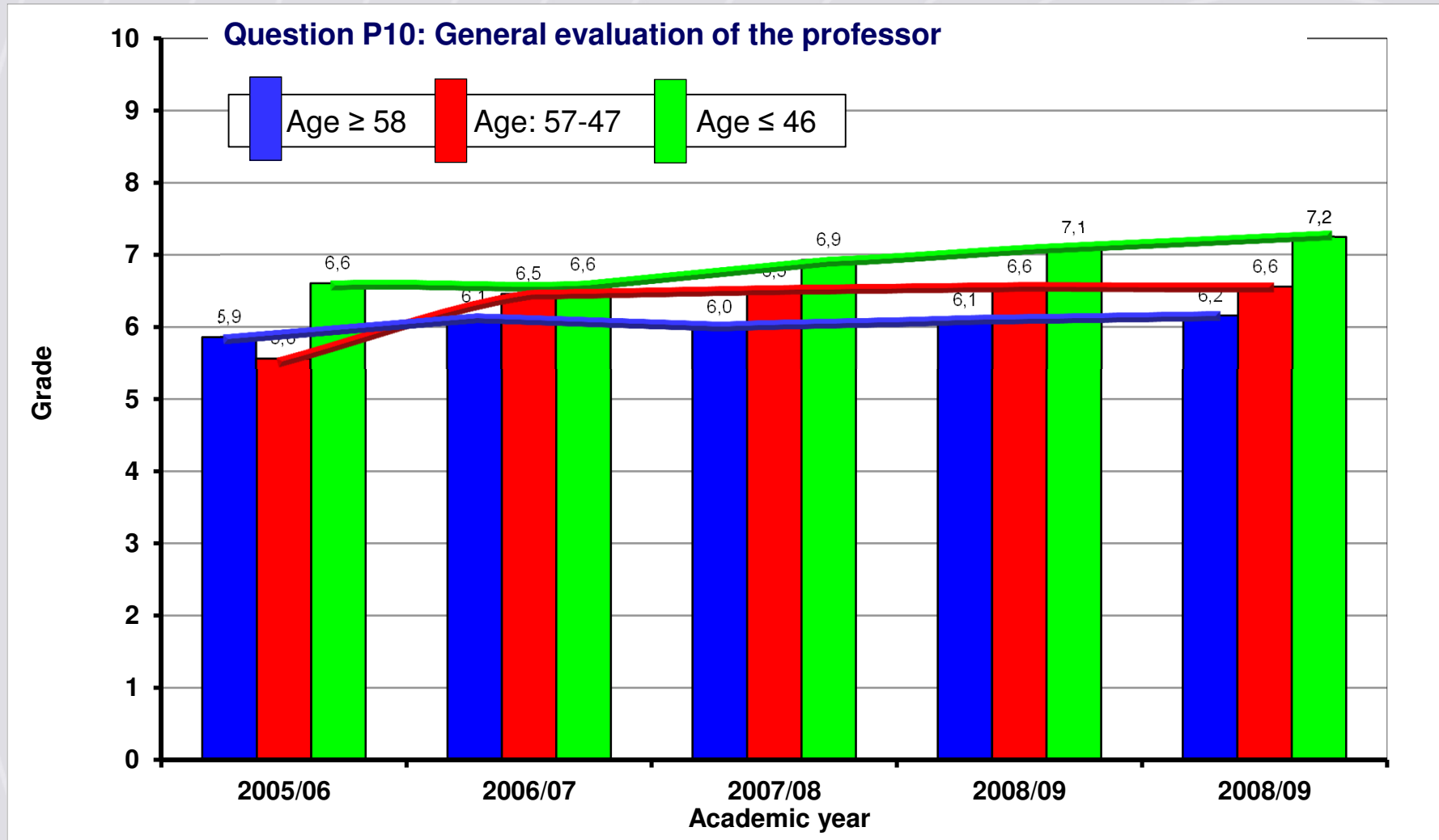
Effect of the evaluation on the rating of professors

Grades of question P10 by professional status. (from 2005-06 to 2009-10)



Effect of the evaluation on the rating of professors

Grades of question P10 by age. (from 2005-06 to 2009-10)



4. Conclusions

- From the tables and graph it is easy to infer:
 - The **average grade** of professors improves, for all questions, year after year over the five year period.
 - Most **professors improve their grades**, without regard of their professional status and age.
 - **Non-staff** professors obtain better ratings and improve more than staff (CU, PTU) professors.
 - **Younger** professors (under 46) obtain better ratings and improve more than older professors.
 - **Age** has more effect on improvement than **professional status**.
- This positive evolution **had not happened before**, although other methods for teaching evaluation were performed.
- **The dissemination of results makes a lot of difference!**

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Thank you for your attention

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Scientific Research

HERE ARE THE FACTS. WHAT CONCLUSIONS CAN WE DRAW FROM THEM?



Educational Research

HERE'S THE CONCLUSION. WHAT FACTS CAN WE FIND TO SUPPORT IT?



2. Description of the teaching evaluation method

Teaching evaluation at the Escuela de Ingenieros de Caminos

- **Before the academic year 2004-05**

- Teaching evaluation was performed student unions.
- The results were confidential, and only known by the professor himself.
- Many errors, huge delay for results,

- **From 2005-06 to 2009-10**

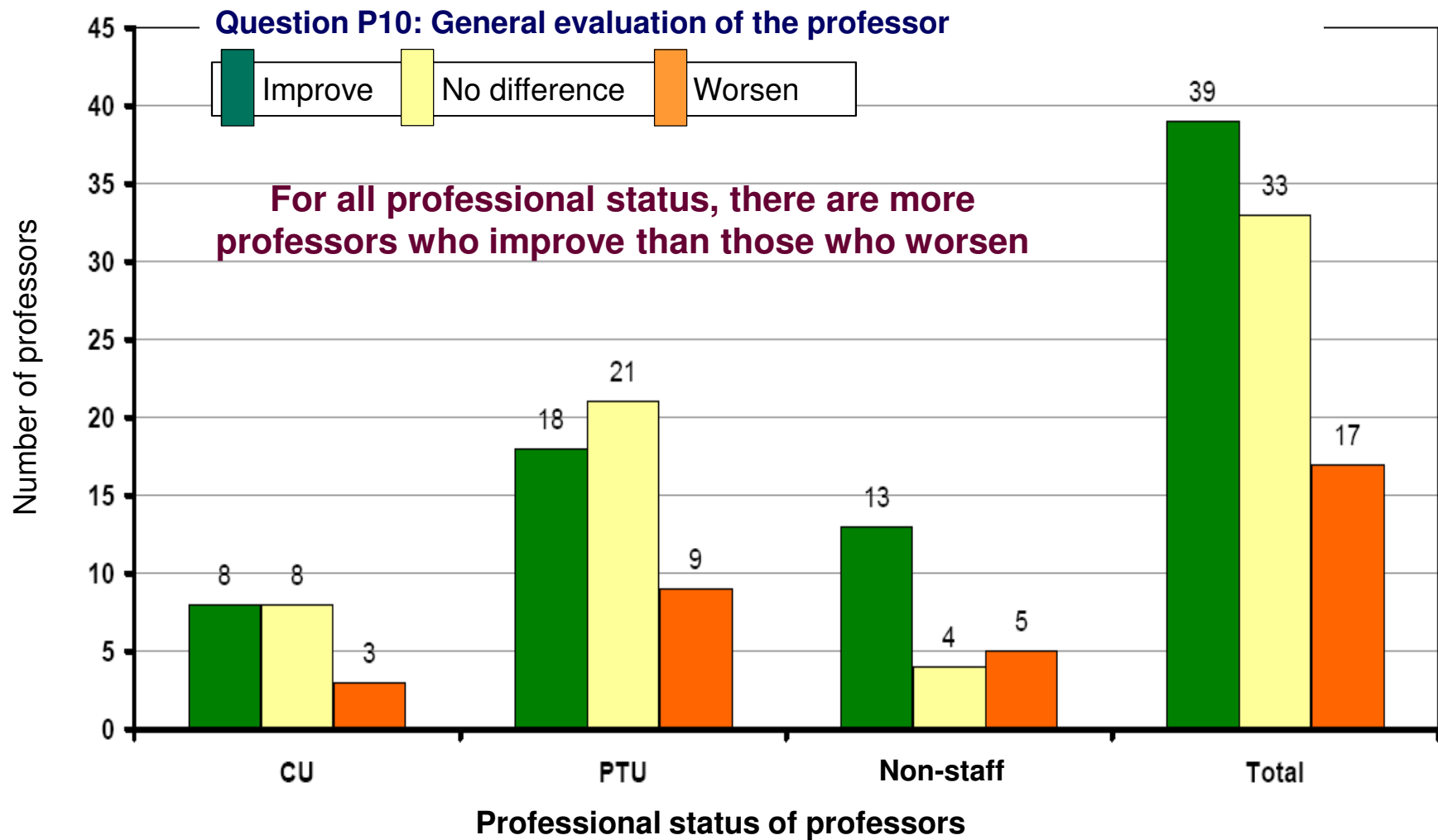
- The Dean of the School was in charge of the evaluation procedure:
 - Questionnaires were filled **on-line** by the student.
 - The results were **widely disseminated** (within the limits of the Personal Data Protection Law)

- **From 2010-11 to the present**

- General procedure for all the Universities (DOCENTIA):
 - Back to the paper and pencil procedure for filling questionnaires.
 - The dissemination of results is forbidden, even for the School academic authorities (Dean, Department Head, etc.).

Effect of the evaluation on the rating of professors

Variation in question P10 by professional status. (from 2005-06 to 2009-10)



Effect of the evaluation on the rating of professors

Variation in question P10 by age. (from 2005-06 to 2009-10)

