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Additional Information

The Influence of Students Distribution on their Grades

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ABSTRACT

This position paper defends the opinion that the distance of students to the professor in the classroom is directly related to their grades. This opinion is based on the results obtained in a large experiment performed during two academic years in various degrees, courses and semesters of two engineering schools. The experiment collected and processed data about the distribution of students in lectures and their final grades. Our results quantitatively confirm that grades can vary up to 14% depending on the distance to the professor.

Categories and Subject Descriptors

K.3.2 [Computer and Information Science Education]: Computer science education, Information systems education

Keywords

Grades, classroom, seats

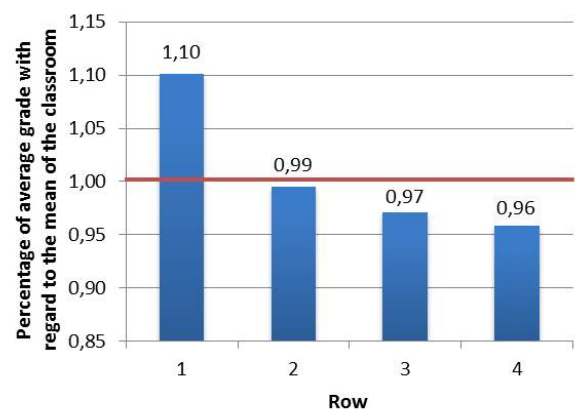
1. THE EXPERIMENT

Along two academic years, we conducted an experiment in two engineering schools of the Universitat Politècnica de València. The experiment involved a total of 2 bachelors, 1 degree and 2 masters; 6 different courses and 255 students with a total of 2160 attendances registered. A preliminary study with a reduced sample of students can be found in [1].

In every lecture, all students registered their exact position in the classroom, and all collected data was later studied in combination with the grades obtained by the students. Of course, the study did not influence the position of the students, who were free to select any position and change it during the semester as usual. With the collected data we performed a statistical analysis that studied the average grade associated to a position (rather than to a student).

The results obtained are shown in the figure. We can see for each row of the classroom the percentage of average grade obtained with regard to the mean of the classroom (represented with the bold line with value 1.00). Row 1 is the closest to the professor, and row 4 is the further, thus we can see the figure as if the blackboard and the professor were located in the Y axis. We can see that students in the first row obtain, as an average, a 14% higher grade than those

in the fourth row. The further to the professor is located a student, the lower grade it gets.



2. INTERPRETATION

Our experiment provides empirical evidence based on a very large sample. However, there are different possible interpretations of the results depending on the causality relation: is there a tendency of bad students to sit in the last rows? This allows them to avoid questions of the professor and chat with their mates. Or, do those students that sit in the last rows become bad students? This could be caused by the fact that the students at the end are more affected by noise and can have more difficulties to keep the attention.

We believe that this experiment is an excellent starting point for a debate about how to handle the location of students in a classroom. This knowledge could allow the teacher to know where are placed the students who need more help.

3. ACKNOWLEDGMENTS

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4. REFERENCES

- [1] J. Silva. Are Marks Related to Chairs? In *34th ATEE International Conference of the Association for Teacher Education in Europe*, pages 78–87, 2010.