

Experience about some results with the application of a new method of teaching Statistics

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1. Introduction

The purpose of this paper is to tell our experience, short without no doubt, (just an academic year) on the application of the new method of teaching Interactive Statistics.

As we all know, we face many challenges when teaching an first Statistics course, specially if students belong to different careers, such as: Accountant, Business Administration, Marketing, Economy, Psychology, and so on, because the idea they have of Statistics, if they have any it is that is "boring". And we also have the problem that the students arrive with little or nothing background of mathematics.

This and other facts moved us to try a change in the traditional methodology of teaching Statistics- information transfer- by the active and participating method of teaching.

Our enthusiasm for this change began with the presentation of Martha Aliaga's book Interactive Statistics, at our University in Argentina.

As the author says in her book "*one of our principal goals is to engage students in the subject and to teach them that Statistics is full of methods that will made more informed users of the information*"

We started to apply this method in some courses of the Accountant career in a gradual way, continuing with the other course with the traditional method, because one of our aims is to compare results between one method and another.

The students have the material for study, that the professor advise that must be read before, at home, so in class the professor assigns to different groups different "Think About It", then they are discussed and analyze altogether.

The professor guides them and unifies the concepts and theory of the issue of that day's lesson.

Once the "Think About It" have been analyzed, the students start stimulation of ideas and reflexion, that is called "Exercises". This part is not just to resume data, but in many cases they make experiments, simulation, and in some other cases they make a questionnaire, letters, and oral expositions.

All this activities, just as it said by the author of the book "Interactive Statistics" "*reinforce the concepts just introduced or lead students to discover the next statistical concept. Students soon find themselves actually doing Statistics- gathering data, analyzing the data they have collected and discussing results with other members of their group*"

At the end of each unit we take them a multiple choice exam and as a final exam they present a practical work of application and integration of all the theoretical units and they also have to prepare a report based on real data. They are given a data base so they have to describe it, analyze it and to make a decision based on the results.

2. Some problems we found

One of the problems we found is that this courses are given just in one semester of the accademic year, and we have a two hour meeting each week. We have large courses and this is a subject that is in most carrers of the third year, so we receive students "totally structured" to the traditional way of learning.

And we also have to face some of the following difficulties or ressistance:

- to the change of the methodology
- to the integration to work in group
- to search problems with real an daily data to work with them in an active way.

On the other hand, as we are developing country the technological advance is slow (for example we have 40 (forty) graphic calculators to be shared in course of 150 (one hundred anfiftey) students, and in general the social -economic level of the sudents don't allow them to buy it .So the students need to "imagine" sometimes what we are trying to present in class.

There is also some ressistance to the change by some professors.

3. Some results

Even though we have to face some problems we can show some positive results such as:

- we succed in making our students to work in group
- we suceed also in making them present reports based on real data, using the knowledge they got in desciptive statistics as well as inferencial statistics.
- They have presented their written reports also orally, being this a great success in the teaching of oral and witten comunication

4. Somenthing to remind

This is just a beginning, so we must remind that our challenge and our aim is to improve the teaching of Statistics by:

- applying an interactive learning
- using the graphic calculators an different statistical software
- encoureging our students to think and enable them to understand the usefullness of the statistical analysis as a help to solve real problems and overall, to create in them the need of the good treatment of data in behalf of making decisions

REFERENCES

Aliaga Martha -University of Michigan (1998) Interactive Statistics. Preliminary Edition .Prentice Hall Ed.

Berenson y Levine 6ta. Edition Estadística Básica para Administradores- Prentice Hall Ed.

FRENCH RÉSUMÉ

On essaie de transmettre l'experience dans l'application d'un nouvelle méthode pour l'enseignement de la Statistique dans quelques courses universitaires. On a l'intention de changer la méthode traditionnelle pour une méthode d'apprentissage active pour améliorer la qualité de l'enseignement de la Statische.