TEACHING PROBABILITY USING A GOOGLE SITE.

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ABSTRACT
TICs has been outlined in the National Plan of Education 2006-2116 like one of the Ends of the Education in the XXI Century in their instance of pedagogic Renovation and with the use of TICs in education. Our challenge as teachers is to achieve a critical formation of the use of these new technologies, and in the province of Santa Fe the Pedagogic Laboratories complete this function. These Laboratories are instances of formation with the purpose of recreating our own practices and innovation spaces in our way of teaching that it becomes in experimentation in new learning ways. We present a Site of Probability as a different strategy of incorporating the Probability at school. When working this way the students are motivated, they participate generating a space of social construction of learning, a significant learning that they will be able to apply to other situations of the daily life.

During the period 2010 Professors of secondary school began to participate in Pedagogic Laboratories implemented in Santa Fe Province through the direction of ORT Schools of Buenos Aires Province, Argentina.

These Laboratories are instances of continuous education formation with the purpose of recreating the own practices of teachers and innovation spaces in the way of teaching as an experimentation in new learning ways.

The objectives of these laboratories are:

- To develop the teaching processes - learning by means of the use of the TIC.
- To offer learning opportunities starting from tools that propitiates the participation and collaboration.
- To strengthen the organization of professors' groups for the planning and elaboration of didactic materials of the different subjects in virtual environments of learning.

Starting from the second semester of the 2011 in some schools of Santa Fe Province, selected in a first stage for the implementation of Pedagogic Laboratories, teachers begin to work together with a Coordinator of Laboratory who collaborates in the same school institution whose function is:

1. To present to teachers the proposal of the Pedagogic Laboratories
2. To motivate their colleagues to produce projects of creation of materials.
3. To disclose the productions of the Laboratories of Santa Fe and to motivate the use of such resources
4. To enable and to accompany the process of production of materials.

This way, in the School of Guided Teaching N°623 were incorporated projects TIC's with an Effect Multiplier through the teachers who have participated in the Project of Pedagogic

Laboratories 2011, transmitting their knowledge to their colleagues. Because of these some teachers take courage to incorporate technological different tools on contents that they want to develop in their classes.

The Technologies of the Information and the Communication are a part of the emergent technologies that usually identify with the initials TIC and make reference to the use of computer means to store, to process and to diffuse all type of information or processes of educational formation.

The American Association of the Technologies of the Information (ITAA) defines them as the study, the design, the development, the maintenance and the administration of the information by means of computer systems. This includes all the computer systems not only the computer, the most versatile, but also the cellular telephones, the television, the radio, the digital newspapers.

The Technologies of the Information try on the employment of computers and computer applications to transform, to store, to negotiate, to protect, to diffuse and to locate the necessary data for any human activity.

Nowadays, technological instrumentation is a priority in the communication.

The Technologies of the Communication show the difference between a developed civilization and another in roads of. They possess the characteristic of helping to communicate because the geographical distances and the time are disappeared.

It is hence that the implication of the technologies should be developed inside a social construction

In the schools it must be shown up the challenge of administering the new technologies and of using them in an effective way. The difference is not given to have or don't a unite computer and access to Internet in schools, but rather the difference shows up among the teachers who know what to make with it and those who do not.

The blackboard doesn't have why to face the computer, as two technologies of historical different moments that today cohabit in our schools but rather they can be completely complementary in didactic diverse proposals.

Today's students feel very motivated by the applications multimedia's and interactive that Internet provides: the monitor presents infinity of colors, the computer transmits sounds and effects that undoubtedly the blackboard cannot give, and in this point is that the educational challenge is being able to supplement means in an appropriate way to the contents that they seek to become trained.

Morduchowics (2008) affirmed that it is not necessary to have fear of technology, it is necessary to appropriate it to form in a critical use of it. A critical reading in Internet is fundamental in front of the great quantity of information that circulates, a good and appropriate use of all the languages that circulate in the net (Oral, Written, Hipertextual, Audiovisual, Multimedial) is also essential to act and to take advantage of to the maximum of possibilities that Internet offers us.

Our place as Teachers is to be able to offer a critical formation of the use of these new technologies. New configurations in the language written have also impacted with the coming of TICs. Chat and SMS mark a break with the rules of the writing and conventional spelling; many people think that this change impoverishes the language. It is interesting to think that as much SMS as Chat possess their specific logics, and their fundamental purpose is the quick communication among adolescents.

Muñiz (2010) suggested that teachers have to prepare virtual classes with structures based on the academic classes, technician and of management, to improve the learning of the students. Following these concepts the tasks that they organize must take in account three competitions:

Academic: to create an educational virtual scene starting from the definitions, concepts, properties the students need and applying pedagogic and didactic ideas .There must be proposed learning activities with situations of the real life.

Technical: to take advantage of the available technology of TIC, and to establish a flowing communication among the site and students to achieve a significant learning

Management: to drift, to direct and to carry out a pursuit of the activities of the students, fomenting among them the collaborative work and their self-regulation of times.

Taking in account all the advantages we have presented, as teachers of Mathematics we prepare a Google Site of Probability thinking that this topic is one of those more difficult for students of second year (14 years).

The site we present was developed in the Pedagogic Laboratory as a different strategy of incorporating the Probability in the school.

Now, we are going to explain the site.

Site: Introduction to Probability

The site consists of an Introduction to Probability with a video of YouTube of situations where the chance completes a very important list. Then, through activities the students in groups should arrive to the idea of Probability guided by the teacher. Then we give this concept so that students can appropriate it.

We propose in the site to work in groups of three, where they must write and explain which of the events presented are those which the possibilities to happen are significant and those which are not significant.

Then we present the concept of Probability and we ask them: What do we mean with the word Probability?

They have to discuss all together in the class and they have to give a response.

We continue the site with the History of Probability. It is shown up a synthesis of the history of Probability with the incorporation of extracted images of different pages of the web and a video on the time of the Gentleman of Mere so as to be located in the XVII Century, ascended from YouTube. Figure 1 gives an extract:

Figure 1:Gentleman of Mere from YouTube.

"The old civilizations, explained the chance by means of the divine will. In Greece and Rome, they used the resulting configuration of throwing four dice to predict the future and to reveal the favorable or unfavorable will of the gods. Practical similar they have been in so different cultures as the Tibetan one, the Indian or the bean"

Then we ask if they know when the study of Probability began and we present in the site a Video to locate students in the XVII century in the life of the Gentleman of Mèré. After this introduction the site present the Theory of the Probability and Definitions. Starting from a new video, in groups of 3 they have to investigate and define:

- Aleatory experiment
- Sample space
- Sample Point
- Event
- Mutually excluding events

Then, they have to verify their definitions and discuss them. Several examples are given in the site that will help them to secure the knowledge that they acquired. We present the different probabilities, their definitions, examples and properties. They have to work in groups, analyze these definitions and properties and solve problems applying the recently acquired knowledge.

The theory of rules of Probability is given, they have to work in groups analyzing them and the problems presented, after they have to discuss and solve problems which results can be checked in the site.

A self-evaluation will allow students to have conscience of their own process of learning and for the teacher is very important to evaluate the material imparted and also if the students have acquired the imparted knowledge.

Our experience has demonstrated us that when working this way the students are motivated, they participate generating a space of social construction of the learning, a significant learning that will be able to apply to other situations of their daily life.

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