

# USE OF ON-LINE FORUMS IN THE INNOVATING CHILDREN SUMMIT

## *Case: ENI Virtual 2008*

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**Abstract:** Children in official elementary schools in Panama are the main beneficiaries of Conéctate al Conocimiento project, this makes necessary almost compulsory, to offer spaces where they can build collaboratively and publish their knowledge. A place where a permanent dialogue could take place among all those that belong to the Conéctate community which are students, teachers, educational authorities, community and the collaborators that work directly for the project. The “Primer Encuentro de Niños Innovadores” ENI (First Innovating Children Summit), was an opportunity for the main actors of Conéctate al Conocimiento project (the students) to take the leading roles. This event was planned by students from 22 schools, who carried out learning projects and presented them at the event to students from other 100 schools that were invited. Currently the number of schools that are part of Conéctate al Conocimiento are over 700 schools (all of them are provided with infrastructure, equipment and connectivity). This presented the necessity that the students from the rest of the schools could take part in the event, that’s why the space “ENI Virtual” was enabled. Forum rooms were created for the students to intervene at a distance and contribute in the project topics. For the above mentioned, a great quantity of posts was obtained. The goal of this paper is to classify, count and show in what manners the students dialogue in the forums. We are observing the measure in which the messages fall into: 1) messages that are outside the context of the topic, 2) messages that are questions or doubts, 3) messages that are presented as a challenging question to the participants, 4) messages that are simple answers, 5) messages that are opinions about the contributions. The analysis of all the messages from each room is being completed, which is why only partial results are being presented. It is the first time that Panamanian students (children) from different parts of the country take part massively in forums, for this, the results would allow to adjust the manner in which we could promote the use of forums as a tool for dialogue among the children.

## 1 INTRODUCTION

Innovation in education and the use of technology to promote meaningful learning seem to be topics well spread and which share expectations that are very similar. Currently, we count with a varied group of tools thought to develop abilities in the students. However, in many cases, the tool itself can not get to be effective enough. It is increasingly evident that in the immediate future the ability to develop, maybe with the utmost importance is the ability to learn meaningfully and constantly. It requires that, in that process, unlearn and learn become the focus of permanent attention for the institutions that are called to promote these abilities, in other words, in the schools.

In Panamá, the panoramic seems favorable, with the implementation of projects that pursue the development of these critical abilities for its citizen. An initiative Government of Panamá, which promise to become the state educational policy, it is *Conéctate al Conocimiento* (Tarté, 2006). This project aims to achieve meaningful changes in the Panamanian educational system with the help of tools such as concept maps (Novak & Gowin, 1984), promoting curricular integration and with a new approach towards knowledge construction, all of the above is implemented using technology as the facilitating mean. Conéctate al Conocimiento offers training for the teachers, follow-up and support visits in the schools, provides the school with *Aulas de Innovación* (Barrios, Rodríguez & Sánchez,

2008) where technology and connectivity is integrated in a non techno-centered model of the use of ICT's.

It is unavoidable that such projects are closely tied to those that are called to be the main actors of the process: teachers and students. Without rejecting other actors that are involving in the educational task, the main sphere in which any educational change takes place in the classroom with the teacher-student dichotomy (this relationship can be assumed as an independent entity). The teacher is the link through which any effort to improve the system can come through. Of course, the students are the direct beneficiaries of any educational innovation initiative that pretends to improve their learning.

The necessity to answer a question arises, how can we make the students take the initiative in their own learning? In a context at the classroom level it could be promoted that the students be autonomous and decide important aspects in the educational tasks. However, when it comes to a scale of hundreds of schools and hundreds of thousands of students, how do we guarantee that they could express? And how can we systematize what is happening when they communicate so it can show us what is it they are learning?

A tool that can help the students to express is the discussion forums. The on-line forums represents an excellent way to have a conversation around a topic. Nowadays, there are numerous forum tools at the users' disposition. Besides, valuable information can be extracted when the conversations in these forums is analyzed. The information that can be obtained and processed can fall into two categories: a) Information in regards to the forum tool (proper use/limitations), b) Classification and analysis of the users' posts, c) Posterior correlations among the posts and other variables associated to the students.

The goal is not only to process the information that is obtained from the forums (for instance the number of posts generated in a room, or by a user, etc.) Due to the fact that it is dealing with students, we are interested in the manner they interact, with the purpose of finding better ways to promote on-line collaborative learning. That is why it is necessary to analyze the conversation in a different manner in order to know which the most favorable factors of the use of the forums are and where are opportunities to improve. The aforementioned helps to learn how to achieve that Conéctate al Conocimiento project scalability could be supported by technology in a manner that assures equity and the same quality, without downgrading the purpose regardless the scale that has to be achieved.

## **2 FORUMS AND THEIR APPLICATION IN EDUCATION**

Forums in Internet (Omelas, 2007) allow to discuss particular topics, they concentrate the opinion of many people from different places, in an asynchronous manner, it means that communication among people does not require them to use the platform simultaneously (synchronic). Each person that is connected, regardless of the moment, have access to the messages that are recorded in the topic of the discussion.

The implementation of fóruns as a tool for discussion is widely spread nowadays. The use of forums to address educational topics is also very popular among the community. However, the use in which this paper is focused is the one in which the forums discussions becomes the media the teacher can use to stimulate the processes of collaborative learning. In this sense, the mediating task of the teacher is fundamental, because a forum where children participate should be oriented and encouraged with pedagogical questions (Chacón, 2006). It is important to be clear the freedoms the users in the forums have to express, so the opinion of a student in regards to a topic can't be graded as right or wrong, in this way the tool forums looks to be a part of the process of meaningful learning (Ausubel 1968) and not the expose the product. The internal dynamic of the forums, allows the teacher to establish which are the aspects that are being learned and which has to be retaken. So, the forum can be used as a good stage for the knowledge of the students in regard to a topic; it means the forum can be a way to assess learning, understanding assessment from a broader perspective, the global vision of the processes and not just the simple act of classification. Even when it is attempted to allow the students to take part in their own assessment, it is needed from the part of the teacher a good management of the student-teacher dialogue plus some psychological skills (Gisbert & Gil, 1996), that is even more significant if the dialogue takes place in a forum.

## **3 CONTEXT: ENCUESTO DE NIÑOS INNOVADORES 2008**

Addressing the possibility of sharing with the students their learning process, the initiative of the Encuentro de Niños Innovadores ENI (Innovating

Children Summit) arises, organized by children for children. Teams of children that represented 22 schools, were in charge of organizing the whole summit. Every team of students carried out collaborative projects between schools (a project for every two schools, for a total of eleven different projects). The organization of the event was based in everything the organizing students asked for carrying out the activities. It was them who chose all the details. On the part of the collaborators of Conéctate al Conocimiento, it was offered all the support to make the preparation and made the event a success. Delegations of students and teachers from the 100 schools, that also take part in Conéctate al Conocimiento, that were invited as guests the day of the event. The guests could enjoy the stands where the organizing students' project were presented, in these stands many activities that involved the use of ICT's were carried out. The local press attended the event, because it was something never seen before in Panamá: An event organized by children with the purpose of sharing with other children what they are learning in the implementation of the strategies of Conéctate al Conocimiento.

### 3.1 ENI Virtual

The physical event was a huge success, however, if the scale of visitors is pondered, it is easy to see that a representation of 5 children per each school that was present during the ENI. To offer an opportunity to a greater number of students, technology had to take the place it deserve for its capacity to “unfold space and time”. Due to the aforementioned, another version of the event was organized. Called ENI Virtual, it permitted the participation of a greater number of children, provided they had Internet access in the Innovation Classrooms (Barrios, Rodríguez, Sánchez) of their schools across the country. The students are already habituated to the use of ICT's because of the different software specially CmapTools (Cañas et al, 2004) , which is a software design for the construction of concept maps in an environment that facilitates collaboration (Novak, 1998). The abovementioned motivated us to habilitate a site on-line for the students to use without prior training. The site (eni.conectate.edu.pa) consisted on a page which describes the event; it featured a live broadcast room for each project and the forum rooms. It was proposed to invite 500 schools and provide them with a generic user for each school; with that user any student of the school could take part in the event

via Internet. That feature didn't allow us to recognize the users as individuals, only as the school group. At first the goal was to invite all the schools in the project with excellent connectivity (521 schools) all over the country, however, the invitation effort and the notification to the school couldn't be done on time, besides the event day there were technical problems the access the site, all these problems only permitted the access to 43 generic users. So there was only the participation of 43 school groups, without differentiated the individuals.

### 3.2 Forum room preparation

During the ENI, forum rooms were fitted out. For each topic, a forum room with the same name was fitted out, so there were eleven forum rooms available. In Table 1 the rooms and their names (topic of the students' collaborative project).

The users could access any room and write their comments, regardless of the number of comments by user, or the number of times that they can enter a given room.

Table 2: Total of Rooms and Tonics

Room	Topic
1	What are violence effects? Effects and Causes.
2	How technology has evolved? How would the world of the future be?
3	How to use the computer correctly?
4	Conservation of Sea Turtles.
5	Culture diversity
6	Endangered ecosystems, Flora and Fauna
7	Global Warming
8	The Human Body
9	The Solar System
10	Bay Environmental Cleaning: How to diminish pollution
11	Drug Abuse and its consequences.

## 4 METHODOLOGY

Trying to obtain some kind of useful information about the impact of the forum tools implementation as a mean to collaborate, a classification about the kind of comments found was made.

*Classification of post type (the examples are taken from the children posts):*

- **Out of the topic context (OC):** Greeting and comments that don't add any contribution to the discussion fall in this category. It is not necessarily

negative messages, but they are not simply related to the topic being discussed. Example: Room 3 (Drug abuse and its consequences) “Hello people, I’m glad to be with you in Conéctate., I am Rosa and I’m 12 years old and you?” Room 5 (Sea turtle conservation) “I love the chocolate milkshake...”

- **Doubt (D):** Questions related to a room topic from someone that needs to know or doesn’t know, or doesn’t remember or just require help to do something. Examples: Room 2 (Endangered ecosystems) “Can someone tell me what is a biotic factor?” “How many kinds of ecosystems are there?”

- **Challenge (C):** It is a question if the form of a situation or problem, which is asked to the participants in an interesting discussion about a topic. Generally, it requires different points of view to solve it. Examples: Room 5 (Sea turtles conservation) “hello, my name is Gloribeth, I would like to ask you what would you do to beneficiate the conservation of sea turtles?”

- **Answer (A):** Answer to a question-doubt with a valid contribution and expresses the manner in which the problem can be solved. It can also be answering a question-challenge, giving an answer to the interrogation. Example: Room 2 (Correct use of the computer) someone asked “what do you like about computers?” And someone answered “What I like about computers is that it help us in our tasks and assignments and it is also fun because of the games”

- **Contribution (Con):** Tries to add fundamental aspects of the topics to help complementing the information that had been generated in the forum. It is a contribution that seeks to give more details about the topic. The contribution can be a personal opinion or consulted references. Example: Room 1 (What are violence effects?) “I think violence affects our everyday life. Violence is observer in all the country, there is not a day without some headline in the news saying that there was violence somewhere, we like everybody else don’t feel protected, not even in our homes”.

It is important to point out that it is only a classification, that is why the posts types don’t possess any particular weight, it means, that there is no criteria to point out what kind of post would have a greater or minor consideration in some rubric scale (this scale can be developed but it is beyond the immediate possibilities of this descriptive analysis).

After setting this simple classification, we proceed to read each one of the messages that were posted in the eleven different rooms. There were a total of 1256 posts, of these 1197 were posts made by children, for now we will not take into account

the 59 posts made by adults (teachers and facilitators) to focus in the students interactions.

## 5 RESULTS

Trying to get some kind of useful information about the impact of the introduction of forums as a mean to collaborate, a classification was made in regards to the kind of posts found. In Table 2, the total of posts publish by room are shown.

Table 2: Total of posts publish per room by the children

Room	Published Posts	Room	Published Posts
1	89	7	69
2	36	8	64
3	116	9	84
4	124	10	40
5	40	11	268
6	267		

Regarding the distribution of percentages per room, there is Table 3. In Table 4 the percentages of type of commentary are shown per room, just as the mean values for this percentages and their respective dispersion.

Table 3: Percentage of each type of comment in respect to the total of comments (posts)

Type de post	OC	D	C	A	Con
%	13.2	4.5	21.5	23.2	37.6

Table 4: Distribution of Percentages of each kind of comment per room

Room	OC	D	C	A	Con
1	11.2	2.2	16.9	22.5	47.2
2	13.9	5.6	22.2	22.2	36.1
3	12.9	0.0	21.6	25.9	39.7
4	13.7	3.2	26.6	24.2	32.3
5	17.5	10.0	22.5	25.0	25.0
6	14.9	1.5	22.4	23.5	37.7
7	11.6	7.2	26.1	24.6	30.4
8	9.4	3.1	25.0	26.6	35.9
9	11.9	6.0	23.8	26.2	32.1
10	12.5	15.0	22.5	27.5	22.5
11	13.1	7.5	16.5	18.7	44.2
Mean	13.0	5.6	22.4	24.3	34.8
Δ	1.5	3.2	2.2	1.9	5.8

## 6 DISCUSSION

As it has been mentioned, it is only descriptive results from the ENI Virtual event. Some interesting aspects that can be observed are:

The OC comments has a 13.2% of the total posts and a percentage mean or 13.0% (and a low dispersion), meaning that they can't be discarded, which compel us to sub-classify this category and look deeper in what manner were these comments out of context, that is, how many of them were greetings, jokes or comments that don't contribute at all, this could give us a idea about the ethic behavior that the students displayed in the forum rooms. The doubts were very little in most of the rooms, except in Room 10 (Bay Environmental Cleaning: How to diminish pollution) that presented a 15.0%. But with a total of 4.5% in all rooms, it could be seen that the students didn't ask clarifying questions to each other, probably this is due to the fact that the students know most of terms and ideas that were expressed because the topics dealt with were, in their majority, topics from the regular classes' curricula. It is interesting to see that the Challenge (C) with 21.5% in total, and with a distribution very homogeneous (22.4% mean and 2.2 dispersion), meaning that most of the rooms provided many challenge comments, the students opened the floor to reflection asking questions prompted questioning. In regards to Contributions, it could be seen that the highest percentage was obtained in Room 1(What are violence effects? Effects and Causes.) with 47.1% and Room 11(Drug Abuse and its consequences) with 44.2%. it is interesting to notice that they are topics with a high social content, so it is probable that the students were reflecting in their comment what they were living in their communities, which in most of the cases are communities in marginal parts of the country.

## 7 CONCLUSIONS & NEXT STEPS

With the implementations that are taking place in the official elementary schools in Panamá that work with Conéctate al Conocimiento project, the use of ICT's has intensified and requires common spaces for discussion and collaboration that allow teachers and students to construct knowledge together. The on-line platforms that are being developed seek to fulfill this objective. Within these platforms, "Talking" is one of the main activities that are taken into account; here is where the implementation of

on-line forums takes relevance. Even so if it is forums that are going to be used by students (children between 6 and 12 years old), because the tool must be at the service of learning. The forums offer very good opportunities to open the dialogue and allow for the task of the teacher as mediator, with the use of pedagogical questions that stimulate the comprehension of the topics, so the forum allow the teacher to assess the processes of learning in a very dynamic and effective manner.

ENI Virtual allowed the children across the country to express their ideas using the forums platform. The task of Conéctate al Conocimiento is to provide a permanent space for expression, which makes necessary to establish procedures that allow us to know what is going on the forums, so we can foresee any difficulty and to take on the use of these tools without losing the constructivist approach in the process.

In this article, we have shown the preliminary result of what happened in a particular case. It is pretended to obtain a methodology of analysis of comments that is fast and easy to apply and that also considers the forum user population.

Among the short term goals in regards to this are:

a) To conclude the analysis of all the results, taking into consideration associating factors related to population (schools) and the type of comments. This would permit us to have some light about the possible correlated between geographical placement versus interests, types of comments or level of participation.

b) To develop a rubric that allows us to value the comments generated in the rooms. This rubric could be based in other already in existence, however, it is necessary to establish one in particular, due to variables that are common to the people with whom we work (for example; many of the teachers and students have never used a computer, much less discussed in an on-line forum and at a distance with other people).

c) To implement a platform for the Conéctate community called "Punto de Encuentro" (Meeting Point). This Web site is actually been develop and pursues being a common space for all the users to collaborate, communicate, publish and construct knowledge collaboratively.

d) Training for teachers related to the use of forums. It is necessary for the teacher to know and to be able to use the tools with which they count with (among them), always from a perspective of improving the learning processes, so these won't become a problem and interrupt their activities,

neither that the tools becomes the object of study, quite the contrary, that they could value pedagogical strategies that involve the use of this tools without forcing them.

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