

# DISCUSSION FORUM'S EFFECTIVENESS ANALYSIS IN THE DE TEACHING AND LEARNING PROCESSES

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## SUMMARY

This work presents the data of a quantitative and qualitative analysis about the relevance and the effectiveness of the discussion forum in the processes of teaching and learning in DE. The research was accomplished from the case study of a distance specialization course.

By means of a quantitative methodology, the main characteristics related to the students' participation in the course's discussion forums were identified and, by means of a qualitative methodology, it was pursued to know the educators' perception in relation to the motivational factors and to the evaluation criteria of this activity.

The results pointed to indispensable issues to the planning, elaboration and accompaniment of the discussion forum activity, in the pursuit of a better use of the resources that potentiate its effectiveness.

**Key words:** Discussion forum; teaching and learning; DE

## **1 – Introduction**

Distance education (DE) has been highlighting as an educational modality in the last decades, especially after the internet access expansion. Today, it is possible to say that DE is in a maturation process of issues related to its best teaching and learning techniques. This reanalysis is associated to the modern world socio-cultural and technological transformations that, mandatorily, conducts to the DE parameters' discussion under the light of globalization.

About technology, it must be mentioned that the advances in this area have been fundamental for the Virtual Learning Environments (VLEs) to provide, each time more, the development of tools based on a bigger interaction among users <sup>[1]</sup>. Thereby, one of the big challenges of distance education institutions has been the choice of tools which can support the teaching and learning processes, increasing the students' cognitive potential.

In this list of possibilities, the asynchronous communication tools that do not depend on time and place are inserted <sup>[2]</sup>. These tools can revolutionize the interaction process between teachers and students, once that they change the traditional paradigms by means of which this communication has been occurring along the time.

The discussion forum is an example of an asynchronous tool that has revealed itself as an important resource in the teaching and learning process in DE. It is about a collective communication mechanism, used in the general interest issues' discussion, related to any course content. The discussion forums support themselves in the interaction concept and in pedagogical repercussions which consider the subject in his human development process. The employability and effectiveness of this instrument in DE is the focus of the study that here is presented.

## **2 – Theoretical Substantiation**

### **2.1 – Distance Education Challenges**

Against the preoccupation in aligning the hodiernal teaching problems to satisfactory results from the students, it is suggested to think each individual as a contributor in the teaching and learning process, overcoming the transmission versus knowledge production dichotomy, taking to a learning conception that

permits to redeem: a) the unit of knowledge, by means of a view of the relation subject/object, in which it is affirmed, at the same time, the world objectivity and the subjectivity; b) the individuals' life concrete reality, as fundament for every and any investigation <sup>[1]</sup>.

Considering the DE context, in which the teaching and learning process occurs at every moment and at any place, it becomes relevant to imagine these concepts' applicability ways. So that there is a more dialogical, interactive and problematizing education, it is necessary distance education to be organized in a way that favors the establishment of relations among the addressed contents and that contributes to the creation of a net of meanings.

In this context, the student's and the teacher's roles change: the student needs more autonomy to learn; and the teacher turns to be moderator and facilitator in the teaching and learning process <sup>[3]</sup>. To that effect, the teacher needs to release himself from the traditional methods and understand which the new education epistemes are: centered process in the student; process based on problems; flexible learning; democratic posture; mediated learning by the computer in VLE <sup>[4]</sup>.

With basis on this new perspective, the teacher needs to develop strategies which adapt themselves to the distance education context, avoiding the simple presential model's transposition under penalty of no use of the potentialities that the VLE can offer in the conquest of positive results in DE <sup>[4]</sup>.

It is possible then to adopt teaching and learning strategies in virtual environments, using the technology, communication, language and collaboration <sup>[5]</sup>. One of the tools which enables, from a VLE, these strategies' adoption are the discussion forums, dealt as follows.

## **2.2 – Discussion Forums**

The discussion forum is an asynchronous tool whose messages are organized by subject in a central local and, normally, the answers are chained and aligned one below the other. The interaction background is documented in a continuous way <sup>[6]</sup>.

As an asynchronous tool, it permits the debate to extend and enables the participation in distinct moments, each one at its time. The forum access can be made to post a message from a question initially put by the discussion mediator

or to answer a message posted by another participant. In the dialogue dynamic, each forum integrant can publish his opinions, question, provide clarification, argue, agree, refute, contest, negotiate etc <sup>[7]</sup>.

It is a space that permits wide interactivity in which the individual, explicit manifestations build a collective intelligence by means of everybody's collaboration. The collective intelligence is distributed everywhere, incessantly valued, coordinated in real time, which results in the competences' effective mobilization. According to this perspective, the teacher plays the role in stimulating the students, facilitating the information exchange and the knowledge construction, from the debate, the criticism, learning and teaching simultaneously. With the *internet* resources, it gets each time easier to deploy these possibilities to amplify (in the time and in the space) the collective intelligence <sup>[8]</sup>.

In this way, the individual potentialities must be valued and encouraged so that there are intense discussions and reflections which will result in the collective knowledge's construction. The accompaniment and intervention in the discussion forum environment are the active DE teacher's and tutor's fundamental roles. Among the teacher's responsibilities in the discussion forum use, the following are mentioned: to facilitate, to moderate, to motivate and to promote participation; to answer promptly and to provide proper (constructive) *feedback*; to evaluate, to review and to modify the teaching practices according to the *feedback* <sup>[9]</sup>.

### **3 – Methodological Procedures**

As a way to attend this study's general objective and to identify the factors which can potentiate the discussion forums' effectiveness, a quanti/quali research methodology was adopted, based on a PUC Minas Virtual specialization course experiences, accomplished from May 2009 until April 2011.

By means of a quantitative study, it was sought to identify the analyzed course's students' behavior in relation to the participation in discussion forums. For that, the participations in all the proposed forums were raised. The course had 58 (fifty-eight) students and 11 (eleven) subjects were offered, 2 (two) of

which did not take part in the data basis because they did not propose any discussion forum activity, totalizing 9 (nine) subjects in analysis.

The data basis was compound by 2909 (two thousand nine hundred and nine) documents which represent the total number of participations in discussion forums during the course. The teachers' and tutors' participations were excluded, so that only data related to the students' behavior was obtained.

As a way to raise the analyzed course teachers' perception in relation to the discussion forums' importance and applicability in the teaching and learning processes, it was opted to the qualitative method, with deep interviews' application. Four of the 12 (twelve) teachers who acted in the course were interviewed. The recruiting occurred by means of the snowball sampling, in which the own answerers indicated other possible participants.

## 4 – Results Presentation and Discussion

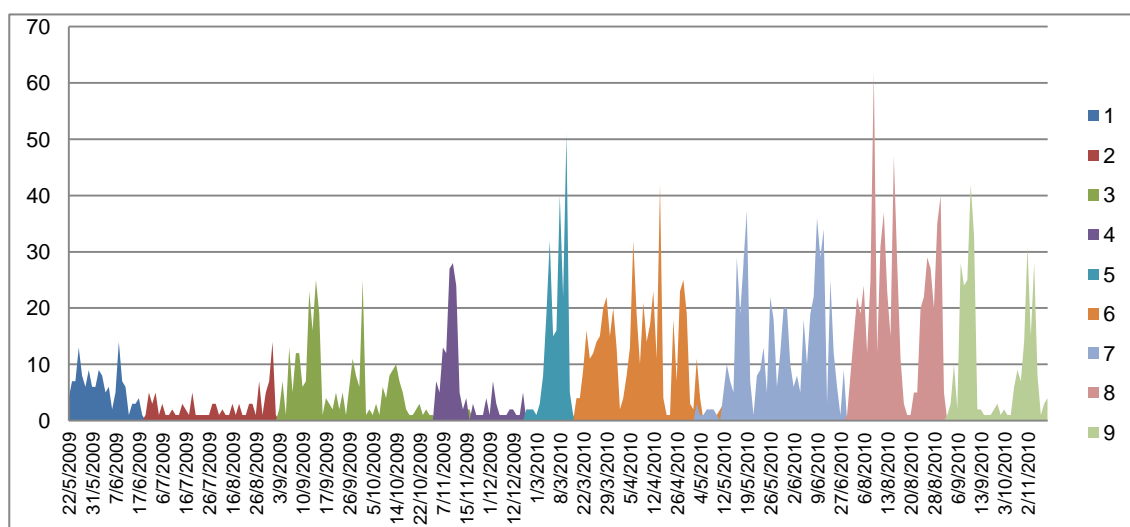
### 4.1 – Quantitative Study Analysis

Basing on the raised data in PUC Minas Virtual specialization course's subjects' discussion forums, it was identified that 2909 (two thousand nine hundred and nine) participations occurred, considering the analyzed subjects (look Table 1). The highest participation volume happened on subject 8 (eight), with 605 (six hundred and five) insertions. Subject 5 (five) obtained the highest participation per student, reaching 3.78 (three point seventy-eight) insertions. The table also demonstrates that there was no relation between the activity term and the volume of participations per student.

Subject	Number of Participations	Duration Average Time	Average Participation Per Student
1	140	21	2,41
2	105	35	0,91
3	302	15	1,74
4	162	21	1,40
5	219	9	3,78
6	518	14	2,98
7	547	10	3,14
8	605	9	3,48
9	311	31	2,68
<b>General Total</b>	<b>2909</b>		
<b>Average</b>	<b>323</b>	<b>18</b>	<b>2,50</b>

Table1. Participations' behavior in discussion forums.  
Source: Ambiente Virtual de Aprendizagem – PUC Minas, 2011.

The course's forum activities average duration was of 18 (eighteen) days. The biggest duration was of 35 (thirty-five) days and the smallest was of 9 (nine) days. Graphic 1 presents the participation variation in the period when there were discussion forum activities in the subject. The highest point in terms of number of insertions in only one day was registered in subject 9 (nine): 62 (sixty-two). It is worth mentioning that this behavior did not have any relation with the proximity of the deadline to the forum finalization.



Graphic 1. Participations per Subject per Date

Source: Ambiente Virtual de Aprendizagem – PUC Minas, 2011.

## 4.2 – Qualitative Study Analysis

The interview's initial approach was about identifying the reason why the interviewed made use of the discussion forum tool in the given subject's development. The information obtained point that the tendency was of presentation of a speech based on what the literature establishes.

“The assumed DE model's guiding view is ruled in the dialogicity and interactivity. For this reason, the Discussion Forum assumes a big value, because it allows the interaction between the teacher and the students as much as among the own students. ... It is in this interaction that the recognized otherness and identity allow the communication and the relation teacher-student. Besides, the Forum contributes significantly for the student to see himself as part of a group, this is, it promotes the feeling of belonging.” (Interviewed 2)

Next, it was asked to the interviewed about the forum activity's construction and leading way. The answers indicated the concession of freedom of expression to the students during the discussion. The activity observation is the most applied accompaniment method. In the interviewed's view, the intervention is necessary when the posts are inappropriate for the proposed theme. Moreover, they relate to accomplish an insertions' synthesis, pointing considerations and questions.

"The best way that I found was to propose an activity in which the students need to do something practical: to search a material out of the environment and to publish in the forum. After this action, everybody must comment about the colleagues' materials' post. My participation is of observation and of evaluation in the students' approaches' quality, from what has been presented in the subject's contents... In case something inappropriate appears in the discussions and I need to interfere, I enter into the discussion."  
(Interviewed 1)

"I create small compilations and summaries to guide the students along the activities. I think that the teacher must search the posted information, organize and repass to the students, accomplishing a shutdown in the end of the forum. Furthermore, to make the normal interventions..." (Interviewed 4)

The motivation for participation in the forums' proposed discussions is a preoccupation from the interviewed teachers. Strategies which instigate the participants to collaborate with substantial considerations about the theme are constantly searched. The reports and the literature reveal that the little prepare of the participants do not habilitate them to a consistent participation <sup>[10]</sup>.

"The well elaborated activities always have great results, in my point of view. What are well elaborated activities for me? Those are the ones which instigate the student to do something which is related to his interest, which makes him to move, to reflect about something new and interesting, so that he needs to move to search the information, to make him know how to search this information etc. This kind of activity in the forum normally increases the number of participants and the quality of the participation, beyond the fact that the students return more times to verify what the colleagues have posted." (Interviewed 1)



When asked to make comments about the students' participation's behavior in discussion forums, the interviewed highlighted the main disparities between the interventions.

“There are interventions which are not consistent. Simply support the colleagues. They do not contest because they do not have any arguments... In the beginning, the participation is smaller... They stay waiting a comment... The most courageous and well prepared begin... From this point on, it intensifies and decreases in the end... In the end, they tend to plagiarize the first ones.” (Interviewed 3)

With regard to the discussion forum activity's evaluation criteria, the interviewed teachers cited the quantity of accesses and the posted content's quality and depth. They specially underlined how much each participant's contribution and intervention are relevant.

“Each student's evaluation is given by his number of accesses (at least three, in different days); by the pertinence of the posted content; by the quality of the comments/deliberations and questionings made to the Forum participants. It is understood that the participants must contribute to the instauration of an instigative and reflexive environment.” (Interviewed 2)

At last, the interviewed were questioned about the discussion forum tool's results. The answers proved the relevance attributed by the interviewed to this tool.

“For me, the most important are the acts of socialization, collaboration and, consequently, of the individual and joint construction. It is very difficult to say which results have been reached, because we do not have any access to the most personal students' processes, but I can say that I perceive a 'awakening' or a 'new look' about a determined subject in some students' speeches. I also perceive clearly that the forum permits a clearer comprehension of some concepts presented in the didactic materials, once it is more informal and it makes a more direct 'link' with the own colleagues' examples.” (Interviewed 1)

## **5 – Final Considerations**

From the quantitative and qualitative analysis presented in the previous section, it is possible to elaborate some final considerations about the study. The objective of this research was to raise the factors which conduct to the discussion forum effectiveness, as a way to potentiate this tool's results in the

DE teaching and learning processes. The literature reveals that this effectiveness is associated to the knowledge production from the interactive participation and the construction of a collective intelligence.

The raised formal aspects from the quantitative study point to the inexistence of a correlation between the proposed period for the activity development and the participation from the student. Furthermore, the quantity of participations in a discussion forum is not directly related to the interactivity reach. Some subjects can present a high level of participation, nevertheless guaranteeing all the students' involvement. Lastly, it was observed that, in general, the participation peaks do not occur on the preceding days of the activity deadline.

The information obtained by means of the quantitative study served to deepen the preponderant factors' analysis to the activity effectiveness. The material aspects detected by means of interviews highlight the importance of intrinsic questions to the activity and which are associated to the problems' solution like: the discussions superficiality, low interaction level, little teachers' and tutors' participation and evaluative processes' inadequacy<sup>[11]</sup>.

In this sense, according to the DE premises, the teacher must assume his mediator function in the teaching and learning process that, in relation to the discussion forum, requires a bigger attention to the planning, to the conduction and to the evaluation of the activity<sup>[12]</sup>.

With regard to the planning, it must attempt to the forum's objective's definition, from the structuration of a discussion axis consistent with the characteristics and experiences of the involved subjects. The activity conduction must involve the raise of consensus points obtained by means of the synthesis of the main ideas presented by the participants, as well as eventual reflection topics' insertions or complementary texts, which stimulate the debate and boost the forum environment. The evaluation should absorb procedural characteristics, with a view to the interactive relations' accompaniment's necessity at the moment when they occur.

Finally, it is worth noting that DE active professionals' continuous capacity is fundamental, so that they are capable of improving the discussion environments' activities as a way to guarantee the teaching and learning processes' effectiveness.

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