# E-MODERATION IN A THEMATIC SAMPLE OF ORKUT VIRTUAL COMMUNITIES: CHALLENGES AND OPPORTUNITIES

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#### Abstract

In today's society, the technologies have a role of prominence in all social segments, allowing the understanding of the new social structure - the network society - and thus a new economy in which information technology and communication tools are considered indispensable in handling the information and construction of knowledge by individuals. Therefore, this communication begins Introducing the concept of social network as a virtual space where information can be shared in a democratic and egalitarian, focusing our attention on Orkut. Then, we discuss the concept of virtual communities and finally, present an analytical study on the role of e-moderator in virtual communities of Orkut that focused on themes: "Web 2.0", "Teacher education" and "ICT". The objective of the study was to find out the e-moderators opinions and perceptions about their role in the community since the literature identifies him as the subject that streamlines and motivates the group, contributing to the integration and socialization of the members as well as to the construction of knowledge in the community. Results show that the e-moderator is the main actor responsible for the mediation of the process of interaction and knowledge sharing inside the community. We also verified that the quality of the topics discussed assumes a very important nature that influences and determines the participation and retention of members in a community. The e-moderator emerges as the key element in fostering virtual communities, yet it was perceived that e-moderators may not have a full awareness of the importance of his/her role, often assuming a more administrative than pedagogical function.

Keywords: E-moderation, Collaboration, Social Network, Orkut, Internet.

#### 1 INTRODUCTION

Nowadays, virtual social networks are spaces in which people of all ages, races, occupations, socio-economic backgrounds and even religions meet for different purposes: to make friends, to share experiences and knowledge and to keep themselves up to date in a changing, competitive and demanding global world. The formation of social networks as informal spaces for learning throughout life is a recurring theme that has been approached by several authors, including [1], [2], [3], [4] and [5].

Today, with the spread of the Internet and other digital technologies, there has been a proliferation of these environments (social networks), on existing platforms or even through specific software (for example, MySpace, Facebook, Ning, Orkut, etc.). This has allowed the creation of virtual communities, which may form as a means of socialising, but which at the same time can serve as an instrument of expression and communication through the discussion of various topics, thereby including the construction of knowledge in a collaborative way.

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## 2 VIRTUAL COMMUNITIES

According to the relevant literature, virtual communities can function as informal spaces for collaborative learning, where, through mutual support and interaction between members, information can be transformed into knowledge. In fact, as stated by[6], "the community is developed not only on shared interests, which corresponds to its simplest form, but also by integrating the diversity of representations, including 'social voice' as regards" [6].

However, not every virtual community can be considered as a virtual learning community. To be considered as such, a virtual community must present three attributes: cognitive presence, social presence and teaching presence.

Cognitive presence is defined as a component that allows participants from a given community to construct meanings through discussions held in that context [7], [8]. The cognitive presence reflects the development of higher psychological processes, giving individuals the opportunity to establish relationships with other existing knowledge, acquiring higher levels of competence in terms of analysis and critical reflection.

The social presence relates to the creation of an enabling environment so that participants feel comfortable and safe when expressing their ideas. This is crucial in a community because it prepares members to develop the ability to express their opinions and points of view and, above all, to respect the diversity of the opinions in the group. Thus, it becomes a very important support through which the cognitive presence can become effective, since it prepares people to learn collaboratively and to discuss ideas using solid arguments and within set ethical principles, thus promoting critical thinking and also learning [7]; [9].

Finally, the teaching presence, which is understood to be the provider of the components outlined above, aims to promote a space conducive to the sharing of knowledge and the construction of meaning.

Therefore, the presence of these elements in a virtual community can bring about multiple forms of communication, and transform cyberspace into an infinite channel for multiple learning experiences. It must be considered that it is both challenging and motivating to belong to a group, to participate and to be recognised as an active member [10]. When socially integrated into the group, the individual seeks to act in accordance with its rules and, according to the author, learns about much more than the focus of his own interest. In other words, individuals learn to live as part of a group, to listen and to overcome conflicts by respecting a diverse range of opinions.

#### 3 E-MODERATION

The term e-moderation can be defined "as a regulatory activity of procedures for the organization [sic] of groups and learning that takes place in virtual environments, with particular attention to the ways of promotion, management and monitoring" [6]. This is because what can promote the expansion or reduction of the learning environment is the constant streams of interaction between participants, which is directly related to technical and human components, thereby ensuring the quality of connections.

However, for this to happen, as noted by [11], monitoring by a leader or an e-moderator capable of energising and involving all members in the group is fundamentally important. It is vital that they always have in mind the aim of creating a friendly and socially positive environment which is conducive to collaborative learning, prolonging the network's "life cycle, i.e., its sustainability" [11].

According to [12], the e-moderator should know how to recognise and value the contributions of participants in the community during the discussion process; they should also have credibility within the group so that members feel free to participate, encouraging the flow of information. They should make appropriate interventions by means of providing feedback, an evaluative summary at the end of or even during the discussion, so that the construction of knowledge is seen as a result of the interactions established inside the group. Moreover, they should have skills and abilities related to online learning; they should have communication skills, be able to master the content that will be addressed and, above all, they must have knowledge of the technologies in use. Finally, the e-moderator should have some individual attributes such as creativity, motivation and being emotionally sensitive to the factors (diversity etc.) that can interfere with online interactions, with the aim of establishing a shared leadership.

Many authors as [13] consider that four aspects in the role of the e-moderator in a virtual community: pedagogical, social, technical and administrative. The pedagogical is his capacity to direct the discussions to the proposed community objectives. In other words, it can be seen as the ability to moderate the community discussions so that don't miss the focus as well to enhance the change of ideas and socialisation. The social role aims to maintain the identity of the group creating an environment that promotes the discussions and guarantees mutual respect. The technical refers to the technological expertise and software knowledge needed to create and moderate a virtual community.

Finally the administrative role deals with issues related to the management of a virtual environment. In general, e-moderation is an activity that requires planning, implementing and closure of online activities [5]. The first stage consists in organising the topics to be discussed considering didactics and pedagogical frameworks as well as the relevance they have for the community in order to stimulate and encourage participation. The rules of social coexistence must be defined at this stage as well as the type of language and the form of the discourse. We may speak of a sort of planning of the activity that must consider all details and forms of overcoming unsuspected drawbacks that need to be resolved.

The second stage, the most interventional, is the one that defines the vital cycle of the life inside the community because it enrols all the process of discussion and interaction between the members through the shared experience among peers and the shared construction of collective knowledge. At last we must consider the closure of the activities that demands from the e-moderator synthesis skills in order to draw the main conclusions from the issues discussed that become sources for the members to deepen their knowledge and so go further in their learning process.

In order to accomplish his mission it is crucial for the e-moderator to consider that this requires some pre-requisites to be taken into account as suggested by [14]:

- To know the group, its expectations and previous experiences in order to organize activities that are interesting and challenging to the community;
- To incentivate the participants to join the discussions, respecting the diversity of the opinions, allowing the community to become a democratic sharedspace where all opinions are welcome and encouraged;
- To guarantee the socialization inside the community giving the members the opportunity to contribute with new ideas and experiences;
- To respect the rhythm and time each member needs, giving the necessary feedback and maintaining the unity of the group;
- To identify the issues members are interested in and always considering the focus of the discussions as a main goal to consider;
- Always contribute to diminish the social distance among the members considering both individual and collective interests.

Considering the contributions of the different authors that discussed these issues, we recognise [12] as the most relevant to understand the e-moderator role in an online community. The model proposed to analyse the e-moderation issue is part of a larger framework that considers the complexity of cognitive, motivational and social processes of learning in virtual environments. One of the assumptions she values is that people learn when interacting with other people mediated by the technologies, because as suggested by [12] success comes from the integration of issues coming from the collaborative mediation and the technologies.

#### 4 METHOD

This empirical study was descriptive, analytical and exploratory [15] and involved an analysis of the Orkut social networking communities that meet the following three criteria: i) they were online until March 29, 2009, ii) they had a minimum of 20 members, and iii) they addressed issues relating to the set of descriptors or keywords education, training and technology.

The choice of the Orkut social network was due to the fact that, first, it is the social network preferred by the Portuguese speaking community and, second, compared with Facebook, MySpace, Hi5 and Ning, it was the social network in which a larger number of communities that addressed the issues we were interested in was found. Finally, Orkut, according to the literature review carried out, has had more educational research published, and this was an important argument given the exploratory nature of this research, to which all theoretical and empirical contributions were major benefits.

An electronic questionnaire designed using the free SurveyMonkey tool was applied to all of the e-moderators of all of the communities studied. The purpose of this procedure was to obtain additional information regarding the functions of the e-moderators/mediators in the moderated communities in question.

## 4.1 Data collection

The electronic questionnaire comprised two sections. The first aimed to obtain data for the purposes of sample characterisation and the second investigated specific aspects related to the role of the emoderators of the virtual communities on Orkut. As suggested in the literature, the questionnaires included a brief introductory text that greeted the respondents and presented the theme and purpose of the questionnaire [16].

The first section comprised by four multiple choice questions concerning the following variables: gender, age, education and knowledge of information technology (IT). This section also included: i) an open question designed to identify the e-moderators' profession; ii) an open question designed to find out if the e-moderators were also using other social networking websites, and iii) a multiple-choice question, intended to ascertain the views of the e-moderators as to what is considered to be the ideal frequency of posting, considering that, according to the literature review conducted, the flow of posts may be an indicator of participation and the effective involvement of the e-moderator in the community.

The second section focussed on the opinions, attitudes and perceptions of the moderators from the communities studied. For this reason, we provided a Likert-type scale for 12 propositions concerning specific aspects of the activity of the e-moderator in the community, two of which were negative and 10 of which were positive, in order to avoid a pattern of response [17]. The Likert scale offered responses ranging from total agreement (TA) to total disagreement (TD).

The questionnaire ended with an open question, which was intended to record the experiences of the e-moderators, listing all of the positive and negative aspects related to their experience in the e-moderation process of virtual communities.

In May 2009, the questionnaires were sent to all 27 e-moderators of the moderated communities that took part in this study. For the purposes of this study, we used the message tool that Orkut offers. This study used a convenience sample, which is equivalent to saying that their representation is limited to the study group.

#### 4.2 Results

Data were analysed using Excel software and presented using frequency tables and graphs. For the interpretation of data from the Likert scale, a weighted mean was calculated. As the scale had 5 points we considered that values between 1-2,5 denoted that respondents did not agree with the statement; values betweeb 2,6 and 3,5 represented indifference; and values higher than 3,6 denoted agreement with the statement. For open ended questions, exploratory content analysis techniques were undertaken [18].

#### 4.2.1 Sample characteristics

Of the 27 e-moderators, only 18 answered the questionnaire. Of these, 11 were male and seven were female. With respect to age, we observed that eight of the subjects were between 18 and 28 years old, eight were 29-39 years old and only two were 40-50 years old. With regard to education, six were graduates, six held post-graduated degrees, four had Masters degrees and two held PhDs. Regarding their occupation, two individuals were educators, five were teachers, three were students, one was an advertiser, one was a programmer, one was in sales and five did not report their occupation.

In relation to their levels of computer literacy, it was found that the majority considered themselves to possess advanced technological knowledge (10 subjects), seven reported an average level of knowledge and one had basic knowledge. In this sense, we concur with the ideas of [12], who emphasised that technological skills are regarded as key competencies that e-moderators should have so that they can immerse themselves in online communication systems, in order to ensure a familiarity with the environment and, mainly, to contribute to the practice and visiting in these environments become a routine activity.

With respect to their participation in other social networks, we found that the communities most frequented by the respondents were Facebook, LinkedIn, Hi5, Ning, Twitter and DiHITT.

When asked what they considered to be the ideal frequency for posting on topics or themes in the forum, we found that for five of the respondents, the ideal would be "daily", for six it was weekly, for five it was fortnightly and for two it was monthly.

#### 4.2.2 The e-moderators perceptions of their role and functions

This section of the questionnaire included 12 statements concerning specific aspects of the business of e-moderating, all derived from the literature review [19]. These items took the form of a Likert scale with five degrees of agreement, ranging from disagree to agree, which were assigned the following numeric values: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. In order to interpret the overall average values obtained using this scale, we set the following criteria:

- Average values between 1 and 2.5 = disagreement;
- Average values between 2.6 and 3.5 = neither agreement nor disagreement;
- Average values equal to or greater than 3.6 = agreement.

The first item, which related to the fact that the e-moderator is a key element in keeping the community active, was clearly agreed with (3.8), with 44% of the respondents expressing "agreement" and 28% expressing "complete agreement" with the statement. In our view, this is a good indicator of an awareness of the importance that the e-moderator has in his role in the community.

When asked whether it was more important in terms of ensuring the life of the community to focus on the quality of the topics discussed rather than the number of forums, most respondents agreed with the statement: 12 totally agreed, five agreed and one did not agree nor disagree i.e. no respondents disagreed with the statement. The average value obtained for this item was 4.6, which is expressive of the high degree of agreement found in this sample. These data confirm what has been reported in the literature, namely, that the amount of topics discussed does not guarantee success and the involvement of members, but the quality of the themes are more important in order to provide multiple opportunities for discussion, leading to the production of communal knowledge in a constructivist perspective [20].

Regarding the issue of the importance of the e-moderator in being responsible for the sharing of knowledge in cyberspace, the participants' opinions were divided, with 10 dissenting opinions, four agreements and four who were indifferent. This can be justified by the fact that the figure and the role of the e-moderator in virtual communities is still an unexplored topic and rarely discussed inside the educated scientific community, which means that this task is performed intuitively and with minimal systematisation.

In regards to the essential nature of communication skills in the performance of e-moderators, the group expressed a reasonable level of agreement (3.8), with 14 respondents selecting "agree/strongly agree", three who disagreed or strongly disagreed and who were indifferent. This finding reinforces the need for the e-moderator to use a "plain language, concise and objective, thus preventing your comments or suggestions to have dubious or ironic interpretations, facilitating the flow of information and improving the interaction with members and the mediation of knowledge" [21].

When asked if it was important that e-moderators knew the characteristics of the participants, 69% of respondents expressed agreement with the statement, which is reflected in the average value (3.8). These data confirm the data reported in the literature regarding how important it is that the e-moderator has an accurate perception of the needs of individual members of the group in order to encourage the participation of each member [21].

Concerning the role of the e-moderator in resolving conflicts in the community, respondents expressed a considerable degree of agreement with the statement, with 83.5% of the respondents selecting "agree/fully agree", translating into a high average value (4.0). We consider this to be an important aspect with regard to consciousness, as this indicates that e-moderators must always act with prudence, wisdom and discernment for the proper management of conflict in the community that they moderate.

The next question asked whether the e-moderator should (or should not) make a consult and negotiate with the community prior to introducing issues for discussion within the group. The respondents expressed neutral opinions, reflected in an average value of 3.5. This data suggests that prior consultation and negotiation with the group regarding the issues to be discussed is not a priority for the e-moderators who formed our sample, which may be a cause for concern. In fact, as noted by [21], e-moderators should know how to negotiate with members of the community, knowing what their interests and needs are, investing in a mutual commitment and a shared repertoire [22]. This relationship should not be restricted to the mere management of internal and administrative aspects of the community.

When we enter an institution or organisation, how we are welcomed is a contributing factor to whether we decide to remain and participate. Therefore, we were interested in assessing whether this was a criterion that should be taken into account in the moderation of communities. The respondents stated that they did not have an opinion on the subject (with an average value of 3.3). However, we believe that the group gave a neutral opinion as they ignored the importance of being a good host in cyberspace, as Cabero-Almenara [23] summarised when he argues that "the moderator function as to do with the development of a series of activities, among which we specify: welcome to those who participate in online community, facilitate the development of interest groups for thematic work."

In the next question, we investigated whether it was important that the e-moderator monitored the group; the answers obtained showed a reasonable degree of agreement with the statement, expressed in the weighted average value of 3.8, which shows an awareness of the importance of this role in guiding the discussion between the participators and inspiring the dynamics of the community.

In the next item, which stated that messages from the participants should not be left unanswered, the group of respondents again expressed a clear agreement with the statement (44% totally agreed and 22% agreed, giving a weighted average equal to 3.9). This is important because it shows that feedback is an operational issue to which e-moderators should pay special attention, and that they should be mindful that in virtual communities they have the responsibility for the "guidance of the participants to achieve the construction of learning" [22].

Another point related to the need for social courtesy inside the community. The high degree of agreement (4.1) with this items shows that e-moderators are aware of the need to ensure the life of the community, contributing to the consolidation of a "positive social environment" [23].

The final statement called for an opinion on whether the e-moderator should (or should not) be the element that encourages reflective practice in the community, contributing to the construction of meaning. The respondents expressed moderate agreement with this item (3.6), with ten answering that they agreed or strongly agreed, and six who were indifferent. In this sense, our results are in line with those of [12], when he says that e-moderators, although they believe in and assign a great deal of importance to the construction of knowledge in a collaborative virtual environment, also have to develop better technical, teaching, communication skills, among others, so that they may contribute and help the group in the learning process.

An overview of the comparative results obtained from these 12 items using a Likert scale can be viewed on the bar chart shown in "Fig. 1".

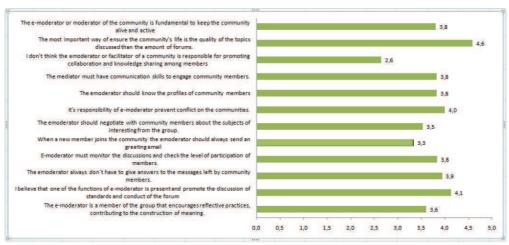


Fig. 1: Perceptions of the role of the e-moderator in a virtual community

As shown in Fig. 1, we found that the statements which achieved the highest degree of agreement among the respondents were "the quality of themes is more important than the amount of forums in ensuring the life of the community" (4.6), and "the e-moderator should present and discuss good manners in the forum" (4.1). In contrast, the items that received lower levels of agreement from the respondents were "it is important that the e-moderator should send an email to welcome each new member" (3.3), and one, the answers to which emphasised that the e-moderator should not be the one responsible for promoting collaboration and knowledge sharing among members (2.6, which reversed represents a level of agreement of 3.4).

In summary, we can say that, despite high computer literacy and technological training, the e-moderators in this sample still lack many of the skills that they should possess in order to manage and lead a virtual community. According to [12], these skills are: being a person who inspires confidence, being a facilitator, being a collaborator, being creative, being dynamic, etc. Only by mastering these skills will an e-moderator be able to "drive" and help the group to develop their independence and thus provide a shared construction of knowledge.

## 4.2.3 Positive and negative aspects of e-moderation

The final question on the questionnaire consisted of an open-ended question that asked respondents about the positive and negative aspects associated with their own experiences of e-moderation in virtual communities.

Of the 18 e-moderators who replied to the questionnaire, only 11 answered this question. By analysing the responses, we were able to confirm many of the issues cited above, namely that these respondents, despite fulfilling the function of e-moderators of virtual communities, do not properly perform the duties assigned to them in the relevant literature. We found that sometimes these e-moderators take only a figurative role in the community, and are both complacent and irrelevant. In other cases, the e-moderators themselves, although aware of the importance of the role assigned to them, do not fulfill this role due to a lack of time, as can be seen in the responses of two of the respondents:

"Unfortunately, this condition requires time that we do not always have to offer, but the challenge of fostering discussions on thematic propositions which contribute to the socialization [sic] of knowledge is the motivation that ensures the continuation of this practice."

"As a positive aspect, I see this function as an hobby that for some people may even become a job, as has happened for some people (C!, B!, Gordo Nerd ...) who now have blogs and can even make money from them. It is also a way to communicate with people about common interests and have fun. One negative aspect is the responsibility of monitoring what they [participants] are talking in a group that you are responsible for and also because you have to take time, sometimes time you do not have, to devote yourself to organisation. I think that is the reason."

We also found that some of the e-moderators lacked motivation, as they believed that many of the members who enrolled in the community were not interested in discussing and sharing knowledge, but simply had the desire to assert themselves in this great global village called the Internet. In addition, it was also found that some respondents believed in the potential of virtual communities as sites for the socialisation of knowledge, but did not use them as such, which seems to be a contradiction.

In short, factors such as time, the knowledge of what should be the functions of an e-moderator as well as ignorance of the factors that may contribute to the collaborative construction of knowledge in the virtual world, may be the reasons behind the results presented in this study. Another factor that may explain these data is that virtual communities are a "new type" of interaction in cyberspace which still needs more time for people to recognise them, not only as a meeting place, but also as a space where a variety of informal forms of learning can occur.

# 5 CONCLUSION

In this paper we present an exploratory survey conducted in a sample of e-moderators from the social network Orkut. The main goal of the research was to understand the process of managing a virtual community in order to verify if those environments had conditions to become informal spaces for knowledge construction and sharing as suggested by the literature.

Data show that the e-moderators are not yet aware of the importance of the role they play inside the community even considering the specificity of the sample of the communities that were considered for the analysis: all communities were organized around the thematic axis ICT - Teacher Education – Web 2.0. In fact, the e-moderators from the sample did not value the importance of supporting and guiding the members of the community in the process of the exchange of ideas and construction of shared meanings inside the group [12].

We understand from the answers obtained that most e-moderators of the sample play a mere administrative role relegating to a second plan the potential of the environment to perform educational activities that could contribute to enrich members learning experiences. Many are not yet aware of the importance of the role they can play in the promotion of learning inside the community; others justify their attitude saying they do not have time to do further; others say they lack motivation, due to the

attitude of members who enroll in the community but are not interested in discussing and sharing knowledge.

We then conclude that virtual communities can become spaces for informal learning where reflective practices can enhance collaborative learning. But for that to happen both members and e-moderators need to adopt a new attitude when they join a virtual community that aims to become a shared space for knowledge construction.

In short, future developments will require a greater commitment, not only from the e-moderators in order that they may wisely lead the discussions in the community, but also from members, who should use these spaces in a more conscious way, aiming towards concrete and well defined goals because only then will these environments become informal spaces for learning. As [24] has stressed, this requires that each member is "able to interact within their context to personalize [sic] information and construct meaning their own" [24].

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