

Communication as a Prerequisite for Forming Online Learning Communities: a case study

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Abstract

Many researchers and educators have emphasized the importance of forming and developing online learning communities. Moreover, the leading role that the forms and the contents of communication between learners have in the creation and functioning of these communities is stressed. In this paper we present and comment on the findings of a research project that studied the aforementioned communication issues between students of undergraduate and postgraduate courses, at the Hellenic Open University. The analysis of the empirical data of this research, shows that the role of communication in the educational activities in which the subjects of our research were involved is extremely weak and consequently the formation of online learning communities is rudimentary.

Keywords: online learning community, distance learning, communication

1. Introduction

The main inquiry of the research project the findings of which are presented and commented in this text, concerns the forms of communication that were developed among students participating in undergraduate and postgraduate courses, offered by the Hellenic Open University by distance education methods.

The theoretical framework for the investigation of this question was composed of three perspectives that approach and analyze the factors, which, among other equally important ones, shape the effectiveness of adult distance education and they have been sufficiently analyzed in the relevant literature. The first perspective concerns the formation and operation of online learning communities, the second one the interaction that develops in distance education between learners as well as between instructors and learners, and the third perspective concerns the role of communication in distance education and the technological means that mediate this communication.

2. Conceptual Framework

2.1 Online Learning Communities

Researchers and educators have frequently emphasized the importance of shaping and developing communities within online learning environments (Du et. al. 2010; Palloff & Pratt, 2007a).

An online learning community can be defined as a group of people who utilize the internet and suitable applications to communicate and collaborate among themselves with the goal in constructing and exchanging knowledge (Palloff & Pratt, 2007b).

The most commonly used and popular computer software applications include both synchronous and asynchronous communication programs, as well as file storage and distribution programs. However, a prerequisite for harnessing the potential of these communities in online learning environments is the appreciation of their significance by the learners themselves since communication and collaboration, both among students and

between students and their instructors, are essential for the creation of online learning communities (Kohls & Schümmer, 2014).

In addition to the previous ones, as it has been set by Du et al. (2010, p. 121) “Compared to other learning communities, the online learning communities has some special characteristics in terms of interactivity, collaboration, trusting relationships, and communication media”.

This means that an online learning community is actualized when learners feel a connection among themselves as well as with their instructor; show signs of communicative behaviors which aim at reducing social and psychological distance between themselves; share common interests; trust each other, and willing to support each other; they actively involved in every available form of two-way communication; and pursue common learning objectives (Rovai, 2002a). In our view, these terms situate the notion of online learning communities within the sociocultural approach to learning which was developed by Vygotsky (1978) and his successors.

Three elements are now considered crucial for the creation and development of online learning communities in related literature: the interaction of participants in a learning process, the communication among learners and between learners and their instructor, and the technological communication and educational tools that mediate interaction and communication (Du et al., 2010).

2.2 Interaction in Distance Education

The concept of interaction in distance education is defined from two theoretical perspectives: communication theories and learning theories (Woo & Reeves, 2007). Communication theories define interaction as the process through which individuals and objects mutually influence each other, and when this process has a positive effect on learning then interaction becomes meaningful.

Learning theories, on the other hand, define interaction about case-specific learning environments. Behaviorist theories of learning, for instance, define interaction in terms of stimuli, responses, and reinforcements provided by the mutual effects of their elements whereas theories of social constructivism focus on these interaction elements that contribute to the creation of meaning, such as dialogue and communication within learning communities. Therefore, the definition of interaction depends on how learning is defined.

Accepting the conceptual multiplicity of the interaction, Thurmond and Wambach (2004), summarized the relevant literature and identified four types of interaction in distance education learning activities: (1) interaction between learners and the instructional materials (2) interaction among learners themselves (3) interaction between learners and their instructors and (4) interaction between learners and the technological tools employed in the educational process. The first three forms of interaction are common in both conventional and distance education, though with different qualitative characteristics in each of these forms of education. The fourth type of interaction is exceptionally important, especially for educational programs which include software packages in their instructional materials or make extensive use of the internet.

The importance of interaction in distance education has been emphasized by many researchers since it is considered one of the most important processes in the educational process while at the same time the concept of interaction in distance education has been the focus of many studies (Muirhead, 2000; Tuovinen, 2000).

2.3 Communication in Distance Education

Various representations of the communication process may be found in the relevant literature, each of which based on different assumptions or definitions of the concept of communication itself (Cobley & Schulz, 2013).

What is clear, however, is that every communication which involves learners, trainers, technological tools, and fields of learning is an extremely complex process directly dependent on the context in which it develops. According to all available data, neither simple linear representation of communication process (transfer of information from a sender to one or more receivers through a medium) nor representations of the diffusion of communication (the spread of information and its reception by potential recipients) seem to effectively represent the communication process that is taking place in distance education activities. However, we may find representations of the communication process which incorporate essential characteristics of their framework as well as the social negotiation of meaning in an effort to better interpret the complexity of this process. For example, Schirato and Yell (2000, p. 1), adopting Bourdieu's theoretical analyses of human practices and activities, define communication as "...the practice of producing meanings and negotiating these meanings within the cultural framework of those involved in communication..." In other words, communication practices always develop within a cultural framework and are shaped by it.

From a similar theoretical approach, Kress (1988, p. 4-5) offers the following clarifications concerning the concept of communication.

First, communication is about meanings rather than about information. By making such distinction I wish to include matters such as attitudes, social relations, individual feelings, social positioning of sender and receiver, as well as those things normally thought of as an information – statements about the physical and social worlds... Second, communication is about the production and consumption of meaning in actual processes of communication. Therefore, attention will need to be paid to consumers of meaning and to their activity in this process as much as to producers of meaning. Third, the processes of communication take place in a socially and culturally formed world. Hence communication never involves 'just individuals' expressing 'their' meanings. The meanings are produced and consumed by individuals who are already socially and culturally shaped and who draw on their meanings of their culture and social groups. Fourth, the processes of communication are much more and other than the 'sharing of meaning', or the 'mutual construction of meaning'. Societies consist of multiplicities of social and cultural groupings, and interactions between and across such groupings are likely to involve contradiction and contestation as they are to involve 'sharing'... So, fifth and last, the processes of communication are likely to be based on difference and on the resolution of difference at one and the same time.

Given that the relevant literature suggests that communication is essential for the development of a sense of community, the integration of various options of communication can be seen as an integral component for the establishment of an online learning community (Dawson, 2006; Rovai, 2002b). At the same time, however, for an effective functioning of an online learning community, it is necessary among the topics of communication of the participants issues related to the content of education and their relevant obligations as well as their peer support availabilities to be included.

Discussing issues related to the content of education and their relevant obligations, learners exchange information, express thoughts, and ideas, ask and answer questions about the content of their lessons, share ideas for the organization of their work, assess their efforts or comment among themselves about the responses to assignment questions and the solutions

to exercises. Communications among participants in a learning community about their availabilities to support their peers in whom they express their sympathy for problems, provide support in difficulties encountered in solving problems, demonstrate solidarity and emotional support, even discuss issues not directly related to their studies contribute to the creation of an atmosphere which reinforces collaborative learning.

In any case, Wood and Smith's (2005) assertion that a learning community requires a minimum number of communicative exchanges among its members is plausible given that simply accessing online content or reading forum posts does not support the development of a social presence or identity among fellow members, and as a result, does not contribute to the building of a learning community.

3. Communication Tools for Distance Education

In the last decades, there has been a rapid evolution in communication technologies and an intensification of their use with analogous, in extent and intensity, consequences in distance education (Fevolden & Tømte, 2015).

While traditional distance education utilized conventional communication technologies such as the telephone and fax, to facilitate interpersonal communication after the 1980's technological advancements, among them satellite systems, teleconferencing software, internet chat applications, asynchronous online discussions (forums), and many more made the "face-to-face" distance education possible, allowing both auditory and visual contact between learners as well as between learners and their instructors (Keegan, 2001). The transition to wireless communication brought about a "wireless revolution" in distance education, often referred as e-learning, which bridged the geographical gap that separates students from the educational institutions, the educational teams and the instructors.

Given the fact that all of us are becoming increasingly familiar with the use of various and different forms of communication, it is reasonable to assume that the choice of the communication medium is determined not only by our preference for a particular medium but also by its availability and its effectiveness in each learning situation (Sahasrabudhea & Kanungo, 2014).

One of the distinctions in the communication media that it has been established is between synchronous media, which offer opportunities for direct communication and asynchronous media, in which a period of time elapses between the reception of a message and its response. It is widely accepted the assumption that through the use of technological means for communication, whether they are synchronous or asynchronous, some elements of non-verbal communication are lost to varying degrees. (Anzari & Pratiwi, 2021; Stodel, et. al. 2006).

However, rather than focusing on assumptions that basic elements of human behavior change when new technologies mediate human relationships, it is preferable to consider how these change through the mediation of new technologies (Chambers, 2013). In any case, the rapid development of new information and communication technologies and their combined use with the development of new technological means requires a constant revision of "human relations."

On such a ground many studies have been conducted in recent decades, aiming to assess the effectiveness of information and communication technologies in learning. These studies have concluded that the primary contribution to learning comes from teaching methodology, while technology serves as an important but mediating tool. Therefore, in the context of distance education, the focus should not be solely on the technological tools themselves, but primarily on the educational content and teaching practices provided that both of them are specified on the basis of the self-efficacy needs of the adult learner in the processing of cognitive issues and in the gradual acquisition of knowledge (Lionarakis, 2006). In addition, educators are

required to possess the necessary knowledge and skills which are needed for the effective use of information and communication technologies in the teaching process, in combination with the necessary skills for promoting collaborative learning among learners.

Whatever the case may be, the e-learning technologies have undoubtedly changed the behaviors of people during the processes of education and learning as well as their attitudes towards them.

Finally, it should be noted that studies on the advantages and disadvantages of synchronous and asynchronous communication media in online learning programs do not reveal substantial differences between them concerning substantial aspects of communication both among learners as well as between learners and instructors.

Taking all of the above into consideration, we decided instead of focusing our interest on the most suitable forms of communication in distance learning, to first examine, in the context of Greek settings, the intentions, views, and forms of communication of participants in online learning programs, and this has been attempted in the research presented in this paper.

4. Methodology of the Research

As previously mentioned, the research reported here focused on aspects of communication which was developed both among themselves and with their instructors by students following a distance education program.

The data were collected from undergraduates and postgraduate students of the Hellenic Open University who had just completed distance education courses. Fourteen (14) students participated in our research, which were selected so as to form a representative group that allowed us to put forward indicative conclusions and to highlight facts from their communication, as well as to trace the significance they attribute to communication both among themselves and with their instructors during their studies.

Our sample is a purposive or a judgment sample, formed by selecting individuals on the basis on their willingness to participate in our research, the number of distance education courses they had attended and the researcher's subjective assessment of their eagerness to provide information, express thoughts, or conveys emotions about the phenomenon under investigation. In contrast to random samples, which aim at selecting to select individuals who are representative of various characteristics of a population, a purposive sample focuses on choosing individuals with characteristics that effectively contribute to the specific research (Patton, 2015). Therefore, a purposive sample is not random and does not follow a systematic sampling method or has a specific sample structure; thus, there is no need to specify a minimum number of subjects. The probabilities of error in each purposive sample cannot be calculated, and the representativeness of the sample within the target population is not guaranteed. Consequently, the generalization of our findings to the entire target population may not be valid, and this represents a limitation to the validity of the present research.

The research data were collected during autumn of 2022 through semi-structured interviews. The interviews included questions related to communication acts of students both among themselves and with their instructors, aiming to explore the forms, frequency, discussion topics, and significance they attribute to communication during their studies. Through the analysis of the data offered by the answers to these questions, it can be traced the contribution of communication with the specific characteristics in shaping the conditions necessary for the creation of an online learning community. The interviews were analyzed using thematic analysis, a method for analyzing qualitative data, seeking to identify, analyze, and interpret structures of meaning or "themes" found in research data (Braun & Clarke, 2006). As put by Clarke & Braun (2017, p. 297), "A key feature of the method is its flexibility in relation to research questions, sample size and composition, data collection method, and

approaches to identifying meanings” through the analysis of qualitative data. In a few words, thematic analysis involves the following steps: (1) transcription of the interviews or narratives, (2) studying and identifying excerpts that provide information related to the research question, (3) understanding the meaning of these excerpts and assigning conceptual labels (data coding), and (4) determining themes in which the conceptual labels are grouped (Braun & Clarke, 2006, p. 87).

5. Research Findings

From the analysis of the interviews with the aforementioned method, interesting findings emerged. These findings are briefly presented below, accompanied by illustrative excerpts from the interviews on a case-by-case basis, while providing introductory comments for each of these findings.

5.1. The Quest of Communication

The students of our sample, despite the fact that they recognize the value of communicating with each other, made little effort during their studies to establish a consistent communication with their fellow students utilising the asynchronous communication forum that they had available from the university.

Participant 4: *"...Personally, I used the forum for exchanging opinions and materials very little because I noticed that only a minority of my class was responsive to this particular means of communication. ...personally, I have made little use of the forum's facility to exchange ideas and material with my fellow students, as after few initial attempts I found out that only a minority of them was involved in this particular medium of communication. There were some attempts to exchange teaching materials, but there was no substantial communication, and most students did not follow up so as to be generated an opportunity for constructive dialogue..."*

Participant 5: *"...Yes, I made some attempts to communicate through the forum, but the students who come in and follow the discussions are not more than five or six from the whole class of nearly thirty. It would be very useful if there was some way to engage more fellow students for dialogue and exchange of views..."*

Participant 9: *"I have not had the chance to collaborate with my fellow students through the forum participating in a discussion or submitting a group work. Although the University forum offers opportunities for discussion groups, I have the impression that they are not encouraged, and their use is not promoted by the instructors. Any form of relationship among learners in our group through the forums is rather limited, if not non-existent at all..."*

5.2. The Need for Communication

According to indications that emerge from the analysis of respondents' answers to corresponding questions, an objective need for communication is created in the online programs, which in our case seems not to be covered by the forum offered by their program of study, and as a result the official forum has been replaced by other social networking programs and mainly by Facebook. A bias can be assumed here against the institutionalized forms of communication, the interpretation of which, however, requires further research.

Participant 4: *"... I rarely used the forum of our program. Just some posts in the forum. We, in our class, mostly used a Facebook group we formed where we exchanged information among ourselves ..."*

Participant 7: *"... Although I participated a couple of times in a discussion which took place in the forum of our program of studies, finally, the only thing that served me was the personal communication I have had with fellow students, either by phone whenever necessary or through social media, mostly Facebook..."*

Participant 10: *"... Yes, we communicated with each other for the absolutely formal requirements. However, if our forum was working supportively, I and other fellow students would not have created communication alternatives on social media..."*

Participant 2: *"...I joined a Facebook group created by fellow students to communicate and exchange material, and we also communicated frequently via personal emails about all the issues we are concerned in our studies..."*

Participant 3: *"...I didn't have a Facebook account, but this year I joined a group created by our fellow students and from there I learned a lot of information about our studies..."*

Participant 5: *"... I occasionally join Facebook groups to communicate and share material with my fellow students. These groups have formed by students according to the course of studies we are following. Less frequently, we communicate via emails..."*

Participant 8: *"... I used emails a lot and, to a large extent, social media...our studies forum is not convenient for me..."*

Participant 11: *"...Throughout my studies I tried to have regular communication with my fellow students. I joined Facebook groups, I followed websites run by fellow graduate students and I kept an eye on few other websites managed by study groups from other universities..."*

Participant 12: *"...I am a member of a group on Facebook ... I am constantly on Facebook, and I often receive messages from our group about our studies... This is very useful..."*

5.3. Doubts about Communication

Just like in traditional educational settings, we also come across students in online learning programs who are hesitant to interact with others in the social milieu that their coursework creates. As a result, they either decline to communicate in both directions with their teachers and fellow students or they question the value of communicating in any way when it comes to their academic pursuits (Dabaj, 2011).

Participant 6: *"... No, I didn't communicate with any of my fellow students because I didn't want to ... I didn't feel comfortable sharing my views publicly. However, I was reading the questions and answers being shared on the forum of our program of studies..."*

Participant 3: *"... I didn't have any particular communication with my fellow students... I'm a little embarrassed to be publicly commented on... this kind of communication through forum is a bit impersonal... I've happened to be in a discussion of fellow students who were "slandering" a fellow student about her questions in the forum. I wouldn't want such a thing for myself..."*

5.4. Communication of Students with their Instructors

As revealed by our data, the primary forms of communication between students of our sample and their instructors or their supervisors were telephone discussions and email exchanges through their personal emails.

Participant 4: *"... Only for coursework I use the communication forum of our program studies ... for questions or various inquiries I prefer communication with colleagues or instructors via email or even by phone..."*

Participant 6: *"No, I didn't use the communication forum of our program of studies... I preferred telephone communications and email exchanges..."*

It seems that even in online learning face-to-face communication is the one that enjoys the preference of the studies employing, however, facilities offered by the internet.

5.5. Forms of Communication

From the discussions developed during the interviews of our research, it was found that the students do not consider that asynchronous communication contributes to the creation of any form of learning community. They expressed in many ways a clear preference for synchronous forms of communication mostly in video conferencing.

Participant 1: *"... It would be much more useful and constructive if, for example, the possibility of video conferencing via Skype was offered, either for the content of our study or for providing additional clarification and material and even for exchanging views among students and instructors..."*

Participant 2: *"...I believe that the forum of our program of studies does not encourage initiatives. Communication between students would be preferable through scheduled video conferencing sessions, where productive exchange of opinions can take place among students and between students and instructors..."*

Participant 4: *"... I encountered difficulties in making use of our forum especially when searching something I needed ... let alone to communicate and discuss with the fellow students in our group..."*

5.6. Participation of Instructors in Communication

Many comments of the research participants expressed in their interviews indicated that the majority of their instructors do not attempt to transform the group of students of their course into an online learning community giving the necessary importance to communication among students as well as between students and them.

Participant 2: *"... I wouldn't say that our instructors, speaking in general, have encouraged us to ask for reading materials from other colleagues or request their opinions or even their assistance on our study-related matters..."*

Participant 5: *"... Unfortunately, our instructor has never encouraged us to communicate among ourselves... at least, it has never happened to me. I wish it would happen... I wish they not only motivate us but also facilitate us in some way..."*

Participant 7: *"...Our instructor neither motivated us nor showed us how to communicate with each other... I don't think anything like that has ever happened to our study group me ... I would definitely remember it if it had happened..."*

6. Discussion

Two main conclusions can be drawn from the research findings reported above.

A first conclusion is that the role of communication in the educational activities that the subjects of our research participated was extremely undervalued mainly mediated by social media, which almost exclusively utilize forms of asynchronous communication. Asynchronous communication precisely because it does not require the simultaneous online presence of students provides great flexibility in attending online educational programs. Many students prefer this form of communication perhaps because they are studying while working, meeting necessary family duties and fulfilling their various social obligations. Therefore, they have the opportunity at their convenience to exchange messages with other students or their instructors and at the same time have as much time as they need to think and work out questions, answers and comments in the dialogues going on between them.

However, it is the modern communication offered by video conferencing and messaging applications (forums, chat rooms, etc.) provided by specially designed platforms, as in the case of studies pursued by the students who participated in our research that contributes dynamically to building and developing online learning communities by creating the necessary

social environment and shaping the conditions for active discussions. In addition, modern communication eliminates the sense of isolation in many cases that students feel which is many times inherent in online learning.

Nevertheless, studies of the advantages and disadvantages of the two forms of communication, asynchronous and synchronous, in online learning programs do not point to essential differences between them regarding the issue of communication that mainly interested us. Therefore, instead of focusing our research efforts on the most appropriate form of communication, we believe that, particularly in the Greek case, we firstly have to look at the intentions, opinions, and forms of communication of the participants in online learning programs and this is what our research attempted at a primary level.

A second conclusion that emerged from our research data is that the formation of online learning communities by the students who participated in our research was either rudimentary or virtually nonexistent. This conclusion seems to be a logical consequence of the previous one.

As many researchers of online learning emphasize, the role of communication in the formation and development of learning communities is particularly important and consequently the existence of active learning communities is one of the essential factors that determine the effectiveness of online education programs.

From a socio-cultural perspective, which theoretically guides our research, knowledge is socially constructed, and communication is shaped and embedded into a social context. Therefore, the ways in which knowledge is acquired and exchanged constitute an essential dimension of any learning context. This is particularly relevant in online learning, where the nature of knowledge and the approaches to it are under ongoing investigation (Alavi & Duftner, 2005).

In online learning, the social construction of knowledge is primarily carried out through the mediation of written texts exchanged online, and learning takes place through various forms of communication. Knowledge and learning gradually coincide through communication and the cooperation that communication fosters.

The online discourse produced through asynchronous communication cannot be separated from the technology itself, but also from the social context it shapes. Broadly speaking, the technological and social dimensions of online learning are intertwined and inseparable. The technological dimension emerges in the specific context formed by the technological possibilities, while the social dimension is constructed through the communication, dialogue, and cooperation of the participants in a learning community. From this perspective, the conclusions mentioned above are not at all encouraging for the effectiveness of the online training programs offered in the context created by the structure and operation of the study program explored although without requirements of generalizations. But as preliminary findings, they need further research to confirm, deny, or amend them.

7. Instead of a Final Conclusion: Past and Future

Whenever we consider issues related to distance education, a crucial question arises: What could be, and actually is, the contribution of the internet to learning? Addressing this question Bruckman (2002) rephrases the question by replacing the word "internet" with the word "book". However, the answer to the question, "What can be the contribution of the book to learning?" seems self-evident, since for all of us "book" is synonymous with "learning."

Nevertheless, the essential answer is not only not self-evident but also not simple and it depends on many individual answers. Which book? Read in what social context? Since not all books are the same, and not all reading contexts are the same either. Learning through the

use of written texts involves not only the reader and the text but also the social context of the reading. The text, the book, the learner, the instructor, and the social context within which they exist and work together constitute a socio-technical system. That is, an amalgamation of technologies, people, and social practices, which, if well-designed and sufficiently functional, can support learning. Therefore, the question about the contribution of the internet to learning does not allow for a simple answer. The internet is an element of a new socio-technical system that offers excellent learning potentials. Hence, just as we are interested in which books, through what activities and with which social practices will support the learning of specific knowledge, we are also interested in which programs, through what activities and with which social practices, will support online learning.

Learning is a social process of knowledge construction and cannot be effective if it is deprived of the dimension of communication and interaction within an appropriate social context, such as that created in online learning communities. It is essential to underline, that communication is not just a rational and mechanistic process, nor a simple exchange of information. The feelings, attitudes, behaviours and relationships of the individuals involved in a communication process also determine its effectiveness (Jaques, 2001).

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