

Technology, Media Convergence and Learning Process in the Pedagogy Course at Distance Education

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Abstract:

The present article aims to discuss, the problematics of learning teaching in the modern world. In this context it is necessary to identify the factors that are unleashed by the universe of technology, seeking to make a reflection on the convergence of mediatic epistemology in the learning of pedagogy course by distance education. The present article analyzes whether the positive and negative points of convergence in education at a distance, in the process of teaching and learning that demonstrates the difficulties and the problems caused by lack of knowledge on the use of new technologies. With these

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assumptions, it is justified the development of pedagogical action through a workshop which can diminish the impact on the lack of knowledge on the use of new technologies and provide the convergence between the curriculum of the pedagogy course, pedagogical practice and resources used. In this context seeks to discuss use of technologies such as didactic resources through convergence in use of mobile phones, radio, tv, digital cameras, switches, internet, applications, printed materials and other, faced with the pedagogical practice from day to day work of education where it is necessary for convergence of curriculum, content (Discipline), methodology, didactics, Resources (material for implementation of content and media types).

Key words: Technology. Convergence. Media. Distance Education.

1. Introduction

The present article investigates the relation of convergences media driven in distance education of the graduate course of pedagogy - what is the influence of digital convergence in the learning of the pedagogy academics of Lapa Educational School (FAEL) pole. The survey assesses the situation of components, as the actions spokesman of the protagonization subjects, and social groups. The convergences, certainly, has vital role in cultural formation of a society, because in an era of information technology, new knowledge also emerges all the time. Despite technological the advances and convergence of telecommunications and the rapid development and popularization of the Internet enables a new tool for educational process. The fact is that the internet makes the configuration which enables the integration of images, sounds and text makes the Internet, as a new and an important possibility for distance learning.

According to Albuquerque (2000), the emergence of new social communities such as generation Y or Z, also called the millennium generation or generation of the Internet, developed

in an era of great technological advances and economic prosperity. In this context, there are some factors that are prevalent and essential for distance education offered on undergraduate courses, such as the use of various resources available for distance learning and education as books, video tapes, audio tapes, phone, fax, computer, TV as well as, video conferencing, radio and satellite TV broadcasted live by promoting a scenario of convergences media driven with integration of a large quantity of technology.

2. Mediatics Convergence

The virtual dependency is affecting millions of people all over the world, bound by the technologies where computers, instant messaging programs and the Internet, tools are used by many, as a means of recreation or even work. It is important to emphasize that society lives in constant transformations such as: cultural, social and technological. In this context education gain more strength in which individuals are able to acquire knowledge and gain help developing the means in which they are inserted.

According to Albuquerque and Sa (2000), at the beginning of the 21st century, there were new modes of socialization and integration, such as the changes in social behavior through the virtual reality that raised quickly through the technologies and transformations related to equipment that promoted interaction at real time, as everything was happening in the world. The society is converging into a single space of interaction media driven, there is no argument that the different electronic media assume an increasingly important role in the process of socialization, and education is part of these changes and even more for the pedagogy environment that is always handy, given the social and technological changes, this process was always understood as information pedagogy, the process of socialization of new technologies and the convergence of the action and the transformations of information into knowledge, that is, "only the knowledge, by means of different languages mediated or not by technology, ensures the possibility to act and interact in an effective way in modern society where the distance of the knowledge may condemn the individual to Isolation, discrimination and exclusion of their citizenship" (ABREU 1999, 12).

Educational innovations arising from the use of the most advanced technical resources for education with the emergence of Information and Communication Technology, ICT, but also the techniques of planning for ways of processing new theories of social phenomena, that is transcending the field of education through new technologies and trends of science and technology in modern industrial societies.

According to Takahashi (2000) education is the key element in building a society based on information and communication and learning. For the development of individuals learning we must take into account the countries and regions organization, if there are inequality of access to the types of technologies and convergences available for each social context. Furthermore there is a large difference in types of technologies between our regions the convergences of media manifestations on has been happening through the radio communication, TV, internet and satellite transmission has managed to transpose and provide the convergences and digital media driven. With these changes educate in an information society means transforming the knowledge epistemology in transmission of knowledge for the use of information and communication technologies.

The change of methodological competence and didactics in creating powers of production of goods and services to promote educational process through technologies based on the knowledge, by means of new means and tools of convergences in communication, as well as applying creativity in new media use, simple or sophisticated. In this way individuals need if conditional ema "learning to learn", so as to be able to deal positively with the transformations interconnections the process of structural convergence of pedagogical and technological knowledge. In This way, "Thinking about the education in the information society requires considering a range of aspects relating to information and communication technologies, beginning with the role that they play in the construction of a society that has the inclusion and social justice as one of the top priorities" (TAKAHASHI 2000, 45).

To define the concept and practice of distance education it is important to reflect on the broader concepts, which are the use of new technologies and the process of convergence of information and communication in education. The technologies have reached all corners of the world up to the most remote corners, with innovations technologies many of them fascinating, especially those who work with the symbolic structures of society, which through the use of the internet produces changes of behavior in social structures.

2.1 Teachers and the Generations X, Y, Z

The teachers need be prepared to interact and teach through the media, led by the Internet that allow instant access to information both positive and negative due to the social changes that have been emerging in technological context. The students have more ease to seek knowledge through technology that is placed at their disposal.

For Valente (1999) the teachers should adopt procedures textbooks, in this new reality, favoring the collective construction of knowledge, recognizing the types of social groups existing in current social communities, mediated by technology, in which the teacher is more a participant that gives the access passage of technological knowledge between the methodology and didactics of the professor in the classroom, and where the purpose is to develop the knowledge construction with the aid using of new technologies. Gilmar Machado, Fabrício Moraes de Almeida, Joel Bezerra Lima, Claudia Stewart-Technology, Media Convergence and Learning Process in the Pedagogy Course at Distance Education

The teacher is replaced by a pedagogic innovation based on new concepts of cultural mediation and technology that, with the resources of informatics, will lead the educator to have much more opportunity to understand the processes of epistemological knowledge acquired by the student and the strategies used for learning with the new technologies. The role of the educator is to guide and mediate the learning process and the situations in which the development of ideas occurs, as the sharing of collaborative learning goes from the social to the individual student.

According to Enricone (2004) professor, searching along with students, they tend to instigates and challenge in the use of new technologies, even that for the students are easier to interactivity of this media. For the teacher facilitates the recognition of problematic factors and the vices of existing technological means such as: use of cell phones to surf the Internet, listen to music, take pictures, record image and other options that new technologies already have. This implies an analysis of the change of the educational paradigm and the role of the teacher in pedagogical relationship, focusing on technological innovations such as tools to increase the interaction.

For Valente (1997), to recognize the technological generation in which the student is inserted is one of the primordial functions for the teacher's work performance. The term generation X, Y and Z is classification of technological knowledge of social classes on the new technologies, each individual is part of a social class where it is differentiated by three levels of knowledge that may be bound or joint generation such as;

What makes the difference is how the teacher will use this technology, leveraging its potential to develop new educational projects. This means that the difference in didactics is not in using or not the technological resources, but in the knowledge of their possibilities, limitations and in the understanding of the logic that permeates the movement between the knowledge at the current stage of technological society (KENSKI 1998, 70-1).

In generation X, the knowledge are basic and differ from certain technologies, as for example someone who uses the cellular only to connect to contacts without using the resources made available by the tool. In generation Y, the knowledge are intermediary making use of all the technological tools at their fingertips, knows enough, manipulating and using everything within their need, as for example the individual who has the cell phone with many features and uses to make connections, send message, take picture, make videos, calculations, access email and others.

For Kenski (1998) the generation Z is that which comes in the process of transformation seeking and acquiring advanced knowledge about new technologies, where they are always updated and attentive to scientific and technological changes, are competitive and is always seeking to learn, dominating the Internet and computer systems. For this reason the teachers need to know and identify the types of technology generations in its context of school knowing to differentiate the focus and paradigms by them acquitted, so teacher can recognize the positive and negative points of new technologies, especially the use of home computers.

Considering the above, we can say that the teacher is faced with all kinds of students, those who use the new technologies to obtain global information and be informed about everything, or a particular subject, those who use only for their own interest, download and listen to music, games, videos and those who uses to attend the social networks such as Facebook, Orkut, Sonic, MSN and other social network, but we also have the use of pages unfit for minors, the site and game downloads banned and other illegal actions in the use of the computer, as stated by Kenski (1998):

There is a need for good planning for technology to achieve the

desired effect. This means that there is an adequate choice of features and software, negotiation and establishment of consensus among the participants to meet the interests of all, always with a view to the greater common objective: teaching and learning (KENSKI 1998, 71).

In the digital society, in a permanent transformation, the teacher should be prepared to teach moral concepts of the Internet and the use of technological equipment, they must use methods to empower their students to develop skills to resolve complex situations and unexpected and problematize the myths of technology generations, giving students challenges on the use of new technologies in a correct and adequate manner. Encourage the development of activity and academic work with individual and collective responsibilities.

3. Pedagogical Approach in the Supervision of Distance Education

The new times have brought with them potential in the field of education. Learn today, is different from some years ago, when the individuals would need to be in rows, in a classroom, inhibited to express themselves on any subject lapped by professor. Such potential accelerates each day with the media and its use in teaching school.

According to Martins (2004) human being lacks communication to transform everything that sees and feels in learning. In this respect, the new technologies and the media provide an interaction between individuals, capable of making the process of teaching and learning a pleasant play. Martins (2004), stated that:

> As current educational assumption, it is assumed ... that the knowledge of the individual nourishes and develops in the context in which it operates that their knowledge are recreated in its daily life, in interaction with other social actors and with the signs present in society. It is assumed,

moreover, that the individual is the totality of social relations, in spaces that allow emerging various voices, stimulating the respect and dialog between beings 'unique' (MARTINS 2004, 26).

In this way, one of the roles of the new technologies in teaching institutions or virtual classroom is to establish the interaction between social actors - human beings mentioned by Martins. In the same way, the computer and the Internet comes to meet a new way of learning. Education at a distance comes breaking paradigms through the use of new technologies. The new methods of transmission of online and via satellite comes modify higher education, providing a flexibility in didactics of learning with the use of means of communication, surf the Internet to find about a particular subject is much more than a year of research, it is a pleasure, a pleasant stroll through the world of information.

However, for Faria (1999) any and all work involving new technologies, in particular the use of the computer and the Internet requires a preparation for the monitoring of the students and the completion of the project. The projects are developed activities where groups of students are guided to develop specific theme. They can use all the features that have the right and access, query the database, the Internet network, exchange of information, participation in discussion lists.

3.1 Distance Education

According to Cox (2003), some cases are obvious, as educators are conducted to assess causation increasingly important among the media culture and schooling post-modern, as well as movements toward computerization the the and technologization of curriculum through the concept of convergence. The process of education through the use of technology must be assessed, what is already occurring in our classrooms, the technology should not be more important that

the teaching-learning, the knowledge must be in evidence constantly, and technology should only do for the process of convergences in action teacher /Teaching learning.

For Cox (2003) the technology is increasingly present in the education space, this fact should change the lives of families, the technologies, mainly the computer, the accesses to interactivity of media, chat rooms, Facebook, Orkut, MSN, Blogs, Chat, and other accesses that are present in the form of various technological equipment such as Tablet, Netbook, Notebook, Ultrabook, Computer, Cellular smart and others, all this being provided due to access to the internet.

Education at a distance (EAD) is a form of education which won forces after the drafting of the law no. 9,394 /96, Law of National Education Bases and Guidelines (LDB), with the aim of developing practices that will make it possible to education be passed to all. The distance education enables the approximation, or better, the shortening of the distance that there is in a country such as Brazil with great territorial expansion. With this, the people who are involved in this form of teaching, has contact with other types of thought and culture; another reality different of that in which he lives, that is,

In the process of computerizing of any activity of human action, the first questions to be made to future users of the machines to process are: what are the components of their tasks and activities such as these are made without the aid of information technology? Thus it intends to check the way computers can be employed in the situation under study (COX 2003, 55).

The mediatics convergence manifestations on the educational process bring as perspective the use of information technology in education, mainly characterized by the distance education system where production of educational platforms comes predominantly in action and interaction with a student, through Education, the distance EaD - that is transforming society from the moment that offers free training (top, postgraduation) to people with problems of accessibility, time and distance, for example, to devote themselves to their studies. However, the modern society requires constant refresher, enhancements, updates of ideas and concepts.

The world undergoes constant changes, mainly technological and this requires that people are able to adapt to them. The technology has been fundamental to the growth of the EAD. Since the teaching through the mail to the internet, passing by the radio and TV, the society has been changing their conceptions of transmission of knowledge.

3.2 Teaching/Learning in Distance Education

According to Takahashi (2000) every day, due to the growth of technology. the information exponential is transmitted more quickly and with greater reach population. In pedagogical action of education EAD, has as fundamental point transmission of lessons on the use of emerging technologies mediatic manifestations on the use of the internet and satellite transmissions of educational content, also arise the programs of student interaction as platforms for educational activities, providing the individual an interaction to forum, chat, video, editing text, resolution of questionnaires and participation in learning content, where they deliver convergence in technological context. In this way they can use all the features that have the right and access, query the database, the Internet network, exchange of information, participation in discussion lists.

In this way developing the convergences is part of the transformational process of didactics in action through the technologies for education at a distance as Abreu (1999),

> The means of communication and the available technologies give the conditions of form, update, qualify, and re-qualify, retranslating professionally people in the course of an entire lifetime. That is, by means of open education, continuing and

distance education or virtual interactive, which contains in its bosom the seed of democratization and the trans-disciplinary, one can, so articulated with the education classroom, meet the broad needs and educational challenges of worlds of school, work, culture and citizenship (ABREU 1999, 12).

In this way, the student of EAD has to be self-paced to stimulate the intellectual development, reasoning and solution of problems, based on a pedagogical approach interdisciplinary and supported in learning projects and in environments and collaboration tools and constitute a pedagogical approach that encourages the development of citizens with new potential for doing so, understand, reflect and invent resources, so that the knowledge built can be used in improving their everyday life and the social groups to which they connect.

> "The teacher training courses as the graduated teachers need an energetic injection but a very weighted with use of information and communication technologies, in order to contemplate the formation of teachers who are familiar with the use of these new technologies" (TAKAHASHI 2000, 49).

The teachers have now to allow the learner to development their ability of learning to learn. The distance education has to promote the principles to stimulate the individual, providing the autonomy to seek understanding, multidisciplinary and interdisciplinary content based on learning by doing, experiencing, creating, investigating, and a joint process of coauthoring the cognitive system of lifelong learning.

According to Cox (2003) synthesize the ability to use the technology, by means of a variety of media to search for, to locate, evaluate and collect new information, communicate information and ideas, log records various and give vent to creativity in the solution of problems and making decisions.

In this way, involve the student by all possible means: by experience, by sound, by picture, by representation or simulation, by multimedia, by classroom and virtual interaction to encourage the participation of teachers and students in the pedagogical process as producers of information, using the media and the technologies available for this production, making with that the product of learning will gain visibility, publicity, characterizing effectively the convergences **mediatic** manifestations on the content.

4. Analyzes and Results

The research performed face-to-face in the pole of distance education of the Educational School of Lapa - FAEL, Ariquemes/Rondonia (Brazil), with transmission of classes via satellite for classes with an average of 50 students from the Pedagogy course, being accompanied by room tutor, formed in the area and with post-graduate studies in Methodology in Higher Education. The institution offers WIFI internet and computer lab for preparation of activities in portal for academic access.

To understand the influence of the use of convergence media driven is convenient to begin to understand the surrounding society precepts of new technologies. This means understanding that the use of technologies and its links and changes it causes in society. This is a historical construction, that is, to understand the phenomenon brought about by the changes that the company produced upon the action of new technologies, because the whole phenomenon should be contextualized not for opinion of auto-reference but as if it existed by itself.

According to Albuquerque (2000) the technological advancement happened very fast without the proper preparation and knowledge enough to observe the ideological distortions and existing paradigms during the process of technological transformations of social classes.

In this way, it started an analysis that started the educational reality of the teaching institution, used in this study, where it seeks to serve in a conscious manner, the social changes of this new class of students. In fact, the institution of education has been the stage used for the realization of part of this work that covers the research objective, i.e., occurred the observation of facts, the collection of data and, finally, the analysis of observation before the case study conducted for the interpretation of these data, based on a theoretical foundation consistent, aiming to understand and explain the problem researched.

The analyses of this study seek then to describe the complexity of a given hypothesis or problem, analyzing the interaction of certain variables, understanding and classifying the results obtained in the institution. The researched reality is taken as a direct source of data and the greater concern is with the process and not only with the results and the product; the data are analyzed inductively, searching essentially for meaning.

The portrait of education EAD is evident in the face of convergence media driven, because 39 academics have already purchased netbook, notebook and tablet and the rest have a computer at home. The greatest obstacle highlighted was the access to the internet, being necessary to the academics to post their activities. Only 52% academics have internet at home and 48% of students use the internet of the institution in which they study or the lan house.

The observation demonstrates that the lack of knowledge of the academics in the use of technologies, that is, of the 50 academics, only 56% have the domain of the computer system used by the faculty. Their difficulties are evident in the use of the laboratory for performing activities that should be performed, especially in the online portal of the student, through the use of learning tools, where are posted the didactic materials and videos for the students.

The education EAD firms the use of s technologies, as didactic resources through the convergences on the use of cell

phones, TV, digital camera, radios, computers, internet, applications, printed materials and others, by the pedagogical practice from day to day work of education.

In this study it was observed that the need for convergence in curriculum, content (Discipline), methodology, didactics, Resources (material for implementation of content and types of media), where it is not only in the transmission of classes via satellite and computer use to work the contents, but that are used other technologies and methods to transmit the knowledge, but also to provide an interaction between faculty and students.

5. Final Considerations

To complete this survey, in the making of this Article, it may be considered of great importance the findings related to the theme in relation to the Convergence of the Pedagogy Course in EaD, in actions of teaching learning through new technologies and the convergences media driven, from the prominence of the theoretical assumptions and here referenced that gave the possibility to resize through the importance of interactive aspects in the use of new technologies and convergence media driven.

This work has allowed an analysis where points out the factors that are prevalent in the period of adaptation in the use of media the educational system of the teacher and the student. Where the methodological changes and didactic seek to promote the principles of stimulate the individual, provide the autonomy to seek understanding, multidisciplinary and interdisciplinary content based on learning by doing, experiencing, creating and investigating new shares for transmitting knowledge and provide learning meant.

This search process has led us to meet new paradigms which must be observed and researched in the courses of methodology and didactic of higher education, such as the ideological distortions and existing paradigms during the process of technological transformations of social classes, i.e., the problems and difficulties in the use of technologies of individuals without access or who refuse the innovations of the new concepts of cultural mediation and technology through the use of electronic equipment and computer system.

In the course of the study of assumptions, detected aspects that have become evident, this is: The importance of curriculum organization with the use of new technologies; Planning of teaching aliened the convergences media driven and the social reality. In this connection it is necessary, that is disseminated the issues about the use of new technologies and the convergences mediatic manifestations on school learning, for that is the subject of research and multidisciplinary analysis that favors its applicability in the modality of EAD.

BIBLIOGRAPHY:

- Abreu, Maria Rosa and collaborators. 1999. Including the excluded: School for All. Experiences of Distance Education in Brazil. UNESCO, Brasilia.
- Albuquerque, Afonso and Sá, Simone Pereira. 2000. "Hypertext, computer games and communications." Porto Alegre: *Famecos Journal* March: 83-93.
- Araújo, Carlos Henrique, Luzio, Nildo. Saeb. 2005. Evaluation of Basic Education: searching for quality and equity in Brazil. Brasilia: National Institute for Educational Studies Teixeira.
- Belloni, Maria Luiza. What is media education? 2nd ed., Campinas, São Paulo:. Authors Associates, 2005.
- Cox, Kenia Kodel. 2003. *Computers in education*. Campinas, São Paulo: Authors Associates.
- Enricone, Délcia. Ed. 2004. *Be a teacher*. 4th ed. Porto Alegre: Edipucrs.

- Faria, Maria Alice. 1999. How to use the newspaper in the classroom new technologies. Context: São Paulo.
- Huizinga, Johan. 2001. *Homo Ludens. The game as an element* of culture. São Paulo: Perspective.
- Kenski, Vani. 1998. "New Technologies: resizing of space and time and the impacts in teaching." *Brazilian Journal of Education* 8: 58-71.
- Libâneo, José Carlos. 1994. Didactic Teaching Collection. 2nd Grade. Teacher Training Series. São Paulo: Cortez.
- Magalhães, Luzia Eliana Reis and Orquiza, Liliam Maria. 2002. Methodology of Scientific Work: drafting work. Curitiba: Fesp.
- Martins, Maria Cecília. 2004. Continuing Education Program in Media in Education. Introductory Module: Integration of media education. São Paulo, Ed MEC.
- Silva, Edna Lúcia da and Menezes, Estera Muszkat. 2001. Research methodology and preparation of dissertation. 3rd ed. Florianópolis: Laboratory of Distance Learning at UFSC.
- Takahashi, Tadão. 2000. Information Society in Brazil-Green Book. Brasilia: Ministry of Science and Technology.
- Valente, José. 1997. "The intelligent use of computers in education." *Patio* 1(1): 19-21.