The Nets of Learning

The spaces of social access and (re) engineering in educational environments

ISSN printed edition: 1889-4208

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RESUMO

Este artigo aborda a importância da comunicação mediatizada por redes de computadores, ofertando oportunidades e desafios aos atores nos espaços de aprendizagem numa construção cooperativa e colaborativa. Dessa forma, a perspectiva conformacional é a melhoria da qualidade dos processos de construção, produção do conhecimento, fortalecimento do processo de ensino e aprendizagem, mediante o auxílio das linguagens tecnológicas nos espaços de formação. Portanto, é tempo de entender que as redes de aprendizagem abriram oportunidades de comunicação e configuram-se relevantes no contexto educacional em consonância com o novo paradigma da educação no século XXI.

ABSTRACT

This article approaches the importance of the communication mediated for computer networks, offering chances and challenges to the actors in the spaces of learning in a cooperative and collaborative construction. However, the conformational perspective is the improvement of the quality of the construction processes, production of the knowledge, reinforcement of the education process and learning, by means of the aid of the technological languages in the formation spaces. Therefore, it is time to understand that the learning nets had opened communication chances and are configured excellent in the educational context in accord with the new paradigm of the education in century XXI.

PALAVRAS-CHAVE

Educação, Linguagens Tecnológicas, Redes de Aprendizagem.

KEY WORDS

Education, technological languages, net of learning.

1. Introduction

First human groups according to IANNY (2001), had only distinguished from other groups of animal when they had started to use tools, weapons and to teach its use to the new generations. With this, the human being existence gained a cultural, different dimension for each group. As the other forms of life, the human beings depended on what was immediately available in the nature, until two new conquests had appeared: the fire and the agriculture that had opened new perspectives.

Agriculture allowed the species to fix itself in a territory, while the fire, beyond the food baking, made possible to it to transform materials, producing ceramic from the adobe and extracted metals of its ores. With the metallurgy, new tools had appeared and they had become in such a way more efficient in agriculture as in the processing of the wood.

These evolutions had not occurred for equal in the world, therefore each society had and has its proper stages of development. Little by little expanding new inventions due to the new collected materials. These advances had generated production excesses and, in consequence, the markets had appeared and the cities where if they carry through exchanges, intensely thus accumulating capitals.

Another important factor was given in century XVIII, with the sprouting of thermal machines that generated work from the heat, and in the following century, the electricity started to be an energy source of regular use. The interest for the thermodynamics had origin in practical questions, on the other hand electricity and magnetism seem to have developed

initially for investigative curiosity before having its perceived utility.

The interchange between the technological development and the scientific one had excellent importance for the modern society where each one of them always stimulates, it defies or it propitiates the other.

According to IANNI (2001, p. 57),

"(...) The world was changed into the practical one in an immense and complex plant, that if develops jointly with what if it can call "shopping to center global". It was intensified and one generalized the process of geographic dispersion of the production, or the productive forces, understanding the capital, the technology, and the force of work, the division of the social work, the planning and the market (...)"

In fact with the Industrial Revolution advent from the end of century XVIII, the man starts on a large scale to establish a narrow relation with the production of good, products and services. The work systems are developed from these industries as taylorism, fordism and toyotism, bringing in the bulge of its intentions the work relations that we have in our days, as: work and knowing fragmentation, the exacerbate consumerism and the distinguished specialization of the worker, becoming multi-functional before the emergent technologies and the use of its techniques.

It is noticed, in fact, an advance in the relation man-work and with the means of production. This last characteristic appears among others in the center of a series of transformations that the current world is suffering especially with the great advance of sectors as computer sci-

ence, telecommunications, chemistry and the biotechnology.

This process of change has been called technician-scientific revolution, but it can also be called, as they prefer some, third Industrial Revolution. According to WIENER (1968):

"(...) The society alone can be understood through a study of the messages and easinesses of communication of that it makes use; e of that, in the future development of these messages and easinesses of communication, the messages between the man and the machines, the machines and the man, and between the machine and the machine they are destined to play role each more important time (...)" (apud Ianni, 2001, p. 77).

However, what had happened in fact, it was a revolution under diverse prisms: the fragmentation of the work and knowing is still evident; the man-machine relation tends to narrow each more alienator time in face of great productive scale imposed by the capitalist world.

The contribution given for this intrinsic relation deprives of characteristics in certain way the humanistic side and for consequence the state of conscience in front of many appeared innovations. Another still bigger impact is that the perfectioning of the services and intelligence human being have obtained of some form to exterminate it that definitive of the work market, where little by little, this they go being substituted for robotic instruments, almost human. (IANNONE, 1995, p. 54), it affirms in them:

"(...) The Industrial Revolution corresponds to the revolution of the pro-

ductive process, therefore it was left to produce through the manufacture and it was transferred to mechanization or, more specifically for the machinefature. In the first case, the man was the productive agent and the production was limited by its ability and its proper energy or physical capacity. In as, the production was commanded for its talent and creativity, since the effort was on account of the machine under the command of the man (...)"

It is perceived, in this context, that the values had been inverted, not that the uses of technological instruments are less important. But what it is in game is the human value, what can be carried through by the pleasure of carrying through, for the relations and the dialogue established with other citizens. In this case, the machine has to assume another dimension, being only a machine, manipulating the service of these human beings. Will be this same a reality?

The industries seem to evaluation the machines more than men. They invest massively in devices of last generation, while lives are decimated by not having conditions to be benefited for such inventions. It is produced large-scale, paid little for the worker and finally it is quit for not taking care of the market demand.

TV devices are constructed, programs are created and advertisements invade the homes without giving any possibility to contest such propagated information. Without saying that the same ones occupy, most of the time, prominent places inside their homes being shown as trophies.

Another important technological mechanism is the computer, which has contributed to increase all the sectors micron

and macro economic, social and politician, however, it also has demonstrated an important mechanism of domination, therefore at the same time where it shortens the distances between the world of the businesses and the entertainment, it widen the distances between that cannot make use of this.

It urges to say, that used intelligence before the use of the computer, has been presented with sites that usurp and stimulate the revolt about the sordidness contents of its e-mails, blogs and Orkut.

Currently, with the intense communication web between the people, the transference of techniques from a different culture for other is common. But it is in the interior of each culture that these techniques acquire new meanings and values.

However, the technologies and its products are not good nor bad in itself same, the problem are not in the television, the computer, the Internet or any other medias, and yes, in the human processes that can use them for the emancipation human being and the domination.

It has, however, an escape valve. The human beings only can rethink its practical attitudes front to the interaction with different technologies. For AUGÉ (1994), the world of super modernity does not have accurate dimensions of that one in which we think to live therefore we have lived in a world that not yet we learn to look at. We have to reconstruct/apprehend to think the space.

Then, the paper of information and communication new technologies in this new scene of the social relations development is gaining particular relief in the educational scope, the perspective to determine the improvement of the quality of the construction processes and production of the knowledge and to fortify each time more the process of education and learning, by means of the aid of the technological tools in the formation spaces.

And when reflecting on the transformations generated for the insertion of the new technologies in the world, some questions are raised: how if it can establish the relation between the man and the machine? Of that it forms the used technological language assists in the cognitive process?

To rethink these questions is essential in the preparation of the professionals of the education for the call Society of the Knowledge in the Society of the Learning, face-to-face with ruptures in all the education levels and the social relations, therefore it requires a new reading of the world where if it lives. Of this form, to educate for the use of the new Technologies of the Information and Communication (TICs) is to breach with the paradigm of the spread education as information transmission, that to learn is more than to memorize contents, in fact, is to understand that the new educational options fortify, transforms the chances, practical and the results of the process of education and the learning.

2. Development

The education was extended in the scope of its abilities and, what is more important; it perceived that, in the contemporaneities, its master objective is the acquisition of necessary social abilities for the adaptation, interaction and the social success. In this direction, it converge the importance of the education in century

XXI. However, one runs the risk of if having the sensation that this new proposal of education and cultural universe in century XXI inside represents a magical paper of our society.

It must be reflected that the education is not capable of pointing out before the challenges of (re)engineering the environment of learning¹ compromised to the development and the construction of knowledge. In accordance with PÓVOA and Coscarelli (2003):

"The current advance and the dissemination of the information technologies and communication are creating new forms of confab, new texts, new readings, new written e, over all, new ways to interact in the cybernetic space".

The question that is focused: how to integrate this new form to think stimulated for the reality of the cybernetic space, to the knowledge development and to know the actors? Therefore, the needs of the praxis educational demand an educative action that offers to ways and alternatives meditate for technological language, generating a socialized knowledge².

The knowledge is one of the most powerful tools of transformation of the society. All the technological innovations created by the humanity somehow perpetuated transmit and to communicate all its wisdom for the next generations and had represented a jump in the history of the civilizations. In some cases, the socialized knowledge generated revolutions.

Additionally, the development of the Informational Communication Technologies, from the second half of century XX, represents a great jump in the storage and the transmission of data that make possible the sprouting of a new form of social communication that today is very influential: the Communication Mediated for Computer.

For example, the insertion of the Internet in century XXI represents one of the most promising medias of the society in the dissemination and socialization it knowledge. Established under the paradigm of the Web, form of emergent organization of century XXI, the Internet is capable to congregate a web of contents, never imagined before for the humanity, of information and knowledge.

This generates the construction and production of the knowledge for the actors, mediated for technological language, long distance the systematic of the monological speech in certain reply, of linear sequence of contents, the rigid structures and ready knowledge. And approaching the to optimize of syntonized educative making with the new ways to think and to act, demanded for the cybernetic space, suggesting a model for learning environment implementation that has supported the technologies of computer science and the communication. Such model considers commitments renewed in relation to flexibility, the interconnectivity, the diversity and the variety, beyond the contextualization in the world of the social relations and of interests of the actors in the learning process.

They are defined surrounding of learning as systems of integrated and including education and learning capable to promote the enrollment of the actors. (BLACK & MCCLINTOCK in COSCARELLI, 2003).

² Knowledge produced socially by means of virtual interaction between separate individuals in the space/time.

Educative actions redirected and focus in the citizen as center of the learning, in the cover of its active paper in the act are defended, therefore, to learn and understanding that the practical one of these actions is pouted in three basic pillars: (a) the metacognition³, (b) the affective and (c) the social, with consideration on styles and strategies of learning. Thus, it is based notion of that the citizen if makes agent of the process of construction e (re)construction knowledge and that educative and mediated making it incorporates one of significant form, motivator and with bigger level of efficiency.

"Strategies mention the actions and procedures to it chosen, assumed and controlled for the individual to decide one definitive situation problem or a certain challenge. They involve taking of decisions on the basis of the reasoning, in the affectivity and the social interactions, to reach specific goals (long, average or short term) and objectives". (Coscarelli, 2003: p. 29)

And identification out it necessity of reflection and implantation of pedagogical methodologies in function of the new possibilities opened for the new information and communication technologies, in relation to the process of interaction between the citizens and in function of the flexibility related to the time/space destined to the learning.

It is noticed that pedagogical innovations do not mean technological innovations. Such affirmation does not glimpse a technophobic⁴ vision or technophilia⁵ and, yes, the perception of that the defined pedagogical methodology as process of mediation and interlocution consists of the treatment of educative making and forms of expression that become the conceived education as act of participation, creativity, expressive, practical investigative, interaction and interdependence.

Therefore the attention to the methodological process is extreme important, as all the necessary process need to be evaluated, in a pedagogical systematization "action-reflection-action", and, if necessary, to be redirected. The necessary caution is in the methodology adopted for the organizational management of the interactive programs mediated by cyberspace in attendance to the demand of the citizens. And the new models of life and society, the interdependence becomes indispensable, since, the permeate productive system the life human being and is each interrelated more, allowing to create, to recreate and to participate of rich environments in possibilities of information and learning.

Ethnological, the word metacognition means stops beyond the cognition, that is, the college to know the proper act to know, or, for other words, to acquire knowledge, to analyze and to evaluate as if it knows. In the measure that the knowledge allows to interpret the experiences and to act on them. These, in turn, contribute for the development and the modification of this knowledge.

Vision of total aversion to the use of the information technologies and communication, considering that the machine will go to substitute the man or will promote the distancing, the loss of the affective relations.

⁵ Vision of total *theos ek mechanes* as possibility to decide all the educational problems.

"(...) we learn from what already we learn, we know from what it is known, we inside read the reality of certain previous context, understand ourselves in the language on shared and not questioned cloth of deep. We say, therefore, that the learning is a reconstructive phenomenon, alluding in such a way to its biological mark of selective interpretation how much to the social one of formation of the capable citizen of proper history". (Demo, 2000: p. 102).

The reflections occur around the two fields of knowledge, the field of the communication and the field of the education, establish the paradigm of the meditator that glimpses the development of institutional projects and leads to the (re) signification of the communications human beings. It is visualized, thus, that the citizen while to be creative in relation with the communicative world and with the other men providing meaning to the human being life. It is in this direction that Freire (1997) affirms: "the men for being essentially communicative are that they can be truily human".

It is observed, therefore, the fight for a humanize education, the affirmation of the man as subject or its minimization as object, being able to intervene with the reality in place to be as simple spectator, accommodated to the other people's lapsing. It is from the relations with the reality that the man goes rationalize its world, goes humanize itself, goes adding proper it what he himself is constructor and in the constant search of "being more".

In this prism of interlocutions, it is emphasized that surrounding of learning dialogical, where educative making is social participation, they must be rethinking and be adapted to the new necessities of the world of today.

The dialogue, base of all education for Freire (1997), constitutes a valuable form of conduction of the subject to reflect. In the dialogue of the meeting of the human beings mediated by the world, it cannot, therefore, to be depleted in the relation "I-you", for that is not treated "to make communicated", but is about dialectic relation, demanding a critical and creative attitude where active men, compromised with the situation that took them to the dialogue.

In the vision of Freire (1997), educating is to construct, it is to set the human being free of neoliberal determinism chains, recognizing that History is a time of possibilities. It is one "teaching to think rightly" as whom "it speaks with the testifying force". It is one "communicant act, co-participated" in any way a product of "bureaucratic" mind, acquiring knowledge about the importance to stimulate the pupil to a critical reflection of the reality where he is inserted.

It is in this direction that Mclaren (1999) affirms that for Freire (1997), the "pedagogy has as much to see with the actions to change the world how much with rethink the categories that we use to analyze our current conditions in history". It is configured; then, the established dialogue enters the two knowledge fields-the communication and the education-objectifying an alternative way of thinking

It has its origin in the word mediation, portraying the "action to make bridge or to make to communicate two parts, what it implies different types of interaction". (SODRÉ *in* PAIVA, 2002).

the meaning and reach proposals of the social scene. This estimates the introduction of new educational options that fortify and transform the chances, the practical one and the results of education and the learning.

It is said, therefore, in Nets of Learning as form to think about an enthusiastic reply of the actors/subjects that defend the idea of that the net technologies can to increase the forms of education and learning, opening new forms of communication, contribution and construction of knowledge.

In the perspective of that the computer mediated for the net⁷ presents itself as a collaborating technological instrument of construction/production knowledge and individual and collective growth, the biggest proportionated benefit for the technological instrument mediated by cyberspace is the social transformation, in what it refers to the knowledge exchange between people through the reciprocity. And Souza (2003) in his work "Communication, Education and New Technologies", describes well this affirmation:

"The construction of the knowledge ahead passes for a process of transformation of all the modern technologies. This new way of communication modifies the form of the citizen to receive and to interact. This question makes in them to think about the necessity of the lock, in the coexistence and reciprocal interpretation of the diverse circuits of production and diffusion of knowing". (Souza, 2003: p. 55).

The aid of the nets, in a collaborative and interactive process of the learning, the involved actors in the process of knowledge construction identify the following benefits: (a) increase of the interaction, (b) more access to the knowledge to the o support of the group, (c) surrounding more democratic, (d) emotional aspects (motivational), (e) active and cooperative learning.

Day by day it is recognized that the learning in net is intensified by activities in small groups e for the capacity that each pupil has to work in heterogeneous groups and to acquire different perspectives and experiences, objectifying to structuralize and to chain the learning process, to provide support to the pupil whenever to become necessary and to argue and to interact enters the pairs by means of access the resources on-line.

3. Final consideration

Therefore, to work with learning nets on-line as development of based proposals of action in the valuation of the resume, can be an instrument of approach of the educational community to the reality of our times, preparing it to act and to develop the ability of its proper chances, constructing, thus, processes of information and development for an intellectual knowledge, having as axle the formation social human being and of the citizen and the autonomy of the citizen.

This conscience facilitates the understanding of the professors who nets present them to the learning to a vast

Shared spaces formed for linked computers in the whole world for satellite and telephone signals. (HARASIM, 2005).

set of resources, ideas and perspectives which helps them to become more conscientious of the chances to change and to improve the learning of all the actors. The education institutions have the chance to be not small islands anymore in the educational universe.

It is time to understand that the learning nets had opened communication chances and are configured excellent in the educational context. One knows, however, that to teach he is one I officiate that it demands commitment and specialization. Optimizing the figure of the actors (ensinante and learner) in a permanent dialogue, perceiving that they are as starting point of the educational changes. Therefore, in fact, it does not have enough mechanisms so that the citizens share its empirical formal knowledge or so that they themselves start to plan change processes. The learning nets are one of these mechanisms.

The communication to mediatize for computer networks offers to the actors chances and challenges that stimulate the interaction of high quality, what the "heart of the education" is called, a time that provides to a rich chance of interchange of contents, sharing a common universe of knowledge and content. And this experience is constructed of cooperative and collaborative form in the context of an independent learning.

Therefore, learning in net configures a new paradigm of century XXI. Additionally, the learning nets are transforming the relations, the chances and the results of education, the learning and the use of the technological tools.

Entangling the web between the convergence and the matureness of compu-

ter science, of the communications and a new educational connection.

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Las Redes de aprendizaje

Los espacios de acceso social y (re) ingeniería en entornos educativos

Resumen

Este artículo aborda la importancia de la comunicación mediada por redes informáticas, ofreciendo oportunidades y desafíos a los actores en los espacios de aprendizaje en una construcción de cooperación y colaboración.

Sin embargo, la perspectiva de conformación trata sobre la mejora de la calidad de los procesos de construcción, la producción del conocimiento, el refuerzo del proceso de enseñanza y aprendizaje, por medio de la ayuda tecnológica de las lenguas en los espacios de formación. Por lo tanto, es hora de comprender que las redes de aprendizaje han abierto posibilidades de comunicación y se configuran excelentemente en el contexto educativo, de acuerdo con el nuevo paradigma de la educación en el siglo XXI.

El conocimiento es una de las herramientas más poderosas de la transformación de la sociedad. Todas las innovaciones tecnológicas creadas por la humanidad de alguna manera perpetúan transmitir y comunicar toda su sabiduría para las próximas generaciones y ha representado un salto en la historia de las civilizaciones. En algunos casos, la socialización de los conocimientos generados por las revoluciones.

Además, el desarrollo de las Tecnologías de la comunicación informacional, de la segunda mitad del siglo XX, representa un gran salto en el almacenamiento y la transmisión de datos que hacen posible el surgimiento de una nueva forma de comunicación social que hoy en día es muy influyente: la Comunicación Mediada por Computadora. Por ejemplo, la inserción de la Internet en el siglo XXI, representa uno de los medios más prometedores de la sociedad en la difusión y socialización de conocimientos informáticos. Establecida bajo el paradigma de la Web, la forma de organización emergente del siglo XXI, Internet es capaz de congregar una red de contenidos, nunca imaginado antes por la humanidad, de la información y el conocimiento. Esto genera la construcción y la producción del conocimiento para los actores, mediada por el lenguaje tecnológico, de larga distancia de la sistemática del discurso monológico en la respuesta de algunos, de la secuencia lineal de contenidos, las estructuras rígidas y los conocimientos de otros. Y acercándose a la postura de optimizar la educación en sintonía con las nuevas formas de pensar y de actuar. Todo esto sugiere un modelo para el aprendizaje de la aplicación de entorno que ha apoyado las tecnologías de la informática y la comunicación. Dicho modelo considera nuevos compromisos en relación a la flexibilidad, la interconexión, la diversidad y la variedad, más allá de la contextualización en el mundo de las relaciones sociales y de los intereses de los actores en el proceso de aprendizaje.

El diálogo, base de toda educación para Freire (1997), constituye una valiosa forma de conducción de la materia para reflexionar. En el diálogo de la reunión de los seres humanos mediada por el mundo, no puede, por tanto, que se agotan en la relación "yo-tú", para que no se trata "de hacer comunicados", pero es la relación sobre la dialéctica, exigiendo una actitud crítica y creativa, donde los hombres activos, comprometidos con la situación que llevó al diálogo.

Trabajar con las redes de aprendizaje en línea como el desarrollo de propuestas de acción basado en la valoración del curriculum vitae, puede ser un instrumento de acercamiento de la comunidad educativa a la realidad de nuestro tiempo, su preparación para actuar y desarrollar la capacidad de sus posibilidades adecuadas, construir, así, los procesos de información y el desarrollo de un conocimiento intelectual, teniendo como eje la formación de ser humano y social de los ciudadanos y la autonomía de los ciudadanos.

Esta conciencia facilita la comprensión de los profesores que las redes de presentarlos a la formación de un vasto conjunto de recursos, ideas y perspectivas que les ayuda a ser más consciente de las posibilidades de cambiar y mejorar el aprendizaje de todos los actores. Las instituciones de educación tienen la oportunidad de

ser no de islas más pequeñas en el universo educativo.

Es hora de entender que las redes de aprendizaje ha abierto posibilidades de comunicación y se configuran excelente en el contexto educativo. Se sabe, sin embargo, que para enseñar que es uno que ofician que exige el compromiso y la especialización. Optimización de la figura de los actores (enseñante y alumno) en un diálogo permanente, la percepción de que son como punto de partida de los cambios educativos. Por lo tanto, de hecho, no tiene mecanismos suficientes para que los ciudadanos compartan sus conocimientos formales o empíricos para que ellos mismos comenzar a planificar los procesos de cambio. Las redes de aprendizaje son uno de estos mecanismos.

La comunicación a mediatizar para redes de computadoras ofrece a las posibilidades de los actores y los desafíos que estimulan la interacción de alta calidad, lo que se llama el "corazón de la educación", un tiempo que proporciona una rica oportunidad de intercambio de contenidos, compartiendo un universo común de los conocimientos y contenidos. Y esta experiencia se construye de la forma de cooperación y colaboración en el marco de un aprendizaje independiente.

Por lo tanto, el aprendizaje en red se configura un nuevo paradigma del siglo XXI. Además, las redes de aprendizaje están transformando las relaciones, las oportunidades y los resultados de la educación, el aprendizaje y el uso de las herramientas tecnológicas.