

Critical Thinking: an Effective Way to Maximize the Opportunities Offered by Communication Technologies to the Formative Process of University Students

El Pensamiento Crítico: Una Vía Efectiva para Maximizar las Oportunidades que Ofrecen las Tecnologías de la Información al Proceso Formativo en las Universidades

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RESUMEN

El pensamiento crítico es un proceso cognitivo que permite analizar la realidad desde una perspectiva abierta, profunda y personal. La realidad del mundo contemporáneo se presenta con amplitud a través de las tecnologías modernas de comunicación. Sin embargo, la información que se genera en esos medios no siempre refleja la realidad de una manera objetiva. Esa información se caracteriza por ser: inabarcable para un individuo, altamente diversa en su forma y contenido, poco confiable desde el punto de vista científico, representativa de intereses particulares, y considerablemente tergiversadora de la realidad. Mucha de esa compleja gama de información es accedida por los estudiantes universitarios tanto por interés académico como personal. En particular, los estudiantes que se forman como futuros traductores e intérpretes necesitan procesar esa información de manera objetiva para desempeñar de modo competente su profesión. En consecuencia, se hace necesario formar en los estudiantes un pensamiento crítico, reflexivo y contextualizado para lograr maximizar las oportunidades formativas que las modernas tecnologías de la comunicación ofrecen. El presente trabajo ofrece los resultados parciales de una investigación sobre el desarrollo del pensamiento crítico-reflexivo en estudiantes de la carrera Lengua Inglesa de la Universidad de Holguín.

Palabras clave: pensamiento crítico; proceso formativo; tecnologías de la comunicación; estudiantes universitarios

ABSTRACT

Critical thinking is a cognitive process that allows the analysis of reality from an open, deep and personal perspective. The reality of contemporary world is amply presented through modern means of communication. However, the information generated in the media does not always reflect reality objectively. This information is characterized by being: non-embraceable for an individual, highly diverse in its form and content, unreliable from the scientific point of view, and representative of particular interests of groups or individuals. Much of that complex array of information is accessed by university students for both, academic and personal interests. In particular, students who are trained to be translators, interpreters and professors need to be capable of processing that information from an objective approach to perform their profession with due competence. Consequently, it is necessary to develop in those students a critical, reflective and contextualized thinking to maximize the formative opportunities that modern communication technologies offer. The present work presents the partial findings of a research on the development of critical-reflexive thinking in students of the English Language major at the University of Holguín.

Keywords: critical thinking; formative process; communication technologies; university students

INTRODUCTION

Critical thinking is an essential cognitive process that must be developed by university students in a world of rapid development of technology and communication. Such development offers new opportunities to the formative process of these students; however, those opportunities are not always well valued by the organizers of the pedagogical process. In this sense, the authorities involved in the curricular design must pay special attention to the impact that the development of technology and communication has today in the formation of students. This impact moves in two trends: institutionally organized platforms universities use as support for the teaching process, and the wide range of materials from the media students access by their own means.

On the other hand, the technological advances linked to the cultural industry have catapulted this industry to unexpected levels of production and consumption. The messages generalized by the discourse of most mainstream media are aimed at modeling behavior and consumption patterns in citizens. Such circumstances make some think that the new reality imposed by the media constitutes "a challenge" for the development of the formative process at university. In the opinion of this author, the appropriate use of the formidable variety of contents that are now accessible in the Internet and the media are, rather, an opportunity to unleash the full potentials of the formative process in this technological era.

But to achieve that commitment successfully, it is not enough to stimulate free access to the aforementioned contents available on the web and the media, it is necessary to form in students the critical capacity to discern, within the infinite number of accessible options, which are those that effectively contribute to their successful professional performance.

The development of critical thinking in university students becomes, thus, a formative need of first order. However, the study of critical thinking as a cognitive process must be approached from a perspective that reveals the internal contradictions of the phenomenon under study, and thus, define the variables that interact in those contradictions.

The present work presents the partial findings of a research on the development of critical thinking in students of the English Language major at the University of Holguín.

A THEORETICAL APPROACH TO THE INTERACTION BETWEEN CRITICAL THINKING, THE FORMATIVE PROCESS, TECHNOLOGY AND COMMUNICATION

Contemporary society is characterized by dominant dynamics as technology, communication and consumption. These dynamics interrelate and complement each other so that they symbiotically coexist and globalize to an extent that reach all spheres of society. In their interaction, it is ultimately through communication and consumption that the interaction between society and technology materializes. The Internet, social networks and audiovisuals become the fundamental means through which young people connect themselves to society and technology.

This panorama demands from social sciences and Pedagogy a constant theoretical update to identify the ways in which the sociocultural and technological changes affect the formative process at university. Moreover, research findings must become visible for many and come to practice so that they generate a transforming effect on educational environments. At the same time, the new formative approaches must be transdisciplinary, comprehensive and conveniently attuned to the aforementioned social dynamics.

Consequently, higher education in Cuban is undergoing a renewing process to adapt the curricula to the demands imposed by the vertiginous social and technological changes of the world in "a period deeply marked by scientific and technological development" (Núñez, 1994). The purpose of this renovation is to improve the formation process of professionals. The new policy proclaims the formation of professionals

with a broad profile, who are competent to find integral solutions to complex problems, and are able to critically and creatively contribute to the sustained and sustainable socioeconomic development of the country.

To contribute to such commitment, the author is conducting a research to develop critical thinking in university students so that they are able to assume mature and creative positions based on the socio-historical context in which they will perform as professionals. Similarly, the research proposal is firmly based on fundamental pillars; that is, the three main processes of university education in Cuba: the teaching-learning process, research formation, and university extension. This multiple incidence will impact the formative process from multiple angles and, thus, achieve a comprehensive and consistent formative influence on students.

To successfully cover such a spectrum, it is necessary to give the formative process a broadly transdisciplinary approach as well. In this sense, Philosophy provides the most general principles and categories that guide the study from a dialectical perspective; Pedagogy, as the science of education, becomes the backbone of the research; Psychology, as the science that studies personality, contributes with core aspects related to the formation of thought and behavior; and finally, Sociology guides the effective link between the university and society through the extension process.

As it has been expressed, the research is approached from a dialectical approach. Therefore, the general dialectical method allows us to approach the study from the relationships that are established between its essential categories, as well as to objectively reveal the dynamics, and contradictions that are manifested in the process under study, even when it is understood that this presupposes a certain degree of subjectivity given the cultural and social nature of the formative process.

For the same reason, the study assumes a multidimensional approach that permits a more holistic view of the research processes that allows to transcend from the observation of facts to the theoretical analysis of data, and from it to practice as a source and criterion of truth. In turn, Pedagogy, as the science that is in charge of the education of the individual in society and for society, plays a crucial role in the design of an innovative formative process in tune with times of technological, cultural and communicative globalization.

As expected, the conjunction between theory and praxis is an articulating entity of the pedagogical categories and principles that impact the different spheres of student personality development. Consequently, the critical level of thought, as the main category of the research, becomes the theoretical driving force of this study due to intention of developing in students the critical capacity to successfully identify the opportunities offered by the rapid development of technology and communication.

In this regard, Chaffee (2010) expresses that thinking critically becomes a crucial need in higher education since it introduces students to the development of sophisticated intellectual and linguistic skills. These skills are the basis for interpreting social and technological realities.

In another sense, the formation of the personality as a dialectical, complex and multi-influenced process presupposes the integral development of the individual to insert and fully and creatively perform in a society that is inevitably influenced by technological and communication development. (Núñez, 1994) provides examples of the remarkable social impact of technology on lifestyles, on interpersonal relationships, on values, (and) on power relations.

The formation of the personality of students has an individual dimension on which the formative process organized from the institutions does not have a direct impact. In this regard, the way to take advantage of that individual spaces of interaction of students with technology and contents from the media is to foster the critical capacity of students to choose from the dazzling stream of options they can access. The formative process at universities should focus on the potentials offered by the media in all the possible environments of access. A failure to do so, would generate a vacuum that would, inevitably, be occupied by contexts of influence not organized or oriented from the school, this intrusion would distort any

educational efforts generated from educational institutions.

About the strength of the formative environment at school, Hernández Díaz (1995) emphasizes that it is precisely in the educational practice itself that individuals acquire new meanings that shape their identity.

About this, Labarrere Sarduy and Vargas Alfaro (ND) argue that development, as an expression of processes of appropriation and active intervention in the facts of culture, does not receive specific treatment in education. In the same line of thought, the aforementioned authors express that the school must contribute to the development of an integral individual, identified with his/her culture and with the necessary capacity of reflection and awareness... (because) people are also educated beyond school and family, those other environments and the media are as powerful as those that come from the school and even interfere in the action of it.

The foregoing opinion is convincingly corroborated by social and pedagogical practice. The cultural consumption of young people has been drastically modified by the accelerated technological advances and the revolutionary and attractive ways of transmitting information and art products. This new reality impacts all spheres of society. Although, this is not a totally new situation, since technological advance has always influenced in social changes, and it is the natural result of the dialectic of social development. What happens now is that the theoretical interpretation of the impact of technological changes at a social level as well as its total assimilation by society comes with a delay due to the vertiginous technological development. Obviously, the assimilation of changes is not a homogeneous process. Young people are the sector that most quickly adapt to these transformations and they absorb the products of technology to either benefit from or intoxicate with them.

Within the formative process, university extension acts as an expansive wave of the rest of the university processes. This capacity acquires a strategic dimension to intervene in students' cultural consumption practices beyond the academic environment, via involving them as transmitters of the actions promoted by the university. But, to turn this strategy into a successful educational action, communication skills of students play a key role.

In relation to the potential of communication as an educational tool, Ortiz Torrez (2000) expresses that communication has a heavy educational burden because the people involved in it bears the possibility of transmitting to each other all their psychological reality, social values, knowledge and skills for successful interaction with other people, which stimulates the improvement of personality.

This psycho-pedagogical approach of communication serves as a solid foundation for the present research because it reveals the formative power of the successful communicative act. In addition, it expresses that not only knowledge is communicated, but also values and abilities.

The aspects previously considered are elements of essence in the development of critical thinking as a complex cognitive process and its basic processes: analysis, synthesis, comparison, abstraction and generalization. For this reason, the development of critical thinking in students of higher education is object of permanent attention by the scientific community. As a consequence, the related literature offers a remarkable diversity of definitions of this term. Next, some that provide useful elements for this research are valued.

According to Scriven and Paul cited by Hawes (2003) critical thinking is the intellectually disciplined process of conceptualizing, applying, analyzing, synthesizing and / or evaluating, in an active and skillful way, information gathered from, or generated by, experience, reflection, reasoning or communication, as a guide for belief and action.

This definition points out the fact that critical thinking, in addition to its basic processes, includes the evaluation of the information obtained, as well as its processing, conceptualization and communication.

Another definition of critical thinking cited by Hawes (2003) is provided by Marie-France Daniel who considers that critical thinking is characterized by the development of a critical conscience, oriented

towards the emancipation and autonomy of the person and the community, with the purpose of the improvement of the individual and social experience. Being dialogical, it is cooperative rather than competitive. Assuming, besides, knowing how to do and knowing how to say, knowing how to live together.

This concept is a carrier of values itself, and emphasizes essential elements of the human condition such as emancipation, autonomy, cooperation and the search for human and social improvement from a perspective of coexistence and competence, but not competition.

Richard and Elder (2002) define critical thinking as disciplined, self-guided, self-directed and self-correcting. It presupposes the acquisition of rigorous standards of excellence and knowing how to make conscious use of them, which implies the development of effective communication and problem solving skills.

In this case, emphasis is placed on the self-regulating nature of critical thinking, as well as its influence on problem solving. In turn, it gives importance to communication skills.

Facione (2007) states that critical thinking is a thought that has a purpose (to prove a point, to interpret what something means, to solve a problem).

The same author, Facione (1990) expresses that critical thinking is an essential liberating force for education and a powerful resource in the personal and civic life of the individual.

In the latter case, the role of critical thinking in the education of personality in the individual and citizen dimensions is reinforced.

The concepts analyzed above provide important elements to understand the role of critical thinking in the formative process of university students. Several of the quoted authors agree on the close link between communication skills and critical thinking. This congruence between communication and critical thinking reveals a vital importance for the design of the formative process in the era of technology and communication.

However, it should be noted that none of the definitions consulted establishes a direct relationship between critical thinking, the context in which the criticism is exercised and the reality criticized. The author of this research considers that this relationship is essential to guaranty that the product of critical thinking becomes relevant, has an objective character, and has a coherent relation with reality.

From this position, in the opinion of the author, it is very important to consider the context that frames the reality that is criticized in order to guarantee an objective result of criticism.

Up to this point, the theoretical assumptions that have been presented serve as the basis for structuring the research that is aimed at exploring and stimulating the development of critical thinking of university students in Cuba.

CRITICAL THINKING AND CULTURAL CONSUMPTION OF STUDENTS AT THE UNIVERSITY OF HOLGUIN IN THE ERA OF TECHNOLOGY AND COMMUNICATION

Cultural consumption of young people is part of activities that characterize this age group: recreation and leisure. In turn, this activity contributes to the acquisition of knowledge if it is based on the correct selection of the cultural products that are consumed.

Cubans have increasingly inserted themselves to the Internet and consequently to the access to cultural productions of the international media industry. Such reality inevitably places them in permanent link with cultural contexts that transcends their sociocultural reality. As it happens worldwide, those products from the media have a considerable influence on young people.

As part of this increasing access to media products, audiovisuals are the most popular products among young people. Due to the advantages of audiovisuals compered to written texts, this kind of materials

have become a new form of reading for digital natives; that is, the young people who are at universities today. For this reason, the analysis will focus on the consumption of audiovisuals by Students of the English Language Major at the University of Holguin and their capacity to critically decode the messages encoded in those materials.

This multimedia form of representing reality becomes a sort of semiotic mediator between individuals and culture. Audiovisuals, as a means of communication, encodes information through a complex metalanguage of images, sounds, symbols and intertextualities that mobilizes mental processes such as auditory, visual and vestibular perceptions (the latter, in the case of virtual reality and 3D)

Audiovisual discourse generated by the entertainment and information mega industries is encoded with precise illocutionary intentions in search of a given perlocutionary effect. This makes untrained "consumers" become victims of confusion, manipulation, or deception.

In relation to the use that is given to audiovisuals in general, and to images in particular, Chaffee (2010) states that images influence subtly or openly to persuade us to make, believe, or buy something. As critical thinkers we must pay attention to the ways in which images can inspire, support, and reflect our beliefs and goals.

The previous opinion focuses on the semiotic value of images and their influence on audiences; as well as the value of critical analysis to assimilate the messages properly.

Thus, the critical thinker is in advantage because s/he develops the ability to discern to what extent the messages that are proposed satisfy their needs, motivations and aspirations or not.

Knowing how to decode the meaning and semantic value of symbols and images is crucial to understand contemporary media discourse, only for aesthetic or communicative reasons, but also to detect commercial, ideological or political interests.

From this perspective, the empowerment of the critical understanding of the messages contained in audiovisuals not only helps to develop criteria of selection in relation to cultural consumption, but also favors the formation of aesthetic values that raise the level of comprehension and enjoyment of the cultural contents that are consumed.

On the other hand, taking into account that most of the audiovisual materials consumed by language students are in English, the development of communication skills in the language is also stimulated.

Following those reflections and as part of the research, a survey was conducted to diagnose the levels of consumption of the students from the English language major at the University of Holguin. The results show that 95.4% of the students surveyed consider having a high level of access to the technologies that allow them to store, transmit and reproduce audiovisual materials. On the other hand, 3.1% claim to have a medium access level to these media. Finally, the remaining 1.5 admits having a low level of access to these technologies. In numbers, according to the information provided by the survey, 98.5% of the students consulted have a considerable level of access to the technologies that allow them to consume audiovisuals by their own means. Despite the 1.5 that declares a low level of access to technologies, 100% of the students surveyed admit to regularly consume a great number of audiovisuals from mainstream media.

Regarding the critical analysis of audiovisuals, the survey shows that just a 15% of the students expresses that they focus on the critical comprehension of audiovisuals and on language aspects. The 71.9% focuses only on language aspects. And 13.1% just focuses on entertainment.

On the other hand, from observation as a method of research, it has been corroborated that some students tend to reproduce patterns of behavior, expression and lifestyle of the cultures represented in the media.

In addition to the spontaneous use of audiovisual by students, professors increasingly use this kind of materials as teaching media in their classes since these become authentic language materials for various

disciplines of the English Language major.

According to an interview conducted to professors of the major, a weakness that was detected in the use of audiovisual in class lies in the fact that no scientifically validated selection criteria are followed to decide on the materials presented. The selection made by professors is moved by the need that the materials contain the linguistic contents they teach, and the educational potentials of the materials. In no case, it is stated that the selection is mediated by a deep critical evaluation of the content of the presented material. The formation of critical analysis of audiovisuals by university students is an opportunity that should be grasped from both, spontaneous and school-oriented cultural consumption. In this regard, experts agree in stating that the most feasible variable to handle at the social level to face the influences of audiovisuals is the formation of a critical spectator capable of understanding the contents embedded in said productions. In relation to this aspect Fiske, J. (2000) has expressed: "Decoding those representations and understanding their meaning can be a pleasant process for the viewer".

CONCLUSIONS

The formative process in the Cuban universities of the 21st century becomes an adequate means to seize the opportunities offered by technological and communicational development. In this sense, the development in students of the critical capacity to discern between the valuable and the superfluous contents plays a decisive role in a social context dominated by technologies, communications and consumption. The partial results presented provide information regarding the high level of consumption of audiovisuals, and the limited capacity of critical analysis of their contents by the students of the English Language major of the University of Holguín. On the other hand, the increasing use by professors of these materials in class is also corroborated. However, the lack of validated criteria for the selection of the materials presented, becomes a limitation to unleash the full potentials of audiovisuals as teaching media. To fill these gaps, the present research aims at creating a pedagogical conception to develop critical thinking in the students of the English Language major at the University of Holguín to contribute to their formation as integral professionals; proud of their cultural identity; and able to perform competently and successfully in diverse intercultural contexts.

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