



Critical thinking in Sociology subject. Didactic experience in high school.

PhD. Julio César Orozco Alvarado

Education and Languages Faculty

UNAN-MANAGUA

jorozcoa@hotmail.com

Wendy Floridalma Rodríguez Torrez

Education Science Major focused on Social Science

wrodriguez.samuel@gmail.com

DOI: <https://doi.org/10.5377/torreon.v7i18.7713>

Keywords: *Didactic strategies, critical thinking, Sociology.*

ABSTRACT

This paper is an educational innovation carried out in the public high school Rigoberto López Pérez in Managua, aiming to develop critical thinking through a didactic intervention in sociology subject, because it has been many years the academicist way is implemented, which demotivates students, however, in the didactic intervention both theory and pedagogy practices were merged and students interacted doing cooperative work, criticizing and socializing. This research process based on the socio-critical frame and on the investigation action, because an education trouble was found and was solved through the application of innovative learning strategies. The research focus has both qualitative and quantitative elements, prevailing the qualitative focus due to the techniques and tools used along the didactic intervention as in the ethnography education. The results of the investigation proved the implemented learning strategies generated critical thinking in students and therefore, it is suggested to innovate the didactic methodology so students could be main agents in their own learning and feel motivation towards sociology subject.

INTRODUCTION

Worldwide and particularly in Nicaragua, the sociology subject has a very important role to study and understand social reality, since the education process develops basing on social phenome which involves teachers and students in a historical and social-cultural context. In the process of learning the different subjects of the social component there is a series of steps teachers should propitiate; one of them is the appropriate selection of contents, a second aspect is identify and apply the didactic strategies which can permit the learning of the contents, another important element is the didactic resources teacher works with to develop the class, though something very important is generate interaction between students and contents and the interaction among them, in this particular, socialization and verbalization of contents developed in class is important then teacher can identify if there is comprehension or not of the studied contents.

In the face of this panorama, it comes out the necessity of teaching sociology in an innovative way. This is a challenge because, even though the majority of innovations on education are related to applying information and communication technologies (TIC as in Spanish), in the teaching practice traditional ways prevail. Because of that, it is a priority to act and intervene with learning strategies based on innovation, interaction and participation of students in the building of their knowledge, it is mainly to expand students' knowledge and in this fashion create citizens conscious about the social reality they live and interact in.

As for these new pedagogical methods, based on the students' learning of the sociology subject, on an international level, the research of Montoya Maya and Monsalve Gómez (2008), envisages classroom as an ideal room to retake and analyze events of the particular student context, as an object to ponder to shape a more critical and autonomous thinking. The writers stated that one of the situations affecting the country is the lack of critical thinking in students.

The didactic strategies used were: text analysis, news, text analysis and problem solving, TIC influence over reality developing, learning process based on participative dialogue, images, symbols or no verbal language interpretation and expression. These strategies, even though are simple, but resulted motivating for students, since not all students use them.

Montoya Maya y Monsalve Gómez consider that the used strategies favor critical thinking building; they signalize these strategies can be used to model critical thinking, so awakening and feeding those attitudes of analyzing and judging which enable students autonomy and maturity through expression and participation in classroom; besides, communication and reflection go together, since what is expressed is deepened and what is deepened is exploited.

These findings pointed by Montoya Maya and Monsalve Gómez, produce valuable input for this paper, being that they describe the socio-critical and autonomous model and different innovative didactic strategies are highlighted to develop critical thinking in the sociology subject.

Notwithstanding this progress in the area of educational innovation, in this country the traditional focus remains, the didactic methodology used by the teachers is academicist in which it is clearly evidenced the willing to cover the subject program instead of generating critical thinking in students; also, it is noticeable the use traditional techniques like dictation and mechanical memoristic questions, question which will not help analytical thinking. Another issue is that students do not socialize content, students only transcribe from books, but they do not talk over it, they are not able to apply or give judge about a topic. It is because the teacher does not have a new and innovative methodology, students get demotivated and lose interest in learning, stopping their scientific, technical, critical and humanist knowledge from growth.

This kind of methodology is known as traditionalist, Picado (2006) defines it as “logocentrism and magisteriumcentrism, since everything is about concepts, teacher explanation, logical aspects and the program contents. This model focalizes on contents and discipline to teach and completely omits knowledge and interest of the student to teach learning” (p. 116). It means, student role is totally passive and receptive, that is why, it provokes in student disinterest and boring for learning.

Likewise, Dobles (1990) establishes that “the concern of the traditional school is memorization. For this model, learning is remembering. Recalling definitions, classifications, tables, lists [...] but this cognitive category does not transcend to knowledge application or to comprehension” (p. 46). The teacher role is have all students understand the content and make it useful for life and not an ephemeral learning, “something I study today but I will forget it tomorrow”.

Currently, new learning models have their foundation on the socio-critical model, from the view of Orozco Alvarado (2016), in “this curricula conception, citizen work consists of analyzing social problems with critical sense, and revealing the contradictions and distortions of social life with his/her own points of view” (p. 13), nevertheless, many teachers prefer the traditional model, bearing up against change. It is important to mention that the role teacher should play in classroom is that of knowledge facilitator and agent who promotes reflexive questions in classroom. On the other side, student plays the role of ideas constructor.

MATERIALS AND METHODS

This current research paper was performed through a didactic intervention in the Rigoberto López Pérez high school in Managua department, Managua municipality, in district

No 1, in Camilo Sotelo neighborhood, from ENEL headquarters 500 mt south, during I semester 2017.

The investigation was done through the socio critical investigative paradigm, Ricoy (2006), stated that this paradigm “demands the investigator a constant reflection action-reflection-action implying the researcher commitment, from praxis to assume the change and liberation of oppressions which generate social transformation” (p.p 17-18). Moreover, it leans on the quantitative and qualitative focus, the last one predominates because of the used techniques to discover or attune questions of the investigation in the interpretation process.

The investigation action method was also applied, that “is related to day by day practical problems experienced by teachers instead of doing it with the “theoretical problems” defined by pure researchers about a knowledge discipline” (Elliott, 2000, p.24). Likewise, it was carried out a not probabilistic intentional sampling that helped choose “the sample according to criteria established by the researcher in accordance with the typical characteristics of what is meant to study” (Ruiz, 2008, p.83). The chosen sample was 54 students who undergo eleventh grade in Rigoberto López Pérez high school.

The scope of this research, according to the depth level is descriptive, since it comprises interpretation and analysis of facts, circumstances and experiences in the didactic intervention process. Gómez (2006) points that, “descriptive research aims to specify proprieties, characteristics and important aspects of the phenomenon under analysis” (p. 65).

Insomuch as the timing, it is transversal, due to the study period and sequence, comprised between January and December 2017. Research designs of these kinds “collects data in a moment only, in a sole time. Its purpose is describe variables and analyze their incidence and interrelation at a given time” (Hernández, Fernández y Baptista 2012, p.151).

As for the implemented researching techniques, consider the following:

- *Observation*: this investigational technique permitted investigators know the perception of the student observer, teacher observer and teacher investigator, the scope or incidence of each didactic session developing the critical thinking. On the other side, the poll helped obtain information about the appreciation of the didactic intervention by students towards the used strategies by teacher investigator. The obtained information was used for the qualitative analysis.
- *Journal or notes, questionnaire, quiz and final test done with Kahoot platform aid*, which “is a platform of mix learning based on gaming, that promotes student attention and participation questions and answers” (Muñoz, 2016, p. 21). This permitted

investigation do interpretations, comparisons and checkup, in order to accomplish set objectives and obtain conclusions and recommendations for the research.

RESULTS AND DISCUSSION

Critical Thinking

Calle (2014) stated that “critical thinking is not developed or strengthened only including performance indicators of the areas planning of educative institutions. It is necessary that students exercise their abilities and to do so it should be materialized in actions” (p. 43), it means, student instead of reaffirming what is considered as truth, questions and criticizes.

To continue, León (2006) exposes the following characteristics of critical thinking:

- *Perceptual sharpness*: ability to observe minimal details of an object or topic and enable a suitable posture toward others [...] it means read the subliminal message between lines and find the example or the data that enforce our statements.
- *Permanent Questioning*: it is the disposition to judge ideas and different situations given. It is also the permanent pursue of the reasons of things.
- *Open Mind*: it is the talent or disposition to accept ideas and conceptions from others, even if they are wrong, in other words, contrary to ours.
- *Self-regulation*: it is the capacity to control our way of thinking and performing; it is to be aware about our own strengths and limitations, it is to recognize our weakness about our approaches and improve them.

These characteristics ought to be fostered in students so they will not reproduce somebody else ideas only, this manner contributes to build a heterogeneous society.

Didactic Intervention and its Psicopedagogical Foundations.

The investigation consisted of a didactic intervention which held eight didactic sessions that developed different didactic, innovative, active and participative strategies, to expand the critical thinking of content, culture and media.

The educative paradigm that supports the investigation is the socio-critical autonomous, described by Escobar (1991) as “that which can allow one to set free of oneself [...] the effort to know how and to what extent thinking differently can be possible, instead of legitimizing what is already known, -and he adds-, it is about learning to what extent the endeavor to think about our own history can liberate the thinking of what is thought hidden in silence, so to let one thinks differently” (p. 135). It is the model of education in which the student stops being oppressed to become a free and autonomous being able to do his/her own guessing.

As for the didactic strategies, Díaz-Barriga y Hernández (2010) state that “teaching strategies are means or resources to present the pedagogic help adjusted to progress needs of the constructive activity of students” (p. 118). On the other hand Torres and Girón (2009) express “they allow time saving, because besides they enable students to learn efficiently, they facilitate a faster learning” (p. 72).

Starting from these psychopedagogical referents, which are fundamental in the processes of learning, then the teaching strategies applied by the teacher in the didactic intervention process, in the content culture and media:

- *Guiding Questions*: Teacher displayed a video about “media and its main definitions”. Students had to answer a series of questions, previously handed in. To finish, a talk was done. It was a strategy that let students express their own ideas ground on their previous knowledge.



Picture 1. Questions answering

- *Mind Map*: Students needed to read a document about media classes and eventually created a mind map scheme. Later, every group of students built it on the board until they finished it. This was an active strategy in which everybody participated.
- *Exposition*: Students had to investigate about main media in Nicaragua; later, they prepared the didactic material, to finally present it to their classmates. This strategy showed students developed their critical thinking, because they uttered their judge about media press including television and radio.
- *Video forum*: It was an innovative strategy. Teacher displayed the video about media in Nicaragua. Simultaneously, students were answering to key questions previously given. Questions to argue about free expression, the red news and journalism professionalism.



Picture 2. Students participating in a video forum.

Subsequently, students shared their ideas and opinions in another forum. Thereon, the observer expressed that students demonstrated enthusiasm in this activity they debated among them.

- *School Newspaper*: As the last strategy, teacher suggested the school newspaper that besides presenting the interviews results to the principal, teachers, students and parents, it also would have another characteristics of a wall newspaper. This activity could catch the group creativity. As for this strategy, Calles and Arráez (2007) highlight that “the didactic strategy based on the use of the newspaper in classroom, gives students pondering and experiences that can be used in concrete situations. (p. 194). This was evident because students expanded their skills of reading, investigation, analysis, and an active teaching was promoted.



Picture 3. Students presenting school newspaper.

It is important to mention that each strategy was chosen jointly with the content, objectives and learning evaluations, which are corner stones of didactic planning. Likewise, during the didactic intervention, didactic strategies were used according to the learning stage: exploration of previous work, new knowledge introduction and their restructuring and application to problem solving (Benejam and Pagés, 1997).

- *Exploration of previous works:* in this stage, a diagnostic test was applied through Kahoot platform, here students evidenced their previous knowledge about the content “Culture and media”. It was a very dynamic strategy and sound competition among them. The exploration of previous works is important to identify students pre-knowledge, this allows teacher begin learning process considering what student already knows, it means, identify what the student knows, how and where the student learned it. To initiate a learning process without exploring previous works, is to deny or minimize the student potential.
- *Introduction of new knowledge or restructuring:* this stage consisted of applying the following didactic strategies: a) Questionnaire, which eased students socialize the main definitions of communication; b) Time line, here students learned about communication evaluation through years; c) Mind map, here students characterized media on a scheme; d) exposition, each workgroup determined media in Nicaragua; e) video forum, every student developed critical thinking to recognize the role media plays in Nicaragua. Thereon, the careful selection of each didactic strategy to apply requires teacher consider about suitability of the chosen didactic strategy, in other words, the learning strategy teacher chooses should foster content development, since each area and content has its own structure and nature. In the case of this didactic intervention, the strategies above mentioned were carefully selected to motivate students.
- *Knowledge application:* as the last strategy for the students to demonstrate their knowledge about content, they carried out the school newspaper of the center, showing and applying knowledge, abilities and acquired skills along the content development which were considered during the didactic sessions. At the end, students had a final test to determine the learning they received. This last activity is highly important in the learning process and in the praxis of the content. In this regard, teacher should propitiate that student to have the opportunity to apply content in his/her socio context as both micro and macro way. That is why it is necessary to give students learning or problems based on context.

Therefore, in this stage, students worked on learning strategies with participative methodologies, where students play a protagonist role of their learning. Thus, the correct

application of knowledge or experience of a new situation, will constitute an effective guideline to monitor student behavioral change and verify if in fact the learning process is working properly (Yáñez, 2016).

Table 1. Comparison of the diagnosis test and final test.

Concepts/Questions	Diagnosis test	Final Test
	% of right answers	% of right answers
¿What is media?	54	98
Main media	46	90
Massive media role	54	96
Most important media	17	86
Internet role	67	94
Massive media characteristics	27	90
Not a massive media	19	92
Not a printed media	79	92
Business massive media	27	84
Media purpose	73	92

Source: Own production based on the results retrieved from the diagnosis and final tests.

Respecting to the qualitative and quantitative analysis of the investigative process, this study results remarks that the didactic intervention could establish the following comprehension activities in students: explanation, exemplification, comparison and contrast, contextualization and generalization. This is because the student built his/her own knowledge from previous experiences, relating what is new to what is old. From student point of view, strategies were innovative, active and participative and allowed critical thinking grow in students. The teacher-observer uttered that teacher always very analytical questions in order to know students opinions during the expositions, the newspaper and the video forum.

As for the quantitative results of the process evaluation of students, the final test evidenced that after the intervention the learning curve increased 45 %. The diagnostic test identified weak points of comprehension questions students have about the content “culture and media”, additionally, previous knowledge exploration permitted identified those concepts students have more difficulty. Besides, the final test results showed students improvement related to the questions asked about media.

In so far as the valoration of the didactic intervention, the 73 % students stated it was excellent, the 21 % motivational, and some 6 % funny. As can be seen, it was accepted. Also, students coincided that the strategy that best developed the critical thinking was the video forum, because they could express their ideas. The same interview asked if teacher promoted critical thinking during classes, and some 94 % of students agreed the teacher did, furthermore, students pointed positive aspects of the teacher like motivation and dynamism to teach. Following, there are points of view of three informants involved during the didactic intervention process:

- “With expositions and video forum we debated about current situation of media in Nicaragua” (*student observer*).
- “During the video forum, students commented about television channels and journalism monopoly going on” (*teacher investigator*).
- “Students were asked very analytical questions to know opinions during the expositions, the newspaper and the video forum” (*teacher observer*).

CONCLUSIONS

In summary, it was confirmed that the implementation of the innovative learning strategies are the ones which fostered the critical thinking in students about the content “Culture and media”. This was evidenced in students expressions both orally and gestures, indicated in observation journey.

When choosing and using innovative didactic strategies, eased students comprehension about content of the unit covered, generating a positive impact in their learning, especially in the expositions, video forum and the making of the school newspaper. Student took an active role in the learning process

It is also important to note that when innovative, participative and analytical strategies are not used in sociology subject, students tend to get bored and desinterested, in this manner, teachers are suggested to investigate about educative theories of the socio-critical approach, which permits students develop skills to think, analyze, reflection thus they can be capable to make a critical judge about topics affecting society

Teacher also should take advantage of the space of pedagogical inter capacitation of interlearning (EPI as in Spanish) to appropriate new learning methodologies that promotes critical thinking, this takes to continuous improvement of sociology teaching and obtain better school results in learning process.

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