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## **PROBLEMS OF COLLABORATIVE LEARNING OF THE DIDACTIC UNIT OF INDUSTRIAL NETWORKS IN AN INSTITUTE IN CALLAO. CASE: CLASSROOM**

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### **ABSTRACT**

The research is aimed at unveiling and analyzing the problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: Classroom, which seeks to know the problem of collaborative learning of the didactic unit of industrial networks in students using the Classroom platform. Therefore, the present case study is of a qualitative interpretive approach, with a case study design, the techniques applied were student interviews, teacher interviews and documentary analysis, whose instruments were the student interview guide, interview guide to teachers and document analysis file. The unit of analysis was made up of nine students and three teachers. The triangulation of the discourses facilitated the obtaining of the emerging categories; Consequently, the most significant emerging categories were positive interdependence, individual and team responsibility, stimulating interaction, internal team management, and team evaluation. The conclusion of the study leads us to reveal the problem of collaborative learning using the Classroom platform. Therefore, it is necessary and important to give greater impetus to the work that is being done.

It is proposed to carry out the proposal in order to complement the learning through the classroom platform of the fifth year high school students in the mathematics course, achieving interaction with different technological tools to strengthen the capacities and competencies in the students eliminating barriers of space and time.

**KEYWORDS:** Collaborative learning, classroom platform, innovation, teamwork and evaluation.

### **INTRODUCTION**

Collaborative learning highlights the importance of the teacher when organizing learning activities, so that currently the student's knowledge is

being built, for this it is important to consider the students, the previous knowledge and the skills that they want to improve with the Classroom platform carefully by the teacher, definitely learning is more efficient, participants understand and evoke more quickly, when their teachers guide them in their classes with representative activities during the learning course: Gómez (2020) says about collaborative learning that It has been shown that the participants evoke the definitions for a longer time, have increased their ingenuity, their superior reasoning and critical thinking which is perceived as more trust and acceptance for themselves and their environment. (Mills, 1996).

In Spain, teachers positively incorporate information and communication technology tools in the classroom, through School 2.0 standards, which has led to the arrival of numerous technologies in class, despite traditional educational materials ( blackboards and texts) are usually the most used resources in classes, since more than fifty percent of the teachers use them daily (Area, 2011). Navarra says that this resource has been applied, teachers use computers and the Internet in more than 75 percent every day, with email being the most used resource, social networks, messaging, virtual classrooms and downloads, the least used resources. Navarra teachers request more training in technological aspects: creation of digital teaching media, evaluation, training in web 2.0 tools, use of software and online collaborative projects. (Area, 2011). (De Soto, 2018)

These classrooms are inspired by the active learning classrooms that have been built at the University of Minnesota and the assessment of the classrooms was also based on an interview schedule from the same university (see Note 1 in Baepler & Walker, 2014) (Sundgren). & Mozelius, 2018)

In the course of the development of the different activities to obtain learning by correctly promoting technological tools for communication skills, which have arisen a teaching debate in various educational situations taking into account different innovative paths which develop skills in the 21st century, for example: communication, collaboration, creativity, technological skills and critical thinking of students, since currently we have been forced to apply technological tools in the development of our class sessions, thus avoiding student dropouts, high rates of youth unemployment with greater attention to vocational training.

Whose objective is to Determine the problem of collaborative learning of the didactic unit of industrial networks if it is related to the classroom in an institute of Callao, which proposes as the education and training of students with knowledge, value learning to do and requested skills in the work related to the labor market.

Collaboration in the classroom: collaboration between students and teachers. Teachers can promote collaboration among students as a learning mechanism by placing them in pairs or groups and structuring the interaction so that they learn from each other. The first section of this article examines this process and explores the new role of the teacher in this type of classroom. In addition, in the classroom, teachers can collaborate with each other, not only to better respond to the needs of students but to learn all. (Durand & Ester 2019)

At the national level, the problem regarding the Scarce availability of educational resources. There is still not enough evidence to support the implementation of the “Flipped Classroom” method in a Peruvian environment. (Monjaras, 2019)

In public rural schools, the reduction of texts and learning supplies is a main factor that defines the adequate achievement of their training (Pozzi-Escot, et al. 1999). Rural public educational institutions, native or non-native, find a thirty percent request for attention in the first four levels and a forty-six percent demand for attention in the last two grades (Cueto & León 2009). For learning as a special tool is the incorporation of ICT. Taking into account that in 2018 only 13.2% of the population over 6 years old have internet access in rural areas, which has decreased with respect to the previous year by 1.1%. This situation is complicated when verifying the number of households with computer access in rural areas is 5.5% and 1.3% with internet. The information also indicates the close relationship to the distribution and application of didactic material and the relationship that exists with other subjects linked to the increase of faculties and techniques in the digital world. (Ministry of Education Peru, 2017)

In this context, in an institute of Callao, students from different districts of Callao - Lima seek to describe the problem of collaborative learning of the didactic unit of industrial networks with the classroom in an institute of Callao in the situation that we are living at the moment of global health emergency due to the COVID-19 pandemic, students and some sectors of them are socially isolated, so they are without leaving home, so now the classes are at a distance, they are carried virtually through the use of technological tools , I consider it necessary to develop the Classroom with collaborative learning as a technological tool that allows strengthening education at different educational levels; These activities can be developed in certain times and spaces within their home and through virtual technological tools as part of the daily academic programming that the student must develop during the educational process to increase the knowledge of our students in order to achieve a good performance in their academic activities

Classroom has been developed on the academic programming obtaining satisfactory results within the didactic unit. In the present work the following general problem was taken into account: What is the problem of the collaborative learning of the didactic unit of industrial networks with the classroom in an institute in Callao?. With the following specific problems: (1) What is the problem of collaborative learning with positive interdependence in the classroom of the didactic unit of industrial networks in an institute in Callao? (2) What is the problem of collaborative learning with individual and team responsibility in the classroom of the didactic unit of industrial networks in an institute in Callao? (3) What is the problem of collaborative learning with stimulating interaction in the classroom of the didactic unit of industrial networks in an institute in Callao? (4) What is the problem of collaborative learning with the internal management of the team in the classroom of the didactic unit of industrial networks in an institute in Callao? (5) What is the problem of collaborative learning with the internal evaluation of the team in the classroom of the didactic unit of industrial networks in an institute in Callao?

The following research took into account the importance of the problem of collaborative learning of the didactic unit of industrial networks is related to the classroom in an institute in Callao, teachers take into account actions of use and their appropriate relationship of virtual environments of learning, its didactic material as a primary element of the educational process, therefore the methodological justification to achieve the objectives in a Qualitative approach - Case Study, which will be reviewed through expert judgment taking into account that the research will be considered as a contribution in future research processes.

HUZCO & ROMERO, (2018). Tell us about the Google Classroom in August 2014 it was launched. Its version in Castilian was later released. Whose objective is simply: to create virtual classrooms, group students and teachers and facilitate communication, the distribution of information, educational tools, the application of tasks and evaluations. Google Suite as part of for Education, the use of Classroom requires an educational institution account, in this case we will work with the free environment with a non-corporate or personal gmail account.

The present work has the general objective of: Describing the problem of collaborative learning in the didactic unit of industrial networks with the classroom in an institute in Callao ". Taking into account the following specific objectives: (1) Describe the problem of collaborative learning with the positive interdependence in the classroom of the didactic unit of industrial networks in an institute of Callao. (2) Describe the problem of collaborative learning with individual and team responsibility in the classroom of the didactic unit of industrial networks in

an institute of Callao . (3) Describe the problem of collaborative learning with stimulating interaction in the classroom of the didactic unit of industrial networks in an institute in Callao. (4) Describe the problem of collaborative learning with the internal management of the team in the classroom of the didactic unit of industrial networks in an institute in Callao. (5) Des To screen the problem of collaborative learning with the internal evaluation of the team in the classroom of the didactic unit of industrial networks in an institute in Callao.

## **MATERIALS AND METHODS**

### **Research type and design**

According to the qualitative or unconventional method: In accordance with Bonilla & Rodríguez (2000), specific cases are investigated, not extended. For this reason, it is not a priority to calculate, but to attribute, explain the common environment from the conclusive features of the process to be investigated, according to how they are perceived among the same who are in the studied situation (Bernal, 2010). The author directs us to deepen and therefore not to generalize, therefore his main concern is to qualify and explain a situation within the research process.

Monje (2011) Mentions about qualitative methods: [...] Qualitative methods resort to theory, not as a reference point to generate hypotheses but as a guide to the research process in its initial stage. The knowledge that it seeks as a starting point is the people studied and not exclusively guaranteed by the scientific communities (Bonilla & Rodríguez, 1997: 86). (p.14). According to Monge, the qualitative method does not generate hypotheses and the knowledge seeks that the people studied take their reality into account.

According to the qualitative approach, it takes into account methodologies for collecting information that are not homogeneous or directed. This is based on achieving criteria and position of the members (taking into account their impressions, relevance, experiences, meaning among other subjective aspects). Therefore, the interconnections between people, teams and social groups are beneficial. The researcher makes open questions, collects information manifested through written, verbal and non-verbal language, as well as visual, which he retracts, details and transforms into content with an individual tendency. (Hernández et al., 2014)

Definitely, the authors refer to compiling non-standardized or predetermined data that will serve us to obtain criteria, the position of the individuals to be investigated, which results from their interaction through

interviews with open questions collected in writing, verbally or not. verbal (visual) therefore the researcher is directly responsible for the process.

Categories, subcategories and a priori categorization matrix

A priori categories and subcategories

Categories

Herrera et al. (2015) The definition of the categories and subcategories can be a priori, made a priori of the data collection process, which begins from the collection of significant references at the beginning of the search itself, which is in relation to the difference that Elliot has the distinction of the definitions, objectives and sensitizers, where the a priori categories respond to objectives and ascending to sensitizers.

**Table 1**

Category	Subcategory
Positive interdependence in collaborative learning	Set clear goals
	Rewards specific achievements
	Share tools
	Designate individual activities and functions
	Assume assigned responsibilities
	Consider identities
	Employ ingenuity
	Faces external threats and difficulties
Individual and team responsibility in collaborative learning	The team accepts common goals
	Each member is responsible for their portion of the work
Stimulating interaction in collaborative learning	Progress and personal growth
	Increased motivation
	Feelings of connection and convenience.
	Incentive to creativity and utility.
Internal team management in collaborative learning	Be nice
	Be assertive
	Participatory
	Involve
	Talk and agree
	Solve problems
	Take decisions
	Trust the team
	Give mutual help
Take responsibility for the results	
Internal evaluation of the team in	Co-evaluate

collaborative learning	Evolve the critical sense
	Give back for team activity and collaboration
	Dodge the domain.

Source. Categories and subcategories. Taken from the author, (Ruíz et al., 2015)

### Study scenario

The research work will be carried out on two students of the sixth cycle who are 18 years old, two teachers and two coordinators of an academic program of the IES, located in the Callao Region, constitutional province of Callao in the district of Bellavista, Callao-Lima-Peru, the type of communication is virtual that which is had with students and teachers due to social isolation and decreed by the government of Peru.

### Participants

#### Population and sample

Barriga & R. (2009) taking into account the qualitative approach, sample is a unit of analysis or a team of people, environments, events, a reality which collects information without necessarily being significant from the population under study (Hernandez et al ., 2003). Non-probabilistic sampling presumes a non-formal sample selection process, depending on the researcher. Among them, the following stand out: the intentional or opinion sampling in this sampling is chosen any subjects who are familiar with a topic or with strong ones according to previously established criteria. Therefore the students are the participants in the interviews selected only for them.

#### Population

Gallardo (2017) It takes into account the population as a limited or unlimited meeting of participants with ordinary particularities will be specified at the end of the research process "(Arias, 2006, p. 81). The characteristics will be defined by the problem to be investigated and the objectives of the research process (Arias, 2006).

As the population was observed in some cases, "which introduces the concept of the universe and gives it meaning, however in reality they are of different content and treatment, in understanding of the results obtained. (Tamayo & Tamayo, 2003)

The population is 800 students who study in an institute located in the Callao Region, constitutional province of Callao in the district of Bellavista, Callao-Lima-Peru,

#### Sample

Hernandez et al. (2010) Demonstrates the qualitative process, as a group of individuals, facts, events, society, etc., on which data is collected, without having to be representative in the universe or population studied.

The sample corresponds to two students of the 2nd cycle who are 18 years old, two teachers and two coordinators of the academic program of Industrial Electronics of an institute of Callao, located in the Callao Region, constitutional province of Callao in the district of Bellavista - Lima Peru

#### Characterization of subjects

The choice of students, teachers, and study coordinators are samples for convenience. The members of a Callao IES. As for the students, they are informants, they are teenage students of a higher technical institute. The teachers and coordinators are informants who manage the classroom platform, and they are working in an IES in Callao. The coding of the informants is presented in Table 2.

**Table 2: Informant coding.**

Informant group	Description	Code
2 Students	Student 1	E 1
	Student 2	E 2
2 Teachers	Teacher 1	D1
	Teacher 2	D2
2 Coordinators	Coordinator 1	C1
	Coordinator 2	C2

#### Data collection techniques and instruments

According to the authors: Information collection techniques or information collection procedures are resources used to compile information in a research process. They may be direct or indirect. Direct: interviews and observations; indirect: questionnaires, scales, inventories and tests as an instrument for collecting information. Resources that are part of an information gathering technique. Such as a guide, a manual, a device, a test, a questionnaire or a test. (Sánchez et al., 2018)

Valderrama (2009) According to the authors, they say that by applying the techniques, the main method and the complementary ones, the progress of



the research would achieve its objectives; compliance with all the investigation processes and mainly give a concrete answer to the problem and the objectives. Valderrama tells us about the technique that seeks to achieve the answer to our problem and our objectives.

Tamayo & Tamayo (2003) tells us about the techniques and alludes to their origins to the productivity of things, to undertake something, to the ability to conceive, to create to do things, which imply an empirical knowledge of how to do them. Taking into account what Tamayo mentioned is in relation to doing in the research process.

### Interview

Bernal (2010) According to the author: [...] Buendía, Colás and Hernández (2001) tell us about an interview that is a technique used to collect information through a direct process of communication with the interviewers and the interviewee, which the interviewee answers previously designed questions in relation to the dimensions to be studied, presented by the interviewer.

Hernandez et al. (2010) Comment on the context in which a questionnaire is used (quantitative instruments). However, the interview is qualitative, it is personal, manageable and open (King & Horrocks, 2009). It is conceptualized, concentration to dialogue and exchange data between the interviewer and the interviewee.

For this qualitative research, the Grounded Theory method will be used, also known as techniques, which allowed the necessary information to be collected from the proposal to be investigated; the following technique will be applied:

The interview.

Expert judgment.

Díaz et al. (2019) considers that a characteristic of the experts' criteria is the involvement of the methodological study with the adequate data collection with the study variables to obtain application data and interpretation of the data collected from the sample.

**Table 2: Purposes of techniques and instruments**

Techniques	Instruments	Purposes
Interview	Student Interview Guide	Collect information on collaborative learning in the classroom.
Interview	Teacher Interview Guide	Collect information on collaborative learning in the

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		classroom.
Interview	Coordinator Interview Guide	Collect information on collaborative learning in the classroom.

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Note: Adapted from Valdivia (2017) Thesis. Valdivia .. Family violence: Case study of users of the Public Ministry of Huaral, 2016.

### Procedures

In this research, the interview will be applied as a technique and the interview sheet as an instrument, that is, the study and interpretation of instruments such as the interview will be carried out after transcribing them verbatim to later be grouped into categories and sub categories.

Category 1: Positive interdependence.

Set clear goals

Rewards specific achievements

Share tools

Designate individual activities and functions

Assume assigned responsibilities

Consider identities

Employ ingenuity

Faces external threats and difficulties

Category 2: Individual and team responsibility

The team accepts common goals

Each member is responsible for their portion of the work

Category 3. Stimulating interaction

Progress and personal growth

Increased motivation

Feelings of connection and convenience.

Incentive to creativity and utility.

Category 4: Internal team management in collaborative learning

Be nice

Be assertive

Participatory

Involve

Talk and agree

Solve problems

Take decisions

Trust the team

Give mutual help

Take responsibility for the results

Category 5. Internal evaluation of the team in collaborative learning

Co-evaluate

Evolve the critical sense

Give back for group work and collaboration

Dodge the domain.

### **Scientific rigor**

Sánchez et al. (2018) It is the strict study of the scientific method. Scientific rigor goes above the posing of easy-to-answer questions, it requires a comprehensive and ethical conduct during the development of the research.

Arias & Giraldo (2011) Rigor in qualitative research, its primary criteria, the different interpretations and applications, ethics and the social obligation of the researcher.

The present investigation will be implemented taking into account the normative scientific rigor because different research works linked to the variables used in the current investigation have been considered, which will allow us to firmly defend the development of the investigation.

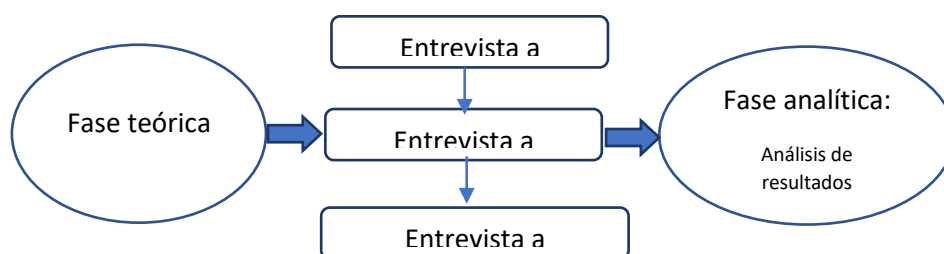
### **Information analysis method**

Herrera et al., (2015) Taking into account the Methods of qualitative research, consequently it is difficult to establish qualitative research methods and specify a type of research [...]. The research design is a case study. Oseda et al. (2018). He explains that "In the interpretive approach, the design is open, flexible and emergent" (p. 28). He continues by underlining that "it is very useful to study practical problems or specific situations" and that "a case can be a person, organization, teaching program, an event, etc. In education it can be a student, a teacher, classroom, faculty, programming, school "(p. 63) and according to Yin, the case study can be a single case, which focuses on a single case, but also multiple where use several cases at the same time to describe a reality (as cited in Oseda et al 2018 p. 63 - 64)

Schettini & Cortazo (2015) comment that on coding, the analyst will carry out a microanalysis of the data. This implies their first interpretation of which is the first moment where the theoretical part is very important to extract the essence of the data and make links between them, which is oriented to seek the meaning of the data.

Aguilar & Barroso (2015) Comment on Triangulation is a research procedure for the social sciences, the methodology that agrees to achieve an increase in the quality of the research development which guarantees the validity, veracity and rigor in the success of the results achieved . [...] Highlight Triangulation of data which is related to the use of various methodologies and data sources between the collection of information that agree to contrast and collect it. The triangulation of data can be: a) temporary: they are data collected on different dates to corroborate whether your answers are persistent; b) spatial: the data collected, carried out in different places, corroborate if the answers are constant; c) personal: applied to different samples of individuals.

**Figure 1: Analysis of the information**



**Ethical aspects:**

Rooms (2019). From the beginning these measures are vital, but as qualitative research shows many authors in this regard, these institutions are not aimed at solving real problems in the research process and in some cases prevent the research from being improved (Tolentino, 2016) .

[...] A research design, for those who are searching for a text that is easy to convey the power of qualitative research, novice researchers who need a compass to carry their research, for experienced researchers who search for a material that simplifies the general procedures of the qualitative processes and of anyone who bets on a point of view of research in motion, whose confusion or errors are elements to be exterminated, are admitted as part of the same sense of practice from which it has been decided to investigate. (Tolentino, 2016).

In the present research process, the criteria of theoretical rigor based on books have been taken into account, respecting each author and methodological according to the demands of the scientific method, in addition, the integrity regarding the collection of information was taken into account, the responses to which the collection of the information was estimated, in the processing, systematization of results in which it was

applied within the field of research ethics, taking into account instruments validated by experts which gave consistency and partiality to the results ; likewise, the report was prepared taking into consideration the APA norms and other norms established by the César Vallejo University.

## **RESULTS**

### **Results description**

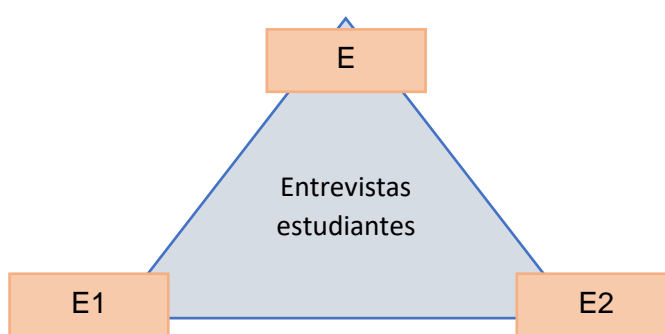
For this process, student interview techniques, student, teacher and coordinator interview techniques have been used to respond to the general objective that is to unveil and analyze the problem of collaborative learning in the didactic unit of industrial networks in an institute del Callao, Classroom case.

### **Interview.**

To collect the information, a semi-structured interview was applied, directed to two students, two teachers and two coordinators; The central theme of the interview was on the problem of collaborative learning in the didactic unit of industrial networks in an institute in Callao, Classroom case., in order to know the problem of collaborative learning using the Classroom platform. Each informant expressed what they experienced within the classroom platform, according to the categories the following is found:

That the students in the interviews expressed about the achievements obtained, the goals achieved in the classroom platform, taking into account the problem of collaborative learning with positive interdependence in the classroom; IT tools, PDFs according to what you have given us, additionally we have audiovisual media with the YouTube videos that you have shared with us, it has been a whole learning process from a network cable assembly. Individual and team responsibility: the virtual modality is a benefit for the student, it also implies a greater effort, development of virtual academic activities. Stimulating interaction: It motivates me since having the content and a partner needs help, I can help him and it motivates me by giving the answer to my partner. Internal management: group work is worked collaboratively because if there is a problem, others are there to help or subsidize the problem and Internal evaluation: I consider that the leader manages and needs a guide and at some point it has touched me Being the leader we have agreed according to the abilities of each of the participants. (E1, 18 years old, VI cycle)

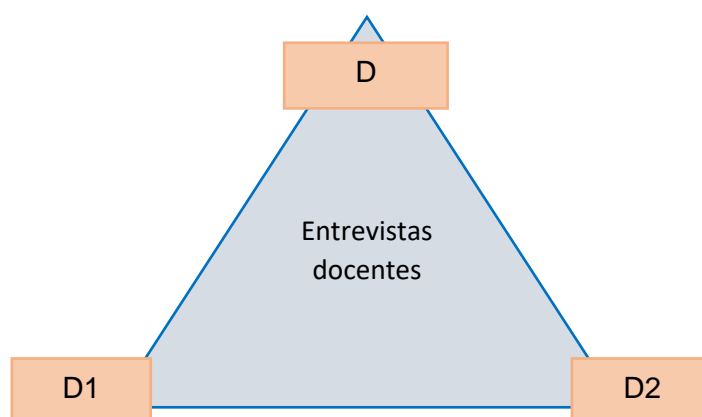
**Figure 2: Triangulation of interviews of informants and students**



Note: Adapted from Coaguila, D. Professional profile of graduates of Cetpro Guadalupe compared to the demand of the labor market in Ica, 2015. Thesis.

From the perspective of the teachers, in the interviews, they expressed the goals achieved in the classroom platform of the students, taking into account the problem of collaborative learning with positive interdependence in the classroom: using pdf files, Word files, linking with the mail, videos and other tools that can be incorporated into the classroom. Individual responsibility: post or publish the activities with which you work and the activities can constantly be organized or depending on why there are activities that have a limit and there are others that do not. Stimulating interaction: adapt to use the technological tools related to the study program. Internal management: technological tools, they connect online or interactively and do not need to meet to carry out their group work and Internal evaluation: classroom that allows you to evaluate, leave tasks asynchronously and leave the activities for them to solve it in a week and in case they have a problem. (D1, 44 years old, Instituto del Callao).

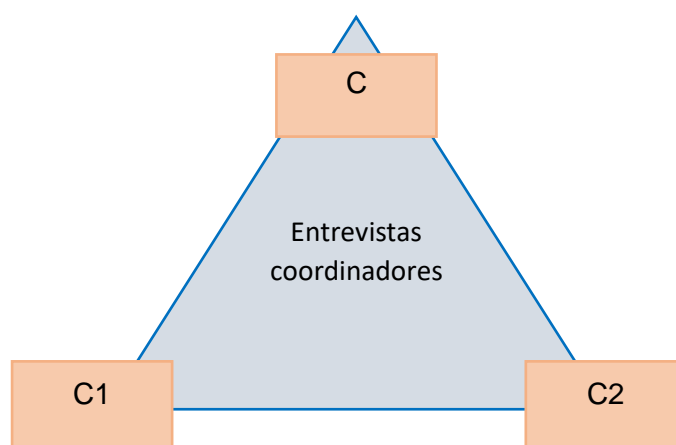
**Figure 3: Triangulation of teacher informant interviews**



Note: Adapted from Coaguila, D. Professional profile of graduates of Cetpro Guadalupe compared to the demand of the labor market in Ica, 2015. Thesis.

From the perspective of the coordinators in the interviews, they expressed about the achievements, the goals achieved in the classroom platform of the students, taking into account the problem of collaborative learning with positive interdependence: Word, in PDF, in presentations, with link, practice guides, forms and other tools that can be linked to the classroom platform. Individual responsibility: the leader has fulfilled his role to the fullest, accompanying his colleagues at all times in holding meetings with meet and publishing inquiries in the classroom. Stimulating interaction: students have been working in their environment since they are digital natives and with respect to personal development it is a success since they share helping each other with their classmates by sending a reinforcement or complement link to them. Internal management: online contributions, consultations among the students themselves and if they do not achieve results they consult me to clear up doubts and concerns, in order to achieve satisfactory results and Internal evaluation: colleagues, when they answered their colleagues' concerns about their work, when and how they presented their work and the way they defended it, taking into account their theoretical references and finally when their colleagues congratulated them for the good work done. (C1, 63 years old, Instituto del Callao).

**Figure 4: Triangulation of coordinating informant interviews**



Note: Adapted from Coaguila, D. Professional profile of graduates of Cetpro Guadalupe compared to the demand of the labor market in Ica, 2015. Thesis.

For this process, the interview techniques and the data collection instruments, the interview guide, have been used, to respond to the general

objective is to describe the problem of collaborative learning of the didactic unit of industrial networks with the classroom in an educational institute from Callao.

The elements that compose it are derived from the interviews carried out with students, teachers and coordinators in the interviews expressed on the achievements obtained, the goals achieved in the classroom platform, taking into account the problem of collaborative learning has as part of the categories: interdependence positive (121-3), individual and team responsibility (97-1), stimulating interaction (94-2), internal team management (119-3) and team evaluation (70-1). It is important to note that these are automatically interlaced.

To collect the information, a semi-structured interview was applied, directed at two students, two teachers and two coordinators of the IES under study; The central theme of the interview was about analyzing the problem of collaborative learning of the didactic unit of industrial networks with the classroom in an institute in Callao, with the purpose of knowing the effect of this problem, classes in times of pandemic and the responsibilities in the education of our students and the virtual educational environment. Each informant expressed what they experienced in their class session, according to the categories, the following is found:

First: taking into account the semantic map of the Problems of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category of positive interdependence (121-3) is part of collaborative learning. In positive interdependence, it seeks that participants recognize their progress in order to achieve success individually and as a team, fused with Implants clear goals In positive interdependence, it is one of its characteristics to achieve common objectives individually and as a team, merged with Reward specific achievements, merged with Share tools, merged with Designate individual tasks and functions, merged with Assume assigned roles It is part of the positive interdependence that allows recognition of progress, merged with Considers identities merged with Employs imagination In Positive interdependence is considered an important part of the use of imagination to increase overall performance in the achievement of individual and team objectives, merged with Facing external problems and threats Positive interdependence considers when facing external problems and threats as part important pair to the achievement of individual or team objectives and it is related to internal team management (119-3), stimulating interaction (94-2) and has a relationship with individual responsibility (97-1).



Second: taking into account the semantic map of the Problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category individual and team responsibility (97-1) is part of collaborative learning. Individual and team responsibility, the responsibility of all participants is sought for the achievement of individual and / or common objectives, common objectives and goals are accepted so that participants have responsibilities before the common objectives, merged with Each member is responsible of her part of the work and she is related to positive interdependence (121-3).

Third: taking into account the semantic map of the problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the stimulating interaction category (94-2) is part of collaborative learning. In stimulating interaction, it seeks the optimal potential of the participants for the achievement of individual and team objectives, fused with progress and personal growth as an important part of the attitudes that increase personal incentives and involve the team, fused with Increased motivation in the interaction stimulating, the increase in motivation allows to encourage the productivity of the participants individually and as a team, fused with Incentive to creativity and utility, the incentive to creativity and utility is considered as the union of attitudes to achieve individual and team goals . and it is related to positive interdependence (121-3), and has a relationship with the internal management of the team (119-3).

Fourth: taking into account the semantic map of the Problematic of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category internal team management (119-3). Is part of collaborative learning. As an important part of collaborative learning, the internal management of the team allows you to organize and project yourself to meet goals set individually and as a team, merged with Being empathic In the internal management of the team, one of the characteristics to consider is being empathetic since it seeks to generate habits For the achievement of individual and / or common objectives, fused with being assertive is a characteristic of the internal management of the team for the achievement of individual and / or common objectives, fused with participatory in the internal management of the team considers participation an important characteristic For the achievement of individual and common objectives, merged with Getting Involved In the internal management of the team, one of its characteristics is to get involved in order to achieve the purposes set out individually and as a team, merging the agreement to achieve the objectives as a team,

Fused problem solving is a means to the achievement of individual goals. ales or in a team, fused with making decisions a habit for the achievement of individual and / or common goals, fused with trusting the team to achieve common goals, fused with assuming responsibility for the results allow students to organize themselves and her stimulating interaction is related (94-2) and has a relationship with positive interdependence (121-3) and with the internal evaluation of the team (70-1).

Fifth: taking into account the semantic map of the Problematic of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category internal evaluation of the team (70-1) is part of collaborative learning. The internal evaluation of the team constantly values the internal achievements as a basis for the achievement of all the participants, merged with co-evaluating as part of the internal evaluation of the team, the participants continuously assess their individual and team performance, combined with evolving the critical sense is a characteristic of the internal evaluation of the team, merged with rewards the work of the group and collaboration is very important since it seeks the achievement of individual and / or common objectives, merged with avoiding dominance to achieve common objectives since it is not a characteristic of collaborative learning. and she is related to the internal management of the team (119-3).

**Figure 5: Semantic map of the problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom**

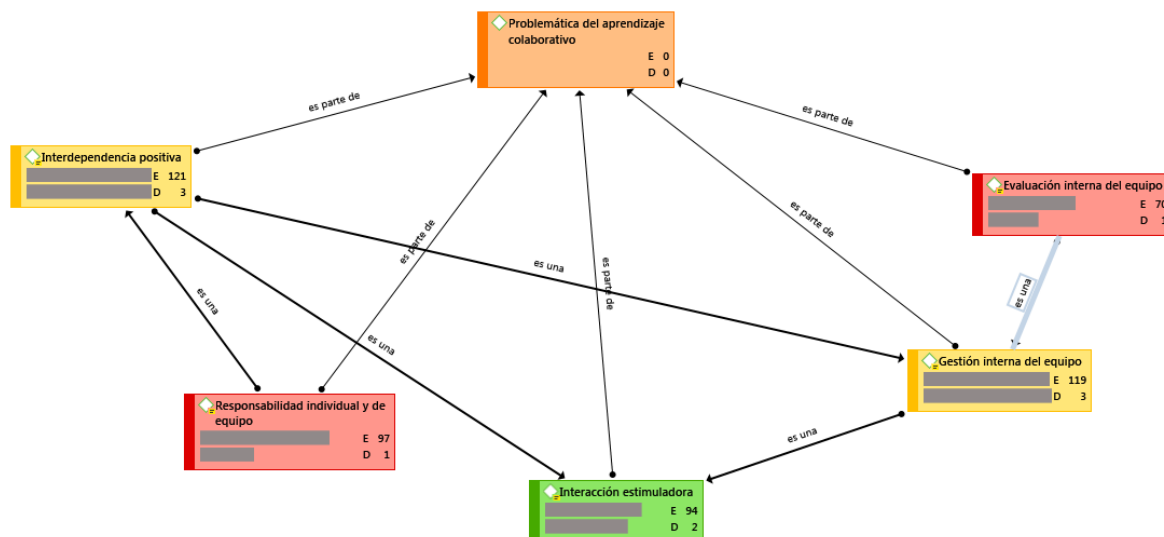


Figure 6

Semantic map of the problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom (categories - sub categories)



CONCLUSIONS

In this part we detail the description of the explanatory categories, among which we have emergent and a priori categories, these are the categories to which we have arrived from the data, from the entire coding process, the first categories and subcategories have been visualized at From the codified phrases and carried out the triangulation process between the interviews with the students, the teachers and the coordinators, in the same way a first triangulation was made between the interviews between the students, teachers and coordinators, finally, the conclusion.

The elements that compose it are derived from the interviews carried out

with students, teachers and coordinators in the interviews expressed on the achievements obtained, the goals achieved in the classroom platform, taking into account the problem of collaborative learning has as part of the categories: interdependence positive (121-3), individual and team responsibility (97-1), stimulating interaction (94-2), internal team management (119-3) and team evaluation (70-1). It is important to note that these are automatically interlaced.

First: taking into account the semantic map of the Problems of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category of positive interdependence (121-3) is part of collaborative learning which is related to internal team management (119-3), stimulating interaction (94-2) and has a relationship with individual responsibility (97-1).

Second: taking into account the semantic map of the Problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category individual and team responsibility (97-1) is part of collaborative learning. Which is related to positive interdependence (121-3).

Third: taking into account the semantic map of the problem of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the stimulating interaction category (94-2) is part of collaborative learning. Which is related to positive interdependence (121-3), and has a relationship with the internal management of the team (119-3).

Fourth: taking into account the semantic map of the Problematic of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category internal team management (119-3). Is part of collaborative learning. Which is related to stimulating interaction (94-2) and has a relationship with positive interdependence (121-3) and with the internal evaluation of the team (70-1).

Fifth: taking into account the semantic map of the Problematic of collaborative learning of the didactic unit of industrial networks in an institute in Callao. Case: classroom, the category internal evaluation of the team (70-1) is part of collaborative learning. Which is related to the internal management of the team (119-3).

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