

Collaborative Learning and Communication Skills in Virtual Environments in Times of Pandemic

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Abstract

The coronavirus continues to ravage the world; humanity has had a preview of many changes in all areas; one of them was in education where most countries, under pressure from the pandemic, were forced to move to a distance education model where direct interaction is not possible and didactic methodologies must be innovated to achieve the development of university student competencies. In this study, the concepts are presented and collaborative learning is analyzed in relation to communicative skills as important aspects for the achievement of competencies, the development of the student in the virtual communication process and the social relationships that generate new ways of learning.

Keywords: Collaborative Learning, Communication Skills, Virtual Environments, Higher Education.

1. Introduction

The world is living one of the most critical stages with the outbreak of covid-19, this virus that continues to shake health, society, economy and education.

This pandemic scenario forced many countries to change the face-to-face modality to an emergency model: remote education; consequently, it brought to light the unpostponable need for an educational reform supported by new information and communication technologies (NICT). In this sense, students have transformed their experiences in social and collaborative relationships thanks to NICTs.

Segrin (2000) indicates that people with good interpersonal relationships are able to adapt, be perseverant and are opposed to anxiety; therefore, it is elementary the improvement of students' communicative skills; these skills are achieved in a habitual way, but they can also be achieved through systematized exercise, this provides the development of them until reaching the very important communicative competence in this context of virtuality. This new remote education does not guarantee adequate university interaction nor does it solve the difficulty of impassive receptivity that was already observed in the face-to-face environment and that, in this new environment, generates even more complexity; therefore, the articulation of didactic strategies and methodologies in the virtual environment is urgent.

Collaborative learning in virtual environments is approached taking into account its three primary axes: participation, motivation and learning (Fernández and Valverde, 2014); its link with virtual environments turns out to be unavoidable in the current conjuncture even in a post-pandemic scenario. Guerra (2019) employs and points out the use of collaborative learning as a means to reach meaningful learning; in such learning, the teacher plays a primary role by organizing and supervising the process -learning of the participants consequently the development of competencies is achieved. Therefore, teamwork should be chosen, promoting communication and collaboration among users, fostering responsibility with the objectives set. Communication skills, in this context, play a fundamental role for optimal academic performance and interaction in the virtual environment and collaborative learning.

In this review study, a methodology based on the qualitative approach is used; the field of collaborative learning in virtual environments is approached and analyzed in relation to communicative skills as important aspects for the achievement of competencies in higher education based on the aforementioned theories and concepts.

2. Communicative Competence in Higher Education

According to Hymes, cited by Tobón (2013), points out that, from the perspective of the context, when it comes to the grammatical rules of language (language skill), communicative competence is not developed: but, when people can determine when to speak and when not to speak; what to do and what not to do; with whom, where and how to speak; when they can perform various speaking activities, they can participate in communication activities and evaluate the participation of others. Therefore, in communicative competence, attitudes, values and motivations of language,

characteristics and use of language will undoubtedly be considered, and even the interrelation between language and other referents of communicative action will be sought.

According to Habermas, quoted by Tobón (2013), the meaning of the term competence basically comprises communicative and interactive competences. This concept is different from what Wittgenstein said, because it is based on the vision of understanding something with another person, on the use of language. In this sense, it is taken into account under the philosophical axis, where people are seen as speakers and listeners who use language to understand something. The subject produces meaning within the same scope of use. Thus, communicative competences turn us into quality competitive professionals, even more so in this new century where globalization demands communicative skills that allow us to develop in any field.

3. Communication Skills in Virtual Environments

When talking about communication skills, we must consider two components: language and communication; the first starts from a form of communication between team members and the second are understood as the means by which information is emitted and received. If it is possible in all training cycles, this ability should continue to be developed in universities; but, unfortunately, this is not done in higher education centers when communication skills should be an important part of professional training, since these are improvable and we can train them.

In this regard, Barriga (2015) defines that the concept of communicative ability, understood as the process of language that will be strengthened in the process of human life, allows effective and skillful communication in all areas of communication. This can be found in everyday life as well as in the doing of things.

Language is not a typical representative of a particular group. In general, we are all able to develop language (unless there are physical or mental disorders). We have the capacity to know a language and if necessary we can create our own. This enables us to express our feelings, thoughts and so on.

A very important part of society is undoubtedly language. Because language is born and needs to be understood, it is not limited to personal norms, but also to the norms of specific communities. Therefore, a series of communicative skills must be developed so that we can become competent people.

Perez and Menocal (2014) pointed out that when there is an impairment of speech behavior, more attention to communicative skills is required. The author believes that the speech act has not

been used correctly. Faced with this problem, beyond the scope of language teaching, it is necessary to reposition and seek improvement. Here the author expresses the importance and need for continuous training on the subject, which should be complemented in university environments, especially in the first cycles of study, although it would be interesting to have them in all cycles in order to train professionals with high and efficient communication skills.

Communication or language skills are the ways in which human beings use language for different purposes: communication, learning and thinking. There are 4 basic skills for assertive communication: listening, speaking, reading and writing. At the oral level of language, there is the ability to listen and speak, which correspond to the writing level. These skills can be divided into receptive capacity (listening and speaking) and productive capacity (speaking and writing). A core aspect for learning is that the contents, strategies and resources are within a social and cultural context with common interests and related expectations (Minzi and Bermudez, 2019).

Being able to show assertiveness, empathy to tolerate conflicts for the achievement of goals with peers seems to be the new modality to understand the social relations of learning (Toruño, 2020). A social relation became a depersonalized modality for the achievement of individual interests and does not seem to represent limitations; rather, it is much more effective for future life. To the social mechanisms that through communicative skills manage to establish agreements, solve problems, understand phenomena, produce better ideas or put them into action, we can call them modulation (Cea and De Vicente, 2019).

Then, social relationships and interest in learning achievement constitute collaborative learning (Blazquez et al., 2017). This reveals the interest in studying how social relationships are channeled through collaborative learning in virtual environments and their relationship with communicative skills in initial professional training. Likewise, collaboration in professional learning environments considers that human capital constitutes the primary resource available to organizations today (Arias and Navarro, 2017). So that obtaining a job is not only due to hard skills linked to the intelligence to do things; but to how we adapt ourselves to function in a chaotic whole and with different interests. Reason why it is necessary to know what are the characteristics of this human resource and, above all, to achieve an articulation with the organization (González, López, Valdivia, & Carvajal, 2019). In other words, collaborative learning in virtual environments represents a capital opportunity for the depersonalized individual to integrate back into the team and belong again (Macías, López, Ramos, & Lozada, 2020). It becomes feasible if it is possible to identify which aspects of social relationships are related to communication skills.

Emerging technologies such as process automation in everyday activities, ranging from attendance marking to performance measurement, can couple skills that need to be exposed so that job improvements can be meaningful. Thus, there is a relationship between communicative skills from virtual environments with the achievement of professional activities (Jiménez, Salamanca, & López, 2018).

In the Peruvian university, the installed capacity, functionality and regulation of digital aspects has started with a reform of presentiality due to the pandemic. This new scenario has forced universities to have higher standards in connectivity, accessibility and, in many cases, has led to a complementarity of services with technology companies that implemented solutions and renewed the concept of digital education.

In this context, NICTs have had an impact on the way students relate to each other, since remote education provides new methods of communication skills and establishes other behaviors. Taking into consideration the above, bringing collaborative learning to the university and practicing it from virtual environments, can cause a positive and direct effect with the development or presence of communicative skills and this can be potentially necessary and essential for the scope of learning (Ramos, 2019). This new digital distance education requires a clear and continuous communication that is essential to build a good relationship and autonomous learning. If we have never learned to disseminate thoughts and ideas since we were young, we may face adverse situations in the workplace and academia throughout life. It seems amazing, but, among the most common blunders found in communication, is that individuals do not know how to listen to each other. Vanity struggles or anxiety that other people want to express can trigger conversations between deaf and mute people that can eventually lead to major conflicts.

Collaborative Learning in Virtual Environments

The pedagogical practice and its evolution towards active methodologies in the university refers that we can find similarities when constructing a definition of collaborative learning. There are pieces in common that other authors have worked on in their definitions.

For example, Delgado (2015) integrates aspects of group and team work. His definition is based on the principle of human interaction and how this is channeled into the construction of knowledge from the collective. It is a result of the interaction that is fulfilled only when there is reciprocal influence. This can be found in feedback.

For Guerra, Rodríguez and Artiles (2019), collaborative learning achieves common goals. This denotes a traceability that, in active methodologies, can be integrated to project-based or problem-based learning. In the university, students who can integrate into collaborative work will be able to make their professional goals, common goals, because they discover the need to communicate. These considerations are important for the formation of learning communities or interdisciplinarity itself.

Nakova and Romero (2019) define online collaborative learning as a progressive, interactive and reciprocal process among students. This reinforces the previous definitions by evidencing a complex chaining of information that can be mediated in a group and managed to be assimilated. Therefore, it is possible to understand the student's intention to form groups or collaborate because they want to enrich themselves and better understand what they are learning in the process.

Cea and María de Vicente (2019) make a fundamental difference between the terms cooperative and collaborative learning, indicating that cooperative learning refers to a face-to-face environment (classroom), while collaborative learning denotes interaction mediated with the use of technologies.

Higher education underwent a sudden change in all countries as it shifted from traditional classroom classes to remote education. This abrupt transition forces us to reflect on the teaching-learning revolution and NICTs. Undoubtedly, face-to-face teaching methodologies and strategies cannot be used in a synchronous or asynchronous environment, so this new remote modality must be analyzed in order to establish teaching strategies that achieve the development of competencies.

This vision, today, is a challenge for the accredited Latin American university that seeks educational excellence from the first years of studies. This ensures that aspects such as formative research or innovation can be present from the first classes and that they are methodologically compatible, making each research and innovation process a transversal process (Briceño, Correa, Valdés and Hadweh, 2020). Thus, although the concept of generic competencies in the university curriculum may seem old, it is a recent and standardized trend in the basic training of incoming students.

This leads us to the fact that not only teachers of advanced cycles should make use of active, participatory and collaborative methodologies for student learning (Silva and Maturana, 2017). But the methodologies must exist from the beginning of university training and must be adaptive and integrative of what may come in intermediate levels of learning (Cardona, Osorio, Herrera, & González, 2018). In such a way that the basic formation of the university student is of a cooperative

competitiveness, with scenarios to solve real problems and continuous use of platforms, tools and digital resources.

Therefore, collaborative learning represents an opportunity for innovation in university teaching (Guerra, Rodríguez, & Artiles, 2018). With more complicated scenarios such as the global pandemic, virtuality became of vital importance for the continuity of formative activities and became a problem for all institutions that had not secured learning environments. This made collaborative learning even more relevant because it allowed the massification of platforms, networks and digital resources that only work with collective work. So its application and the passage from the business to the educational sectors have generated a revolution that reduces dropout and strengthens the interest in professional life in students of first cycles (Velazquéz-Durán, 2017).

In his research, Concha (2018) found that the tools that ensure communication among students are file management tools and tools that edit content; these strengthened collaborative learning of first cycle university students in the private higher education house in the capital of Peru. This revealed the need for an institutional policy for the use of virtual environments, the reinforcement of technological competencies and the modernization of available equipment to ensure learning.

The Teacher in the Context of Collaborative Learning

Another important aspect of collaborative work is the change of authority in the methodological differentiation between cooperative and collaborative learning. In cooperative learning, the teacher remains the center of learning; while in collaborative learning, it is the student. The teacher is a multifunctional and complex systematic tool that can articulate knowledge by being part of the information chain and always being in mediation. His role in collaborative learning is to ensure that collaboration is reciprocal, effective, and flexible and can guarantee the achievement of learning (Delgado, 2015).

In the midst of the digital era, we cannot imagine a teaching process without a mediating subject. But beyond what is mediated is the monitoring of how much what is being monitored works, where it takes the student and how much it manages to deepen (Blazquez et al., 2017). In addition to promoting collaboration among students, the role of mediators is primarily to intervene through teacher-student interaction. Similarly, McWilliam believes that the role of the teacher is no longer the role of the "wise man on the stage", but has become the role of "guide alongside students", there is still a long way to go.

For Terroni (2014), in a virtual collaborative environment, the mediation of teachers will be more important, because it will reduce the frequency of their intervention, which will help the autonomy of the team and respect for diverse opinions; it will also make modifications to remake the classroom and develop group products. At this point, it can be assumed that the amount of teacher mediation and intervention will depend on the autonomy and participation of the group members.

Collaborative Learning Strategies through Virtual Environments

Salinas (2012) warns that the university learning of the future is not only related to institutional networks with virtual platforms or online forums. It is about a real transformation of the educational model in each university, based on virtual networks for personal communication between students, administrators, teachers and authorities. Virtual networks must ensure flexible, innovative and constantly developing environments. With respect to methodology, those that have the student at the center of learning should be promoted. Therefore, it is not enough to have platforms and an automated mail or response system. Virtual networks can start from connectivity criteria to ensure that virtual communication takes place in equitable and diverse circumstances.

For this reason, Cenich and Santos (2005) conducted descriptive research on online learning indicating that activity theory benefits students and improves collaborative tasks. Since users hardly need instructor intervention during the activity, they are considered to have a strong sense of responsibility and autonomy. The indicators of the study results clarify the appropriate level among different goals such as group interaction, independent ability, and ability to make decisions, make work recommendations, and evaluate work progress.

Galán (2017) reveals an ethical aspect in collaborative learning. As the fulfillment of common goals and interaction are of utmost importance, students can moderate a very significant coexistence by understanding that failing their peers implies losing knowledge, experience or creative capacity. It is very convenient to learn collaboratively to ensure a healthy coexistence. Similarly, Roselli (2016) identifies that collaborative learning is a favorable negotiation for the group. It makes group collaboration not circumstantial but permanent and daily. In virtual environments such as online games, social networks, digital communities or learning platforms, it always becomes necessary to collaborate. It goes from personalization to intersubjectivity.

Therefore, due to the complex changes faced by the university, the technological improvements that the industry has incorporated, the change of educational paradigm, it becomes necessary an active methodology that collects the best of the latest pedagogical approaches and

transforms them into opportunities for the integration of students, the deepening of knowledge and the improvement of the welfare of the community (Jiménez, Martelo, & Jaimés, 2018).

In addition, the integration of NICTs brought about by the latest telecommunications singularity provides students with unprecedented multimedia resources to advance in the deepening of knowledge. Working in teams, solving a real problem from a creative community and with communication tools represents a new learning environment and makes collaborative learning a new educational phenomenon (Macías, López, Ramos and Lozada, 2020).

Algorithmic search engines, programming and web design, the internet, big data, machine learning, simulated communication, make the construction and exchange of knowledge very dynamic and complex. In university scenario that can only be taken advantage of by updated teachers with teaching and research laboratories, under a flexible curriculum, internationalization opportunities, and continuous improvement. Of all this, the organization of learning systems continues to be the great challenge for the university (Vargas, Yana, Pérez, Chura and Alanoca, 2020). People no longer attend university to take notes and pass exams that later turned into endless hours of practice or internship to then get a certification and get a job until they retire and die. Learning at university implies, on the one hand, the achievement of autonomous learning and, on the other hand, the use of collaborative learning capable of taking advantage of virtual environments to achieve community welfare goals.

So, does learning imply only social interaction and participation? The difference between pedagogy and andragogy also lies in the fact that the pedagogical process is one of teaching-learning, while that of the university is one of orientation-learning. Understanding the difference between teaching and guidance also implies accepting the differences between the mediation and tutoring of learning. While in the school there was a basic curriculum for fundamental learning; in the university, the study programs have to periodically modernize the curricular plan, because they must be adapted to the needs of the State and the market (Cárdenas, 2020).

4. Discussion

The educational system has been forced to mitigate its current state of health crisis, renewing its forms of learning supported by technology; this new modality has revealed the serious shortcomings in the use of didactic methodologies in virtual environments and with it the great problem of students lacking communication skills to perform and interact adequately in educational platforms.

According to UNESCO (2015), in Latin America and the Caribbean, university education must undergo a democratic digital transformation with equal opportunities. Despite what has been achieved in the last 15 years, the results in terms of competitiveness are still individual and personalized. García and Sempértegui (2018) mention that the aim of an education for all does not only imply mass education; but a commitment to educate from the collectivity, recognizing cultural, personal differences and articulating consensus that ensures equality and democratic coexistence. This in order to articulate learning with technological scenarios as human beings reach working and professional training ages. Therefore, in spite of the basic competencies of the curriculum, it is necessary to articulate these with the basis of intermediate or generic competencies at a higher level. This highlights how incipient progress has been made in professional training, communication skills and collaborative work as a basis for competitiveness and consolidation of professional capital (Macías, López, Ramos and Lozada, 2020).

It can currently be observed that not all students achieve the same level of communication skills or commitment to the teams they work with in this new virtual environment in which collaborative work is mainly used. For example, it is visualized in the discussion forums the lack of university students of not being able to spin opinions in an assertive way, revealing the deficit of text production and critical reading skills that are fundamental in the pre-professional stage (Córdoba, Castelblanco, & García, 2018). Learning communities are affected such as group work activities, plenary, preparation of exhibitions, since they are not fully complied with due to the lack of listening or speaking skills, among others (Nakova and Romero, 2019).

The latest educational models consider that communication skills and group work should be taught from the beginning of professional training (Vargas, Yana, Pérez, Chura and Alanoca, 2020). Addressing collaborative learning in virtual environments allows identifying new phenomena such as social relationships in virtual environments and how this is linked to communicative skills in a scenario of university training by competencies and starting from the sociocultural theory of learning, educational technology, constructivism and cybernetic theories of learning (Quintero, 2017).

5. Conclusions

The application of new technologies in learning has arrived not to leave; this is only a step towards future forms of process-learning that, assisted by NICT, will allow a new way of acquiring knowledge by enhancing the procedural, attitudinal and cognitive levels; consequently, higher education needs to include didactic strategies and methodologies that are up to this new challenge to

achieve and develop the integral professional training of the student. SARS-CoV-2 placed us in a scenario where we are witnessing new learning phenomena such as social relationships in virtual environments and these, in turn, initiated thanks to the communicative skills of students in a context of university training by competencies that starts from the sociocultural theory of learning, educational technology, constructivism and cybernetic theories of learning such as connectivism (Quintero, 2017).

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