Perspectives on Collaborative Learning in ICT Mediated Classes as a Language Learning Booster

Perspectivas sobre el aprendizaje colaborativo en clases mediadas por TIC como potenciador del aprendizaje de idiomas

Perspectivas sobre Aprendizagem Colaborativa em Aulas Mediadas por TIC como Impulsionador da Aprendizagem de Línguas

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Abstract
This article advocates for the implementation of collaborative learning in ICT-mediated classes where a foreign language is taught. A documentary research analysis that involved reviewing academic articles was conducted to obtain a deeper understanding of this emerging instructional method. It offers a description of the advantages using different technologies has on language teaching and learning processes and how those technologies can be used to provide collaborative learning environments. The distinctions between collaboration and cooperation are explained. The theoretical contributions that are central to the understanding of collaborative learning are outlined. Collaborative learning and its benefits are described. It has been found that collaborative learning enhances academic achievement through the development of a variety of social and critical thinking skills that require meaningful interactions and the willingness to embrace innovative ways to teach. Moreover, it was also found that using ICT can increase the effectiveness of this teaching method since greater levels of motivation, creativity, and inclusion can be achieved.

Keywords: Collaborative learning, cooperative learning, ICT mediated instruction, Web 2.0

Resumen
Este artículo aboga por la implementación del aprendizaje colaborativo en las clases mediadas por las tic donde se enseña una lengua extranjera. Se realizó un análisis de investigación documental que involucró la revisión de artículos académicos para obtener una comprensión más profunda de este método de instrucción emergente. Se ofrece una descripción de las ventajas que tiene el uso de diferentes tecnologías en los procesos de enseñanza y aprendizaje de idiomas y cómo esas tecnologías pueden usarse para proporcionar entornos de aprendizaje colaborativo. Se explican las distinciones entre colaboración y cooperación. Se esbozan las contribuciones teóricas que son centrales para la comprensión del aprendizaje colaborativo. Se describe el aprendizaje colaborativo y sus beneficios. Se encontró que el aprendizaje colaborativo mejora el rendimiento académico a través del desarrollo de una variedad de habilidades sociales y de pensamiento crítico que requieren interacciones significativas y la voluntad de adoptar formas innovadoras de enseñar. Además, también se estableció que el uso de las tic puede aumentar la efectividad de este método de enseñanza ya que se pueden lograr mayores niveles de motivación, creatividad e inclusión.

Palabras clave: Aprendizaje colaborativo, aprendizaje cooperativo, instrucción mediada por tic, Web 2.0

Resumo
Este artigo defende a implementação da aprendizagem colaborativa em aulas mediadas por tic onde uma língua estrangeira é ensinada. Uma análise de pesquisa documental que envolveu a revisão de artigos acadêmicos foi realizada para obter uma compreensão mais profunda desse método instrucional emergente. Ele oferece uma descrição das vantagens que o uso de diferentes tecnologias têm nos processos de ensino e aprendizagem de línguas e como essas tecnologias podem ser usadas para fornecer ambientes de aprendizagem colaborativa. As distinções entre colaboração e cooperação são explicadas. São delineadas as contribuições teóricas que são centrais para a compreensão da aprendizagem colaborativa. A aprendizagem colaborativa e seus benefícios são descritos. Descobriu-se que a aprendizagem colaborativa melhora o desempenho acadêmico por meio do desenvolvimento de uma variedade de habilidades de pensamento social e crítico que exigem interações significativas e a vontade de adotar formas inovadoras de ensinar. Além disso, verificou-se também que a utilização das tic podem aumentar a eficácia deste método de ensino, uma vez que podem alcançar maiores níveis de motivação, criatividade e inclusão.

Palavras-chave: Aprendizagem colaborativa, aprendizagem cooperativa, instrução mediada por tic, Web 2.0
Introduction
Undoubtedly, traditional educational methods have faced great challenges and changes in the last decades. This necessary evolution, at all levels of education, has generated more motivating and effective student-centered methods in different kinds of settings. One of such new teaching trends is collaborative learning. This instructional method is perceived as a factor that enhances active learning (Beichner cited in Clinton & Wilson, 2019). Achieving a better understanding of what collaborative learning entails, demands, and offers is fundamental to ensure its effective implementation in the classroom.

Collaborative learning is based on working together on the same task. As learners try to accomplish a task in small groups and search for understanding, they can benefit from each other. The implementation of collaborative learning provides considerable advantages for learners. It gradually contributes to the development of social communication and enhances learners’ experiences. The use of this educational approach influences the promotion of student-centered learning which allows learners to construct meaning through interactions with each other. It should be underlined that collaborative learning holds an important place in language learning. Its use in the language classroom can help learners develop communicative competence. This paper attempts to explain the benefits of using collaborative learning in learning settings. In particular, the paper endeavors to demonstrate the contributions of this approach to the development of language learning.

Collaborative learning has become a must in today’s classrooms all over the world. Online language teaching demands the use of both a variety of synchronous and asynchronous technologies and the implementation of innovative methodologies that move from traditional teacher-centered teaching towards more student-centered ones. Collaborative learning offers the opportunity to create meaningful, safe, and participative learning environments where both teachers and students can use ICT to interact and to develop social relationships. This article describes its origins, its characteristics, and its benefits. In today’s society, where competition is valued over cooperation, implementing collaborative learning techniques in the language classroom can help students develop a greater sense of community and cooperation while achieving better psychological, social, and academic outcomes.

Method
To obtain the information on the characteristics, theoretical foundations, advantages, and challenges of collaborative learning a documentary research method that
involves the use of some academic articles as secondary sources was implemented (Mogalakwe, 2006). The authenticity, credibility, representativeness, and meaning of said sources were considered as quality control criteria while researching the ICT enhanced collaborative learning phenomenon.

**Results**

The information gathered was organized into five comprehensive sections or categories that involve an introduction to the role and use of ICT in education, the definition of collaborative learning, its theoretical foundations and its advantages, the role of ICT to foster learning collaboratively, and how collaborative learning supports foreign language learning.

**Benefits of ICT Use in Education**

Nowadays, due to the fast-paced technological developments and the increased use of ICT in educational settings due to the COVID-19 pandemic, it would seem unnecessary to mention how advantageous using different kinds of software and hardware has become for teachers and students. Nonetheless, it is important to have a better understanding of their advantages in class which include, but are not limited to, promoting students' access to digital information more efficiently and effectively; supporting student-centered and self-directed learning in a variety of student populations; fostering the design of more creative learning environments, especially the ones that offer remote learning options; increasing the opportunities for students to develop critical or higher-thinking skills and supporting teaching by facilitating access to different kinds of academic and pedagogical content. ICT offers both teachers and learners more educational opportunities and possibilities. Moreover, using ICT facilitates changing the role of the teacher from distributor of knowledge to facilitator of the learning process. This is a considerable advantage since it allows to accommodate new modes of learning that were not taken into consideration some years ago when technology had not been effectively integrated into the curriculum. Such integration usually takes place at different stages according to the institution and educators' levels of willingness to embrace educative innovation in their classes. In short, the increased use of ICT in class leads to an improved quality of both teaching and learning.
The Role of ict in Collaborative Learning

Even though using a variety of digital tools and content in educational settings offers a wide range of autonomous and self-paced learning opportunities, there is also high potential for students to engage in collaborative work with peers from their classes or, even, from all over the world. This is possible because using different kinds of ict increases and facilitates communication among peer learners, synchronously or asynchronously, thus enabling them to learn within diverse formal and informal educational settings. On the other hand, teachers can also benefit from collaborative work with colleagues since they can interchange information and resources more easily. Additionally, they can design more creative multimedia materials and presentations by using a wide range of Web 2.0 tools that allow them to share, edit and publish their teaching resources collaboratively. This allows each educator to adapt and enrich the materials to the specific needs and interests of their learners. According to a research conducted in primary and secondary education settings (García-Valcárcel, Basilotta & López, 2014), teachers tend to ascribe ict a high potential to improve collaborative learning among students despite the challenges both teachers and students must face when implementing it. On the other hand, another research on the impact of ict on collaborative learning processes carried out at a higher education level, forewarned on the issues that might later arise if the institutions do not try to accelerate the transition towards more digitalized and networked education Kenan et al., 2015).

What Exactly is a Web 2.0 Tool?

There are currently many kinds of Internet tools in the market. Web 2.0 tools, or New Web tools, are those that allow their users to move beyond the passive roles of recipients of information to become active and interconnected agents in the process of receiving, analyzing, evaluating, and sharing information. According to Ergul Sonmez & Cakir (2021), the learning environments currently known as Web 2.0 offer a variety of opportunities to profit from all the advantages ict-mediated education can have. For these authors, the most important differentiating factor between Web 2.0 and other kinds of technologies is that the former fosters the active participation of learners in the content creation process in their learning process. In other words, Web 2.0 tools enable the students to collaborate and interact while negotiating meanings and constructing new information.

Most of these tools offer free access to all after creating an account (Domalewska, 2014). Some of the best-known collaborative tools are blogs, wikis, video editing and sharing software, RSS, social networking apps, mind map, and presentation tools,
among others. Even though technology-supported learning is usually perceived as an isolated, individualistic activity, it can, and should, turn into collaborative tasks to boost long-lasting learning. When learning becomes a social activity, it becomes more effective.

**Implications of Web 2.0 Tools for Language Learning**

When content is provided within a socially meaningful context, learning is boosted. This is explained by the fact that social learning allows the learner to assimilate new information into their prior knowledge. Consequently, this building upon already existing schemata increases the students’ performance in the foreign language. Furthermore, when learners have a common goal, they tend to use the knowledge and resources available to achieve it. Throughout this goal-achieving process, the students develop different kinds of skills and get more knowledge while establishing and strengthening relationships with their peers. When teachers and students use Web 2.0 tools, their creativity is enhanced due to the interaction and collaboration, through blogs, websites, wikis, and other kinds of digital resources, with peers from different contexts. A remarkable feature of collaborative ICT tools is that they allow students to receive immediate feedback, which in turn raises their motivation, interest, and participation levels. They feel encouraged to research more deeply and thoroughly in the content they are learning. Research is also encouraged by the fact that it is easier to study a problem from different angles since most of the related concepts are interconnected thanks to a variety of hyperlinks.

Unquestionably, using Web 2.0 technologies to teach and learn stimulates the development of multiple learning, literacy, and critical thinking skills such as reasoning, analyzing, organizing information, sorting out relevant data, communication, creativity, autonomy, and collaboration. In essence, ICT mediated learning leads students towards a lifelong acquisition of meaningful knowledge.

**The Foundations for Collaborative Learning**

As with any other approach to language learning, collaborative learning draws from different theoretical sources. It is safe to say that its four main pillars are the Sociocultural Theory proposed by Vygotsky, Krashen’s Second Language Acquisition Theory, Dornyei’s Model of L2 Motivation, and CLT or Collaborative Language Teaching (Figure 1).
According to Vygotsky’s sociocultural theory, language acquisition takes place when an individual interacts with significant others and through those interactions can achieve an unassisted performance level (Shabani, 2016; Nguyen, 2019). Assuming this, collaborative learning among students can be considered as a sort of scaffolding that helps them to advance through their Zone of Proximal Development to reach their next level of language proficiency.

In his Second Language Acquisition Theory, Stephen Krashen defends that second language learning is divided into acquisition, which happens at a subconscious level, and learning, which involves a formal and conscious acquisition of a second language (Maluleke & Mapindani, 2020). Regarding this theory, it is worth noting that when engaged in collaborative work, the students can help each other to move from their current level of development (i) to the following achievable level (i+1). This is possible because when working together, the pupils’ learning becomes more enjoyable, and they feel more comfortable. In short, their affective filter is lowered, and this enhances the target language acquisition.

Dornyei’s Model of L2 Motivation considers both the presence of orientation and the specific situations involving the learner and the surrounding context. According to this author, how goal-oriented a group is in a specific learning situation level is one of the motivations for foreign language learning. In this model, some important aspects are the norm and reward system, the group cohesion, and the classroom goal structure.

Finally, CLT emphasizes the importance of engaging learners in collaboration and sharing to create the learning group ideal. This learning group ideal is achieved
through conducted pair and teamwork, the provision of authentic language input, and the fostering of students’ language use in meaningful communicative situations. Additionally, CLT also encourages teachers to share their expertise, decision-making, lesson delivery, and assessment methods with other peers with the objective of co-planning, co-constructing, or co-teaching their language classes.

What is Collaborative Learning?

Once described each one of the theoretical components that comprise the theoretical basis of collaborative learning, it is important to determine what this concept is about. To begin with, collaborative learning is neither a method nor a mechanism but a kind of social contract. Since both teachers and students are involved, it becomes a didactic contract. To be more precise, collaborative learning is a group-based kind of learning in which learners join their efforts, initiative, and work to carry out and achieve educational endeavors where there is no room for drills and meaningless, automatic exercises that might prevent any kind of social activity. Salma (2020) defines collaborative learning as an instruction method process in which students construct knowledge through their interactions while working together on the same task in small teams. In other words, this is a learner-focused method that fosters meaningful exchanges of ideas to arrive at some shared understanding and elaborated explanations.

Differences between Collaborative Learning and Cooperation

Since there are a few important commonalities between collaborative learning and cooperation, there is a widespread tendency to use these terms interchangeably. Both collaborative work and cooperative provide possibilities for developing active learning, promote the role of the teacher as facilitator, encourage sharing teaching and learning experiences, and focus on the students’ responsibility with regards to their learning process (Alvarez & Bassa, 2013). However, some important distinctions between them should not be overlooked.

Ted Padniz, a supporter of both cooperative and collaborative learning, offers the following distinction between both methods:

Collaboration is a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and res-
pect the abilities and contributions of their peers... In the collaborative model groups assume almost total responsibility...[whereas] cooperation is a structure of interaction designed to facilitate the accomplishment of a specific end product or goal through people working together in groups... in the cooperative model the teacher maintains complete control” (Panitz cited in McInnerney, 2004, p. 206)

Iglesias Rodríguez et al. (2017; cited in Kukulska-Hulme, & Viberg, 2018) accurately explain that collaborative learning is more than just a synonym for students learning in groups since it involves their joint efforts to solve a problem, to carry out a task, and to create a product. Probably, one of the main differences is that when working cooperatively, students solve tasks individually and then combine their partial results to generate a final product. In other words, the students solve sub-tasks on an individual basis and then assemble the partial outcomes to create and present a final result. This requires a vertical and rigid division of tasks.

On the other hand, when students work collaboratively, they are all committed to carrying out a common task that is constructed by the whole group. In this case, some group negotiation of meanings is required if true collaborative knowledge is to be produced. Although there is a certain amount of horizontal and unstable distribution of the responsibilities, all the students carry out the tasks together through a process that usually leads to a continuous interchange of roles within the team.

Computer-Supported Collaborative Learning

This is a new model where learning theories and technological tools merge. It is based on a socio-cultural view of cognition that proposes an essentially social nature for the learning process. This approach looks to technology for its potential to create, support, and enrich interpersonal contexts for learning. Jeong et al. (2019) conducted a meta-analysis about the effects of Computer-Supported Collaborative Learning in STEM education that showed that this instruction method furthers the social nature of learning by using various technological and pedagogical strategies. In other words, technology can effectively support collaborative knowledge construction and problem-solving when productive interactions are granted, and peer collaboration distractions and unruliness are countered.
Collaborative Interaction Criteria

It is important to keep in mind that collaborative interaction is a process that must comply with the following criteria:

**Interactivity:** According to Yacci (2000), instructional interactivity takes place when a message loop moving from and back to the student is completed. In this kind of message loop, which involves mutually coherent interactions, there are two distinct kinds of outputs: content learning and affective benefits.

**Synchronicity:** This is a relative factor that depends on the kind of technology, synchronous or asynchronous, used during the interactions. Sometimes, when an asynchronous ICT is used frequently and in such a way that mutual modeling emerges, it can have a synchronous effect.

**Negotiability:** This sometimes happens when there is some ambiguity in the proposed task. In that case, the need to involve negotiation and to reach an agreement on certain concepts usually arises. This negotiating process encourages learning.

Effective collaborative learning is a process that requires thoughtful planning and knowledgeable decision making on some factors such as the composition of the group, the scope for communication by using suitable ICT, the specific characteristics of the task, and the setting of the problems to be solved. On the other hand, the educator who aims at implementing collaborative learning activities in class must be aware of the following: They need to learn how to regulate the students’ interactions. Additionally, they are advised to use collaborative learning methods that have already proved successful in face-to-face teaching and learning settings. Besides that, they must ensure the construction of effective interactivity among all the participants by exchanging information in different formats such as video, text, and image.

A particular requirement for teachers, if effective collaborative learning is to be achieved, is to be able to switch roles with their students. This means shifting from the traditional and individual teacher-centered methodologies towards student-centered, group, and asynchronous learning. This kind of change also involves increasing social presence by generating different kinds of social interactions beyond the ones that aim at educational objectives and by encouraging interactions that promote the development of social relationships among the students to build an online community.

Benefits of Collaborative Learning

Undoubtedly, collaborative learning is an approach that offers a variety of benefits. Some authors (Johnsons; Pantiz cited in Laal, & Ghodsi, 2012) have found over fifty
benefits that were classified (García-Valcárcel et al., 2014; Laal & Ghodsi, 2012) as follows (Figure 2):

**Social benefits:** Since collaborative learning integrates both individual and social learning processes, it helps the students to develop a social support system, to build diversity understanding, to establish positive environments for modeling and practicing cooperation, and to develop learning communities. The team’s efforts are encouraged by extrinsic motivations that lead them to succeed. Success becomes the group reward. There is greater positive interdependence and shared responsibility among team members since they are committed to achieving the learning outcome. Collaborative learning promotes the development of transversal learning skills such as social skills, problem-solving, work habits, self-reliance, responsibility, and organization. Besides that, the students acquire a greater capacity for reflection, critical thinking, and initiative (García-Valcárcel et al., 2014).

**Psychological benefits:** Since collaborative learning involves student-centered instruction, the student’s self-esteem is boosted. On the other hand, this kind of learning reduces anxiety levels and helps develop more positive attitudes towards teachers because more satisfactory learning experiences are provided.

**Academic benefits:** Collaborative learning promotes critical thinking skills, enhances participation, and actively engages the students in the learning process. This results in better academic outcomes, more appropriate student problem-solving techniques, and more personalized lectures. Additionally, it fosters mega-cognition. In short, collaborative learning leads to higher student motivation in specific curricula and in educational environments where they can refine important social and leadership skills.
Assessment benefits: Since this kind of teaching promotes alternate student and teacher assessment techniques, it allows to use of a variety of assessments. A quasi-experiment study conducted by Clinton and Wilson (2019), showed that students engaged in active-learning processes perceived high intrinsic and utility value in collaborative learning in terms of inherent interest and enjoyment and personal relevance or usefulness.

On the other hand, Salma (2020) postulates that some of the benefits derived from collaborative learning are associated with the opportunities learners must take on responsibilities, to develop critical thinking skills that allow them to analyze data to make informed decisions, and to improve their metacognition.

Collaborative Learning and Foreign Language Learning

Regarding the role collaborative learning may have on foreign language teaching and learning, it is worth noting that the negotiation of meanings through different kinds of interactions can greatly boost both oral and written skills. Additionally, the teachers' ongoing assessment, follow up and support are highly beneficial to learners, especially those at the earlier stages of the foreign language process. A literature review study about the state of the art of mobile collaborative language learning, carried out by Kukulska-Hulme and Viberg (2018), revealed that collaborative language learning generates enriching opportunities for the learners to practice the foreign language, thus acquiring both linguistic skills and knowledge, inside and outside the classroom. According to this study, using mobile devices, some of the most popular ICT’s nowadays, facilitates collaboration in a variety of settings and timeframes. These authors point out that collaborative learning can take place with just two learners or a learner and teacher. In other words, larger groupings are not always required insomuch as two people engaged in a conversation could be working together to solve a specific problem or to complete a task.

Probably, one of the most frequent challenges foreign language students face is the limited opportunities they have to engage in real-life communicative situations through access to authentic sources. The use of ICTS provides a solution to their limited exposure to the foreign language in real-life settings making their learning more active, authentic, efficient, and relevant through the blending of traditional and innovative teaching methods (Avci & Adiguzel, 2017).
Conclusions

To summarize, collaborative learning is an innovative teaching and learning method, with proven psychological, social, academic, and assessment benefits, that can be greatly enhanced using a variety of synchronous and asynchronous technologies and the implementation of innovative educational principles. As education shifts away from teacher-centered, traditional instructional methods towards more student-centered and innovative ones, collaborative learning becomes a robust pedagogical alternative for both institutions and individuals.

An ICT-mediated class where collaborative learning is carried out will probably have motivated teachers and students who commit themselves to achieve common learning objectives in an atmosphere of understanding, respect, critical thinking, and cooperation. This poses both a challenge and an opportunity for all the agents involved in educational practices since the current knowledge society demands more collaborative, meaningful, and digitalized instruction.

Concerning foreign language learning, ICT-mediated collaborative learning can greatly support the teaching and learning process thus leading to the more effective and constructive acquisition of a variety of linguistic and technological skills the students need to interact with others successfully and meaningfully in such language. The pedagogical use of technologies in the foreign language classroom leads to designing meaningful and durable learning experiences where students are enabled to practice the foreign language through collaborative and authentic language activities. However, this demands a robust and stable commitment from both institutions, educators, and learners to acquire the know-how to successfully integrate different kinds of technologies in their language learning settings and tasks.

References


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