

# Teaching-Learning Process by Synchronic Communication Tools: The Elluminate Live case

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## Abstract

When integrating a new online tool in university educational system, it is necessary to know its features, applications and functions in depth, advantages and disadvantages, and the results obtained when it has been used by other educational institutions. Synchronous communication tool, *Elluminate Live* can be integrated into a virtual platform and has different resources that enable virtual communication in real time. Elluminate Live, online tutoring provides, through a process of audiovisual and written communication in real time and it incorporates the possibility of sharing the board (workspace) and content and files in different formats. It is evident that the use of communication tools in real time, reinforces the professional interaction, socio-emotional relationships and personal interactions, in short, it is a tool that facilitates and enhances interpersonal communication between users. The immediacy of communication and fostering rapid response to a bilateral discussion gives a greater degree than in any asynchronous communication.

**Keywords:** Synchronous communication, Elluminate Live, distance learning, online tutoring.

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# **El proceso de enseñanza-aprendizaje a través de herramientas de comunicación síncrona: El caso de Elluminate Live**

## **Resumen**

A la hora de integrar una nueva herramienta virtual en el sistema educativo universitario, se hace necesario conocer en profundidad sus características, aplicaciones y funcionalidades, ventajas e inconvenientes, así como los resultados obtenidos cuando ha sido utilizada por otras instituciones educativas. En el actual documento se analiza la herramienta Elluminate Live y su efectividad en el sistema educativo a distancia. La herramienta de comunicación síncrona, *Elluminate Live*, puede ser integrada dentro de una plataforma virtual y presenta diferentes recursos que permiten la comunicación virtual en tiempo real. Elluminate Live, facilita la tutorización online, por medio de un proceso de comunicación audiovisual y escrito en tiempo real e incorpora la posibilidad de compartir la pizarra (espacio de trabajo) y contenidos y archivos en diferentes formatos. Es evidente que el uso de herramientas de comunicación en tiempo real, refuerza la interacción profesional, las relaciones socio-emocionales y las interacciones personales; en definitiva, es una herramienta que facilita y refuerza la comunicación interpersonal entre los usuarios. La inmediatez de la comunicación y la rapidez de la respuesta fomentan una discusión bilateral que se da en mayor grado que en la comunicación asíncrona.

**Palabras Clave:** Comunicación síncrona, Elluminate Live, educación a distancia, tutorización online.

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## Introduction

With the integration of new technologies in higher education there are several authors to highlight the emergence of a new type of student population who study mainly at a distance. This new way of learning has been called virtual learning communities (Barrett, B., 2010). A new kind of teaching that has facilitated access to education to a larger number of students. Some highlighted points by Barrett in 2010, clearly reflected this situation: in the U.S. 4 million college students are enrolled in online courses.

The increasing use of virtual classrooms is an indisputable fact. Clark (2005) considers that one of the reasons for this growth is the cost savings and he highlights the need to take advantages from the software features in its application to education. Following Clark, we pose the following questions: What are best practices for the use of these powerful new tools to deliver training? What can be learned from educational experiences carried out and from the research on the instructional methodology implementation?

It is used the basic principle that is difficult to improve the instructional process by simply incorporating a new technology as a starting point. Quality educational innovation is only achieved if the integration of the tool in the education system is carried out on the basis of detailed and consistent results when applied and used.

In the current paper, it is discussed the Elluminate Lived tool and its effectiveness in distance education system, based on the analysis of the results obtained by different educational institutions which have added synchronous communication tools within the teaching process. The literature review presented in this article is intended to be as a framework for the use of the tool Elluminate Live virtual courses, not forgetting the need to fulfill those issues considered basic by experts on online learning process.

*Elluminate Live!*®: Advantages and disadvantages

Elluminate Live is a synchronous communication tool developed by Elluminate Inc. which integrates various virtual resources in order to facilitate the process of online training.

Among its resources we can emphasize some, such as audio, session recording, video, chat, surveys, presentations, etc.

Numerous studies on the efficacy, use, evaluation and impact of the use of online courses and asynchronous communication tools in education can be found, but few sources of research on the use and effectiveness of synchronous tools communication due to his recent appearance on the market can be read (Falloon, 2011; Hampel, 2003). Comparative studies of synchronous tools such as Elluminate Live, and asynchronous tools (forums, chat, etc..) indicate that synchronous communication reinforces the interaction at work, socio-emotional relationships and personal interactions (Chou, 2002; Freitas & Neumann, 2009; Rourke & Anderson, 2002; Schullo, 2005).

The immediacy of communication and fostering rapid response to a bilateral discussion gives a greater degree than in asynchronous communication (Chou, 2002). In asynchronous communication can be seen that the communication is preferably oriented to the task and the course content (Chou, 2002; Hrastinski, 2008; Mabrito, 2006), whereas other studies indicate that communication and interaction with synchronous tools are more frequent than those done with asynchronous tools (Freitas & Neumann, 2009; Mabrito, 2006) and that synchronous tools provide a better emotional and personal communication (Chou, 2002; Fox, Morris, y Rumsey, 2007; Rourke & Anderson, 2002).

Hrastinski (2008) performed a study comparing the use of synchronous and asynchronous tools in a post graduated course and concluded that the asynchronous communication tools were focused on the task at 99% and 93%, in contrast with the communication that takes place with the synchronous tools that is between 58% and 57%. Another conclusion drawn by Hrastinski (2008) is that through these two types of communication different aspects of participation are reinforced. Synchronous communication strengthens personal involvement, increasing motivation. Instead, asynchronous communication, focuses on cognitive involvement, increasing the reflection and the ability to process information. When using asynchronous tools the students are more motivated to read and also have more time to reflect.

Clark (2005) highlights the advantages of synchronous tools like Live Meeting, Centra, and Elluminate, which “(...) coupled with growing broadband Internet access, are revolutionizing the world of distance learning” (Clark, 2005, p.1). These synchronous e-

learning environments open new possibilities as such: videos publish animation, audiovisual presentation teacher and/or communication in real time through of the several recourses which are offered by these tools.

Many authors highlight the advantages of Elluminate Live, as a medium that offers the possibility of synchronous conferencing, which facilitates social interaction in a virtual classroom space, which, at the same time, allows students and teachers to send written messages, verbal communication, to submit documents in PowerPoint, the use of videos, surf the web together, among other possibilities. On the other hand, they point out the need to investigate the possibilities, advantages and disadvantages of integration into the educational system (Clark, 2005; Freitas & Neumann, 2009; McBrien, Jones, & Rui Cheng, 2009; Schullo, 2005; Shauna, Kromrey, Barron, & Hogarty, 2005).

Clark (2005) describes some of the advantages of synchronous tools like Live Meeting, Centra, and Elluminate, as is the ability to use animated images, video and audio, intercambio messages via the desktop and the board and use Chat are some of the features highlighted by the author. The literature review conducted by Freitas and Neumann (2009) concludes that one of the most positive aspects of the use of synchronous tools is that they make possible the social presence and thus facilitate participation and maintaining the interest of the distance learners. They emphasize, moreover, that the synchronous tools offer an opportunity to learn through real-time interaction. They indicate that these tools integrate the three major communication systems: audio in real time, shared images, text chat. The use of visual cues or systems emoticons to vote for quick answers from teachers, to share the screen, the multiple possibilities to coordinate and track sessions for students, creating breakout rooms, using questionnaires, video-recorded or live, integration of web pages, among other things, add a component enriching the learning process. In short, we can conclude that Elluminate Live, shares the advantages and disadvantages with synchronous communication tools.

Among its *limitations*, we have highlighted the difficulties in moderating the talks, the difficulty of getting all students connected at the same time constraints that occur in communication due to lack of ability of some students to write using a computer (Branon & Essex, 2001). One of the limitations of synchronous tools most reported by the authors has been the lack of time to ponder the answers, ie the need to provide an immediate response limits the

possibilities of analyzing the content and then provide a considered response (Branon & Essex, 2001; Kirkwood & Price, 2005; Laurillard, 2002). Moreover, the authors discuss the drawbacks of asynchronous communication tools such as: late response and lack of immediate response, the development of feelings of isolation and lack of time for discussion and interaction (Branon & Essex, 2001).

As noted by Coll (1996) synchronous communication tools are characterized by facilitating a fluid and fast online communication process among the participants in the learning process. The use of synchronous communication tools can be a motivator for the student, as it encourages interaction within the working group and, therefore, cohesion and a sense of permanence to the community and decision making group as well as discipline. Some of the disadvantages of Elluminate, as the synchronic tool, are the likely problems in the planning and real time participation, as the necessity or organizing schedules to take part in the sessions and the problems resulted from the internet access. Besides, the use of video, audio or big sized image files can make the problems cause by a limited broadband bigger (Schullo, Hilbelink, Venable & Barron, 2007).

Bearing in mind the technical limitations noted by the authors, it may be interesting to note the comparative studio by Chou (2002). In the comparative studio of the communication process and student interaction in synchronous and asynchronous learning networks, Chou (2002) concludes that the perception of students about features of the tool affects the first few weeks of interaction but afterwards, two or three weeks later, students are able to concentrate on the task and forget any technical problems.

Hofmann (2001), ACME Training Solutions, presented a study of blended learning which main objective was to determine the effectiveness of the tools used in synchronous and asynchronous distance learning programs. Asynchronous tools facilitate the development of basic contents of the synchronous course and were considered necessary to provide an opportunity for social interaction among students, facilitating the development of social skills. The inclusion of both types of tools sought on the one hand, work on content quality and, secondly, to integrate innovative tools in the learning process. The main conclusion drawn is that the combined use of different types of tools facilitates the development of the educational process. One of the most symbolic recommendations made by Hofmann (2001) is that the best practice is to mix three main components for the proper functioning of blended learning: start

with online tutorials, adding online communication together with the use of discussion forums.

## **Results**

### *Results which have been obtained when Elluminate has been used*

Kelvin Bentley, PhD, Northampton Community College Director of Distance Learning, stated that university needed the integration of a tool that allowed synchronous communication for the development of tutorials. With the support of Elluminate, some of the activities carried out in the university have been: online tutoring for Spanish subjects, science, mathematics, psychology, writing and accounting, the virtual focus, the implementation and development of working , advice and guidance meetings of the Faculty and/or with parents and students, carrying out of online conferences with guests.

Therrezinha Fernandes (nd), Pilaf Project Coordinator, and Sidiki Traore, Manager, Dakar Regional Office, commented that Elluminate has been the solution to the needs of the African Virtual University (AVU) in Nairobi, Kenya. In order to facilitate the learning process they sought a platform that would not need a lot bandwidth and technical requirements, due to technical difficulties experienced by African partner institutions of the University. The solution to their offices was found with Elluminate vOffice that enables them to connect with their teachers in the U.S. and Canada with African students and use it in some of their short programs in English and journalism certification. They believe that the platform is flexible, easy to use, interactive and its use encourages students.

Another university that has built Elluminate Learning Suite <sup>TM</sup>, has been Al-Quds Open University (nd) of Palestine. According To Dr. Majid Hamayil, director of the Open and Distance Learning Center, their experience has been excellent, cost saving, tool efficiency, integration with Moodle.

At John Jay, College of Criminal Justice, the Master of Public Administration Inspector General (MPA-IG) Program is one almost completely online. At first, using WiZiQ Elluminate was replaced by vOffice <sup>TM</sup>. WiZiQ constraints, it was only possible to communi-



cate audio-visually between two people at a time, this was solucionated with the use of Elluminate, since it allows communication among a group of people and communication control. It is a professional tool. Some applications are: lectures online, real-time discussions, group work and evaluation.

The National University of Ireland, has more than 16,000 students and 2,200 staff members. The professor Peter Cantillon, head of the Department of General Practice in NUI's School of Medicine, comments on the use made of Elluminate Live, during the first year of experience in September 2009. The university offers several graduate programs which are taught at a distance and with the support forum, chat, email, video conferencing (Skype) and telephone. Elluminate Live, has provided the opportunity to work with large groups of participants.

The Department of Mathematics at Pennsylvania State University offers courses in mathematics through online conferences. Smith (nd), Director of Online Instruction, Department of Mathematics at Pennsylvania State University, appreciates the potential of a tool to allow communication and interaction between teacher and student, facilitating collaborative work among the group of students. Currently the university is conducting further tests with Elluminate vClass in order to use it for math courses. The University of Florida has integrated it into the Online Master of Science in Pharmacy program with about 200 students. By using Elluminate a collaborative learning process online has been developed. It highlights the ease of the tool's use, its ability in motivating students and opportunities it offers for interaction and collaboration (Brushwood, nd).

Among other universities that are using Elluminate Live! We can mention the University of Hertfordshire. Peter Bullen, Director of the Centre for Excellence in Teaching and Learning, stands out among its main features that it is a useful, effective tool, that facilitates the elimination of space-time barriers in Blended Learning, as well as it allows to carry out international conferences. I is considered as a platform to support low bandwidth, rest rooms, attractive, the possibility of recording sessions, increases flexibility in the learning process, improve student participation and provides advice and guidance. (Elluminate, Ind., University of Hertfordshire).

Sancerni and Villar (2008) have performed a pilot study of Elluminate Live, developed during a year (March 2007 to March 2008). The choice of tool is warranted in five main reasons: the objective results in comparative studies on different platforms, in which Elluminate is one of the best recognized, for its prestige and the results of the reports of the universities which are using it, because of the ease of integration with other platforms (Blackboard, Moodle), the constant updating of product and the possibility of testing it for a month without charge. It is a tool that extends the boundaries of class time, facilitates active learning and enrich the interaction through synchronous discussion tools and the facility of providing immediate feedback. Some of the outstanding applications of the tool are: the possibility of providing distance learning, synchronous and asynchronous interaction, recording sessions, the possibility of publishing the contents prior to the meeting, share documents and other resources. From a technical standpoint, pointing out the possibility of adapting the connection speed based on the available bandwidth, it is an adaptable application to Microsoft, Mac and Linux, it allows the main board working publicly and privately, it has wealth of tools offered on the board, it allows for testing and / or surveys and then publishing of the results, it offers the possibility to publish, print and store content in different formats (text and / or multimedia), real-time application sharing and use independently salts (Sancerni & Villa, 2008). Among the results obtained, the authors emphasize, you can highlight a positive evaluation by both teachers and students. The authors conclude that the platform is useful as a learning tool, it is an intuitive and easy tool to use, accessible to students with visual or hearing disability (keyboard access, closed captioning for easy tracking subtitles), works well with width band, the possibility of recording sessions and turn them into MP3 and MP4 mobile playback easier and asynchronous. In short, it is concluded that it is a tool to help teachers and students as it facilitates interaction, student tracking and security features in live examinations. Some of the outstanding problems may be that some of the tools can be slow if there is no bandwidth, but they stress that could be due to the characteristics of the trial and their dependence on external service to the university.

Schullo, Hilbelink, Venable and Barron (2007) introduce an analysis of Elluminate Live and Breeze –two online, synchronous learning solutions–. They wanted to analyze their abilities to meet both technical and pedagogical needs in higher education. Authors conducted a comparative analysis with respect to the ease of tool use (usability), its adaptation to training needs, technical aspects. The objective of this research was “(...) to compare the pedagogical features of two leading virtual classroom systems. Among the educational objectives sought

to get teachers with the integration of this technology the following can be highlighted: to help to explain difficult concepts and conducting reviews, resolve problems quickly and immediately, allowing real time interaction, lead the student learning, promote growth of the community of learning, debate and discussion and, finally, assess student learning.

The authors obtained interesting results of this comparative study among Elluminate Live and Breeze. Here are some of the conclusions: Elluminate is easier to learn to use and provide a more intuitive interface Breeze; Elluminate Live is a handy tool for people with visual or hearing impairments, for example, access via the keyboard; Both platforms enable video communication to several people simultaneously; Elluminate allows the use of Power-Point slides, however, Breeze offers higher resolution and more professional looking slides; Elluminate Live allows the use and recording of audio and its quality is superior to the audio in Breeze tool; Elluminate Live let you use several virtual rooms simultaneously and all are located on the same page URL, making its location, whereas in Breeze each Virtual classrooms have different URL; Support both Mac and PC. In addition, to work with Elluminate Live Linux.

In the research done by Cogburn and Kurup (2006) Elluminate Live received a high evaluation (management and ability to conduct meetings, cross-platform integration, user interface, application sharing, image quality, application performance, multimedia tools, Recording and later playback, among other things), highlighting the possibility of being integrated into various platforms and its accessibility.

Between 1999-2006, a collaborative project between South Africa and some U.S. universities was carried out. A seminar ("Globalization and the Information Society: Information, Communication and Development") was held in order to develop the human capacity for knowledge. The aim of the study is summarized in the question: Is it possible to develop and implement a global virtual course graduate from universities in developing countries through the use of collaborative technologies? Data taken out from surveys of participating students across different academic courses. The study offers a possible model for collaborative development in multimedia environments. The study design is mainly qualitative, although some data are descriptive. Collect data provided in interviews with students over the years. Results indicated that most students (73%) liked the course, 97% of participants assessed as a valuable learning model and 51% said the approach was of great value. We found a high level of

overall satisfaction with the course (95%). On the other hand, it was found that students learning teams assessed face to face better teams, 75% versus 63% of students in virtual teams.

One of the advantages of virtual teams, in contrast to the team face to face was that distributed teams were considered an excellent opportunity to learn to communicate with other students from different countries and cities. The main conclusion is that using ICT can work across different borders and cultures, enhancing participants' confidence and providing opportunities for virtual learning (Cogburn & Levinson, 2008).

*Results have been obtained when it has been used in Education*

Schullo, Siekman and Szydlo (2003) conducted a research which goal is to understand why teachers use synchronous tools and how to use them in the teaching-learning process. In particular, they study the use of Elluminate Live! Analyzing subjects from different disciplines: Education, Nursing and Engineering. On the basis of qualitative analysis of data from surveys answered by 70 students and the observations made by 5 teachers, the authors drew the following conclusions: a synchronous tools allows you to include audio, application sharing, it strengthens students immediately. They are tools that facilitate communication and increase the potential for interaction, thus allowing building connections with and among students more effectively.

An interesting study in higher education is by McBrien, Jones and Rui Cheng (2009). They analyzed data from six graduate and undergraduate courses that used Elluminate Live tool for the development of online tutorials. This research aimed to study the use of Elluminate Live is a collaborative project among the faculty of the Faculty in Instructional Technology, Social Foundations, and Special Education in which data from undergraduate and graduate students is analyzed. Study participants were selected from three courses Post Flow and three undergraduate of the College of Education (University of South Florida). As an assessment tool, an open interview was used consisting of four questions concerning the use of the tool and learning experience: what you like and you do not like about the tool, which aspects worked and which should not be used again, explain your reasons.

The advantages of using the tool indicated by the students include the ability of Elluminate to enhance social interaction, ie, participation in the course. They also consider that it facilitates the expression of opinions, making students feel comfortable. They find that

the tool increases the potential for learning, as it facilitates the expression of ideas, as well as receiving and sharing the answers. Another of the conclusions of the study indicates the importance of finding the right degree of flexibility-rigidity to the design of the learning process. The students responded appropriately when the course had a clear organizational structure, firm and transparent observed difficulties when the learning process in the virtual classroom was less structured. The students expressed the need for a course with a definite and coherent structure, with clear expectations and roles in the synchronous sessions.

Overall, the study concludes that the students had a positive virtual learning experience, although not without difficulties. The authors highlight three main problems when using the tool. First, it was observed that the simultaneous use of more than a synchronous tool (audio, written chat, PowerPoint or the use of questions should be answered at the time) resulted in student's confusion. It is considered that this is an issue that can be better managed by the instructors if you limit the use of tools in each session. Secondly, we found that for some students the lack of nonverbal communication reduced the educational experience. The authors suggest the use of web cameras to develop online classes without losing the non-verbal language in the communication process. Thirdly, a point raised by students are the technical problems and how they adversely affected the teaching-learning process, because that directly affect their ability to engage and participate in the course, providing a sense of loss of control and thereby reducing their ability to emotional independence and self-direction. The authors note that it is important to address and invest in resources to ensure a learning process without technical problems (McBrien, Jones & Rui Cheng, 2009).

Barron, Schullo, Kromrey, Hogarty, Venable, Hilbelink, Barros, Loggie, and Hohlfield (2005) performed a studio whose main objective is to study the use of Elluminate Live synchronous tools and HorizonLive a course in the College of Nursing, two courses the College of Engineering, two courses of Library and Information Sciences and three College of Education at the University of South Florida. It is a qualitative study based on data collected from interviews with students and teachers, surveys and observations. The results support the use of synchronous learning tools for distance learning, highlighting its ability to promote interaction among the users of the course, and among students' interactions.

Schullo, Siekman and Szydlo (2003) state as the main advantage of synchronous teaching and communication systems its high resemblance to a face to face class. They both

share some of their defining characteristics, as it facilitates the student's immediate reinforcement, orientation and guidance on learning and therefore their motivation in the study. The authors emphasize the technical innovations that are being developed and that they consider greatly enhance the possibilities of interactivity, and expression of emotions (raise your hand, laugh, clap ...). One of the main advantages of using synchronous systems is the ability to make a preliminary assessment of the knowledge that the student have to then make an adaptation of the course material to the needs of students and discipline. Moreover, the authors note that this communication system can provide greater external motivation by facilitating direct interaction among the users of the course with asynchronous communication systems. These aspects, the authors conclude, may reduce the dropout rate.

Schullo (2005) studied in his doctoral thesis, the web system synchronous Elluminate Live! <sup>TM</sup> as a complement to distance learning courses offered by the University of South Florida. It was analyzed on the basis of five unique cases, the type of instructional strategies used, which tools are the most used by the instructors and, among other things, what are the perceptions of students and instructors on the use of the tool. The tools used were: auditory presentation, chat, whiteboard, raising your hand and emoticons, and meeting rooms. The author concludes that despite the complexity of the interface and technical problems, such systems enhance the learning experience by providing immediate, social interaction, physical presence, facilitating both group and collaborative work. It is oncluded that the lack of immediate response in asynchronous tools , makes immediate relationship and interaction among students and teachers difficult. In sum, we conclude that Elluminate Live, allows complete distance learning and facilitates the relationships between users of the virtual course.

Pruchnicki, Bennett, Legg, and Mungall (2005) presents the results of the implementation and development of teacher training experience (students in Nontraditional Doctor of Pharmacy (ntpd) program), 16 weeks of application, through the use of different types of virtual tools, synchronous and asynchronous. The objectives of the course, attention should first teaching skills curriculum that provides basic knowledge and skills related to education, learning styles, course planning, the use of technology in education and knowledge about the process learning, and secondly, learning design and development of structured educational activities online, the development of teaching materials and the development of an evaluation system. The methodology used was the participation of a minimum of 160 hours of online learning activities, with an average of 10 hours per week for those engaged on: dedication to

teaching assignments and lesson preparation, delivery content, use email, among others (4-6 hours per week) holding meetings among students and teachers through Elluminate Live™ (2 hours per week), preparation of modules on the curriculum (2-4 hours per week) and presentations by students (one teacher per student per semester). We used WebCT and Elluminate Live synchronous system as a means of communication. By using Elluminate, lectures, discussions with other students and teachers were developed. In addition, using shared whiteboards, graphical presentations, and other resources offered by the tool, the comments of students and teachers indicate that the environment is attractive, interactive and effective.

## **Discussion and Conclusions**

The literature reviewed and the experiences analyzed give us a clear vision of the possibilities and limitations of the tool and its effectiveness when it has been integrated into studies and degrees in different educational institutions. The different experiences provide data on the optimal conditions under which synchronous communication tool may be used. Synchronous communication tool, Elluminate Live, developed by Elluminate Inc., can be integrated into a virtual platform and has different resources that enable virtual communication in real time. Elluminate Live, online tutoring provides, through a process of audiovisual and written communication in real time and it incorporates the possibility of sharing the board (workspace) and content and files in different formats.

It is evident that the use of communication tools in real time, reinforces the professional interaction, socio-emotional relationships and personal interactions, in short, it is a tool that facilitates and enhances interpersonal communication between users (Chou, 2002; Clark, 2005; Freitas & Neumann, 2009; Hrastinski, 2008; McBrien, Jones & Rui Cheng, 2009; Rourke & Anderson, 2002; Shauna, Kromrey, Barron, & Hogarty (2005); Schullo, 2005). The immediacy of communication and fostering rapid response to a bilateral discussion gives a greater degree than in any asynchronous communication (Chou, 2002).

We conclude that the frequency of interaction increases with the use of synchronous tools, to a greater extent than with asynchronous communication tools (Freitas and Neumann, 2009; Mabrito, 2006), providing emotional and personal communication (Chou, 2002; Fox, Morris and Rumsey, 2007; Freitas & Neumann, 2009; Hrastinski, 2008; Rourke & Anderson, 2002).

Moreover, the approach of a synchronous communication process may constitute a motivator for students (Coll, 1996; Brushwood, nd), directing the student to focus on the task and content (Chou, 2002; Hrastinski, 2008; Mabrito, 2006). It is also possible to enrich the instructional process, as Elluminate Live, allows you to use different resources (animations, video, audio, slides, web pages), the exchange messages on the desktop and whiteboard, chat, among other alternatives (Clark, 2005; Freitas & Neumann, 2009; McBrien, Jones & Rui Cheng, 2009; Shauna, Kromrey, Barron & Hogarty, 2005; Schullo, 2005).

Following the approach of Freitas & Neumann (2009), one can say that the biggest advantage of the Elluminate Live tool is the ability to facilitate learning in real time, since it integrates the three main systems of communication (audio, image and text). It is unquestionable that synchronous tools facilitate an interactive communication process, variable considered by most studies as influential in the quality of the learning process. A suitable approach for these variables in the instructional process and, therefore, tools of communication, facilitate increased motivation, effort, collaboration and student engagement.

Synchronous tools allow us to make instant communication that reinforces social relationships with greater ease than asynchronous tools (Chou, 2002; Schullo, 2005), breaking the sense of isolation that can occur in distance education systems and fostering interaction and communication and participation (Fox, Morris & Rumsey, 2007; Gosmire, Van Osdel & Morrison, 2009; Hrastinski, 2008; Hofmann, 2001; Mabrito, 2006; Schullo, Hilbelink, Venancio & Barron, 2007). The inclusion of synchronous learning tools provide students with an opportunity to interact with peers and allows teachers to raise issues (Hofmann, 2001).

The results obtained when Elluminate Live is integrated into the education system are a proof of this. In most of the researches reviewed, regarding the use of the tool in university studies, have found that its use facilitates synchronous communication, the development of online tutorials, conferences, debates (Bentley, nd; Jay, nd; Sancerni y Villa, 2008; Smith, nd) and teamwork (Cantillon, National University of Ireland, 2009; Sancerni & Villa, 2008) and, more specifically, collaborative work, recording sessions, share documents, conduct tests on time real and the ability to publish, print and store content (Sancerni & Villa, 2008).



The advantages of Elluminate Live, have highlighted the flexibility and its ease of use, interactivity and ability to motivate students to reach (Therrezinha Fernandes & Traore, nd; Brushwood, nd; Smith, nd), the quality of sound and video, easy to perform screen sharing, recording sessions and the ability to integrate the tool into a platform (Cogburn & Kurup, 2006; Jay, nd). The integration of Elluminate in studies related to education, has shown similar results to those found in other disciplines. We conclude that it is a tool that facilitates interaction and communication, that is, reinforces social interaction (Barron, Schullo, Kromrey, Hogarty, Venable, Hilbelink, Barros, Loggie, & Hohlfield, 2005; McBrien, Jones, & Rui Cheng, 2009; Schullo, 2005; Schullo, Siekman & Szydlo, 2003).

Therefore, we can state that the use and integration of Elluminate Live can help to reduce physical and psychological distance between teacher and student. The transactional distance between course users can get to enhance the psychological distance and therefore the development of confusion between student and teacher, generating difficulties in the communication process (Giossos, Koutsouba, Lionarakis & Skavantzios, 2009; Moore, 1997; Moore & Kearsley, 1996; and, McIsaac & Gunawardena, 1996). The interaction and communication directly influence information processing, focusing on the acquisition of deep learning and in turn, performance (Anderson & Archer, 2001; DeLotell, Millam, Reinhardt, 2010; Fink, 2003). Clearly the process of communication and interaction impact on online learning for students (Biner, Barone, Welsh y Dean, 1997; Crissman, 2001; DeLotell, Millam, Reinhardt, 2010; Fink, 2003; Garrison, Anderson & Archer, 2001; Gunawardena, Linder-VanBerschoot, LaPointe & Rao, 2010; Johnson, Aragon, Shaik, & Palma-Rivas, 1999) and the use of synchronous tools can be a facilitator.

Some of the limitations encountered in using the tool Elluminate Live are related to technical problems (Chou, 2002; McBrien, Jones & Rui Cheng, 2009), such as the need for bandwidth and the problems caused by the use simultaneously over a synchronous tool. Technical problems may affect negatively the process of teaching and learning, as indicated directly on the potential for students to engage and participate in the course, providing the feeling of loss of control and reducing the capacity for self-direction and autonomy of the student (McBrien, Jones & Rui Cheng, 2009). In addition, they have found it difficult to moderate the discussions and get all students to connect at the same time more difficult for those students who have no skill in the use of ICT and / or writing computer (Branon & Essex, 2001; Schullo, Hilbelink, Venable & Barron, 2007). It is indisputable that synchronous communica-

tion has a clear limitation in relation to lack of time to analyze the content and reflect the response (Branon & Essex, 2001; Kirkwood & Price, 2005; Laurillard, 2002). Moreover, the use of video, audio or large images can increase the problems caused by limited bandwidth (Schullo, Hilbelink, Venable & Barron, 2007).

The aforementioned limitations of synchronous tools relating to lack of time to analyze the academic content and reflect on the response may be a barrier in the teaching-learning process, since it has been shown that variables such as compression and reflection (Nelson Laird, Shoup, Kuh & Schwarte, 2008; Ngeow & Kong, 2003), the process of understanding and establishing relationships between concepts (Draper, 2009), the development of methodological strategies to facilitate thinking, problem solving, decision- decisions (Ngeow & Kong, 2003) and understanding and establishing relationships between concepts (Draper, 2009), are crucial to the quality of online learning.

Elluminate Live tool allows different types of possible activities, including: synchronous holding conferences, sending written messages, file documents in PowerPoint, use videos, surf the web together, group work (Clark, 2005; Freitas & Neumann, 2009; McBrien, Jones, & Rui Cheng, 2009; Schullo, 2005; Shauna, Kromrey, Barron, & Hogarty, 2005), creating breakout rooms, the use of questionnaires (Freitas & Neumann, 2009). It highlights the possibility of testing and / or questions in real time, story time, compression of poetry, check out the recorded sessions, (Cordell, University of Illinois Springfield) mini lectures with interactive exercises and small group work (Schullo, 2005). You can perform interactive lessons that include surveys, dictation, filing questions, answers and discussion, group work presenting brief lectures that can be discussed in small groups and then discussed in the class group (Schullo, Siekman & Szydlo, 2003).

The development of these group activities facilitates collaboration and enhances the participation of students in the virtual course. They power the student to take the lead in discussion, reflect on smaller working groups and practice presentation skills, public debate and discussion in front of a larger group. Moreover, it was observed that it is possible to use the tool for testing the approach in real time, allowing the student's response either verbally or in writing through a questionnaire to strengthen the process of learning and knowledge acquisition.

The results of the analyzed research indicate that by implementing Elluminate Live tool, we must take into account the number of students and groups with whom we work in each session, the number of sessions you need to schedule and the duration of the session. In general, we can say that the sessions should not last more than an hour (or at most 90 minutes) (Clark, 2005). Brando (2005), indicates that the class should not be more than 2 hours and working groups are formed by a small number of students (Brando, 2005; Clark, 2005; Freitas & Neumann, 2009). Brando (2005), notes that the number of students shall not exceed 12. The use of several resources that Elluminate Live presents can enrich the learning process, provided that the student's attention is maintained throughout the session and does not cause confusion in the student. It is important to prepare the session in advance and ensure there are no technical problems and gain experience in using the tools and training necessary to coordinate a group.

The design of an instructional program through Elluminate Live, means finding the right degree of flexibility-rigidity to the design. As noted by Khan (2001), Kirkwood and Price (2005) and McBrien, Jones and Cheng Rui (2009), the program should provide a clear structure, consistent and structured. The specification of the expectations, objectives, functions and roles of the course to develop, should be clarified from the beginning of the course. The presentation of the contents should be made in an organized and sequential way (Khan, 2001).

One of the dangers of using technology is to convert synchronous distance education online, in a kind of educational classroom over the Internet, ie using excessive and irrational use of synchronous technology would impose on our students the need for sessions in network at specific times. Excessive use, based on a restrictive approach would result in a directed learning process and controller that greatly hinder the monitoring of studies by distance education students. In the distance universities (such as: The Open University in United Kingdom or the National University of Distance Education in Spain) students, mostly adults who supplement their family and work obligations with the continuation of their studies. As any technology, the rational use of Elluminate Live can facilitate the learning process, considered a complementary tool to other such as discussion forums or wikis that provide asynchronous communication media, providing freedom of choice to students and teachers.

The joint use of synchronous and asynchronous tools in the teaching-learning process online will facilitate the development of an online course quality. Asynchronous tools respect the autonomy of the student, study at an individualized pace, reading, consultation and reflection documentation and analysis of content, without time and space constraints that can impose synchronous tools and allowing access to content to an individualized pace. Synchronous tools will enrich the learning process with the integration of new resources, strengthen knowledge, foster communication and interaction, group work and facilitate the assessment and monitoring of students.

The final decision on whether it is appropriate to integrate Elluminate Live tool in our virtual course may be pondering the possibilities offered by the tool, but considering some questions: will our students need training in the tool? Do the responsible tutors of the courses have technical training? What number of students will I have in my online course? What role will the use of Elluminate Live play? Is it possible to integrate the tool in online courses? Who will develop the content and / or material for its publication via Elluminate Live?

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