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VIRTUAL EDUCATION IN THE NEW EDUCATIONAL CONTEXT

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Abstract: From the analysis, use and citation of the contents, from various pertinent sources on the subject, some of the conceptions on virtual education are systematized in the new educational context, beginning precisely with the conceptualization of what virtual education is. Citing the corresponding authors, some elements that constitute virtuality are presented, among which are: the appropriate technology, the role of the actors in the process and the definition of a pedagogical model. The roles of teachers and students in this modality are also addressed; as well as some advantages and disadvantages of virtual education.

Keywords: Virtual education, Virtual teacher role, Virtual student role, Virtual education advantages, Virtual education disadvantages.

INTRODUCTION

In recent years, virtuality has acquired such prominence that it is present, and sometimes predominates, in all spheres (economic, social, cultural, etc.) of contemporary life. Education has not been an exception and since long before the imperatives that the COVID-19 pandemic imposed on the education sector, many institutions, especially universities, already had robust virtual education programs, also interchangeably called online, at a distance, remote, among other meanings.

In this article, a systematization is carried out, based on the search, consultation, incorporation and citation of the contents of various sources, about some of the theoretical, methodological and practical conceptions, concerning contemporary virtual education.

THEORETICAL-METHODOLOGICAL FOUNDATIONS OF VIRTUAL EDUCATION

WHAT IS VIRTUAL EDUCATION? (AMERICAN ANDRAGOGY UNIVERSITY, 2018)

Virtual education refers to a variety of teaching formats that do not involve students and instructors collaborating in person, at least not in the same room. While some of these forms of education involve real-time meetings, the teacher and student are usually in different locations and connected via computer to each other. Also, not all forms of virtual education have real-time connections. Sometimes the material is prepared in advance and any discussion occurs with delays, such as email discussion. These varied forms of virtual learning continue to grow in popularity and offer alternatives to the traditional classroom face-to-face learning environment.

Teachers began experimenting with virtual education shortly after the birth of the Internet. In the early 1990s, it was not unusual for some teachers to use multi-object-oriented sites to conduct at least some courses. With the increased functionality of the Internet, it was soon possible to teach entire classes online and with very little face-to-face. This idea was used to some extent in universities and colleges to offer more flexibility in learning modes to students.

One of the characteristics of today's leading educational institutions is their commitment to tradition. With these traditions come teaching methods that have been around since the beginning of the Industrial Revolution and have not changed for many decades.

Virtual reality will change the way educational institutions approach learning by delivering learning experiences that no longer rely on lectures to teach concepts or the idea of earning a degree. In fact, virtual reality can

help create learning experiences that span across multiple disciplines, facilitating the growth of multidisciplinary career paths.

The best schools of the future are also likely to be defined by how well the institution has adapted its curriculum to current and future technological demands rather than past achievements.

Virtual education has always been an option whereby you can access content 24/7 anywhere, anytime – one of the great benefits of online education is that you can access to her all day, wherever and whenever she wants. This gives you the freedom to decide and adjust the amount of time you decide to dedicate to classes, you can also decide to study from home with your slippers and nightwear, why not? If no one is watching you (besides your family).

You can create a network of contacts of professionals in different parts of the world: meeting people from different countries allows you to increase and diversify your network of contacts around the world, this is a unique opportunity that offers you online education.

ANOTHER POINT OF VIEW (GCFGLOBAL, S.F.)

Also known as online teaching, it refers to the development of the teaching-learning dynamic that is carried out virtually. That is, there is an educational format where teachers and students can interact differently from the face-to-face space.

It relies on ICTs (Information and Communication Technologies), since it makes use of the tools offered by the Internet and new technologies to provide adequate and high-quality educational environments.

It is important to take into account that virtual education is related to distance education, which was born as a result of the need for quality educational coverage for people who, due to distance and time, cannot travel to a physical training center.

Virtual education complements this type of academic modality, since it improves the dynamics of student training and offers greater support to teachers for the development and academic monitoring of the students in charge. Let us see below, the evolution that distance education has had and its relationship with virtual education:

ELEMENTS THAT CONSTITUTE VIRTUALITY (PONTIFICIA UNIVERSIDAD CATÓLICA DE PUERTO RICO, 2017)

Virtual education can then be conceived as a new modality of providing education, which makes use of ICTs and which is neither better nor worse than the face-to-face modality, simply different. Those who in the past based the understanding of the virtual education modality on the face-to-face education modality, had multiple difficulties when trying to apply the different elements that constitute face-to-face to virtuality. For this reason, it is convenient when making a detailed analysis of virtual education, to understand the main elements that make it up:

- Appropriate technology.

- Role of the actors in the process.

- Definition of a pedagogical model.

The first element that I consider I must refer to when we talk about the elements that constitute a virtual educational model, is its pedagogical foundation. The way in which ICTs configure the relationship between the different actors in the educational process, increases the need for a rigorous conceptualization regarding the pedagogical model that could and must be used in this educational modality.

The construction of virtual programs is not given only by technological aspects, as

many have believed. There must be a deep pedagogical reflection in the background, which supports and provides intentionality to all those activities that are proposed within a program. Octavio Henao, referring to Leflore (2000), proposes the following as pedagogical models to follow:

Gestalt Theory: This theory is based on the influence that sensory perception has on learning. It uses the advantage offered by some visual characteristics that improve the understanding of the subject, such as: contrast, symmetry, stimulus intensity, proximity and simplicity.

These elements allow configuring the contents in a way that is pleasing to the student's eye, giving a direct effect on learning. From this theory, the following recommendations could be given for the construction of a virtual course:

- Use light backgrounds that do not interfere with the sharpness of the text or images.

- Group the information that is related to each other.

- Do not abuse the mixture of colors or their intensity.

- Do not abuse the animations and/or visual effects of the texts.

- Do not leave incomplete information.

- Use simple vocabulary in new topics. If this is not possible, set up a glossary where the student can consult the terms not understood.

Cognitive Theory: It affirms that a large part of learning is given thanks to the development of concept maps and the activation of previously elaborated mental maps. The foregoing forces the virtual teacher to use means that increase the ability to integrate new knowledge to schemes previously defined by the student. This is how the use of examples that illustrate concepts and reality simulation exercises not only comply with this premise, but also have a motivating effect on the student's learning ability. Ausubel clearly defines the importance of this pedagogical conception in his theory of significant learning.

Constructivism: Learning occurs to the extent that the student actively participates in their educational process. This participation must be encouraged in virtual education, since the student's need to interact with teachers and classmates is one of the most important characteristics that will define the achievement of meaningful learning. Formulating problems for group discussion requires the student to develop analytical and critical skills.

Availability of appropriate technology (Pontificia Universidad Católica de Puerto Rico, 2017)

It would not be logical, in an educational modality based on the use of ICTs, not to ascertain beforehand what the basic requirements needed for the educational process to go without difficulties would be; just as it would happen in face-to-face education, if we did not have foreseen aspects, such as: the availability of comfortable classrooms, audiovisual aids, bibliographic and didactic resources.

For example, it would not be pertinent to direct a virtual educational program to a population of students who do not have Internet access or who do not have the appropriate computer to manage the different educational options offered by virtuality. For this reason, a step prior to the construction and offer of virtual educational programs is the definition of this element: What must be the technology under which both students and teachers will interact in this educational modality?

In this sense, two areas must be explored:

Hardware type technology and Software type technology (Technologies called Hard and Soft respectively).

Hardware Infrastructure: For the implementation of virtual education in an educational institution, there must be an adequate number of computers with the appropriate technical specifications that guarantee the proper functioning of virtual resources. These teams are of three different types:

- Those where the virtual courses and their administration platform will be hosted. These equipments are of the server type.

- Those where the teacher interacts directly with software-type technology and performs the different activities required by a virtual course or program.

- Those available within the university campus for student access to courses.

In addition to the Hardware represented by the computer equipment, there must be a network that interconnects all these equipment with each other and allows a continuous output of the virtual courses to the network of networks: Internet.

There are other additions that constitute hardware-type technology, which must be available depending on the processes defined for the development of content and didactic material. In an institution where you are thinking of offering virtual programs, you must have, in addition to the aforementioned computer equipment and networks, equipment for the production of audiovisuals, such as cameras, scanners, and video players, among others.

Software Infrastructure: The term software refers to the computer programs that are required to carry out all the processes that the assembly of a virtual course or program requires. These programs can be divided into two large groups:

The software called Platform for virtual education, which constitutes the framework or skeleton on which the contents of a program will be mounted and which, in addition, will provide the possibility of interaction between the actors in the educational process. This type of software is available on the market under different trade names and for its selection a careful evaluation must be carried out that includes, among other aspects, the following:

- Availability of tools for synchronous and asynchronous communication between students and professors, such as: chat, forum, distribution lists, board or blackboard, and email.

- The flexibility that allows for the construction of interactive learning environments. This is reflected in the possibility that the teacher has to assemble different types of content (text, audio, video and images) and to configure a graphic appearance consistent with the pedagogical models defined by the educational institution.

- The ability to offer online support to the student at the time of any difficulty during the performance of any of the proposed academic activities.

- Possibility of different means for the evaluation and follow-up of students, such as the placement of questionnaires, the realization of exams with different forms of response and the direct observation by the teacher of the time that each student has dedicated to the realization of the tasks. different academic proposals within a course.

- Availability of group management tools, such as group formation, qualification sheets and lists, among others.

- Security that it offers in the continuity and permanence of the contents on the

Web, in addition to the basic security systems for entering the courses, which only allow the entry of those students registered through their personal password.

• The other group of software-type technology that must be available is made up of multiple computer programs that allow the following functions, among others: word processing, information storage in different formats, capture and editing of audiovisual material, creation of animations, creation of elements of design and elaboration of Web pages. It is in this second group of software-type technologies where the institution must focus its training efforts for its teachers, since they are the ones who will finally carry out and condition the contents of each program to the defined pedagogical model.

ROLE OF THE TEACHER IN VIRTUAL EDUCATION (PONTIFICIA UNIVERSIDAD CATÓLICA DE PUERTO RICO, 2017)

As happens in face-to-face, the teacher must carry out those activities that good academic planning requires, such as: Definition of objectives, preparation of contents, selection of an appropriate methodology, preparation of didactic material and preparation of an evaluation plan. So far, the tasks of the virtual teacher do not differ at all from the face-to-face teacher. However, when the means available for teacher-student interaction are ICTs, which do not allow physical interaction, the teacher must also develop new skills, such as:

• Ability to interact with graphic designers and systems programmers who will support the assembly and filming of the course.

• Knowledge and skills in managing ICTs: Internet, email, forums, chat, discussion groups and information search in electronic databases.

• Know and put into practice methodological strategies that stimulate student participation.

• Maintain fluid and dynamic communication with students through synchronous or asynchronous means of communication, understanding that a large part of the teaching role in student learning is given thanks to good accompaniment and guidance from the teacher.

• Know and use methodologies that promote collaborative group work.

ROLE OF THE STUDENT IN VIRTUAL EDUCATION (PONTIFICIA UNIVERSIDAD CATÓLICA DE PUERTO RICO, 2017)

• The student who participates in a virtual education program must also develop certain special skills that allow him to take full advantage of the educational strategies defined by his teacher.

• Develop, based on motivation, a high level of autonomy that allows them, in addition to following the course instructions and thus obtain the learning derived from them, to go further through the search for new information and the development of advanced processes of learning based on analysis, synthesis and experimentation.

• Like the teacher, the student must have sufficient skills and knowledge in the use of ICTs.

• Ability to interact with peers for the development of collaborative work

projects.

• Have a high discipline in time management to ensure compliance with the proposed educational objectives and comply with the schedule defined by your teacher.

• Maintain continuous communication with your teacher and with your classmates through synchronous or asynchronous means of communication.

ADVANTAGES OF VIRTUAL EDUCATION (TOBAR, 2017)

From the student's point of view, virtual education is an excellent alternative because they obtain good quality academic content at a more affordable cost, compared to the face-to-face format. In addition, both the schedule and the pace of learning are adapted to the student's disposition and not to that of the teacher.

For teachers there are also advantages in virtual education that they can take advantage of, both academically and professionally:

1. Significant learning: Your main objective as a teacher is for students to have meaningful learning, that is, to assimilate the information and put it into practice. Virtual education gives students access to review the content as many times as they deem necessary and develop the activities at their own pace. The advantage over traditional education is that the student will have the possibility of reviewing your sessions without interrupting the process of the other students, which in the long term will be beneficial for both him and the others. his companions.

2. Asynchronous communication: In virtual education, communication between the student can be asynchronous, that is to say that the interaction through

digital media takes place at different times, avoiding delays in the learning process. The advantage over traditional education is that the teacher can respond on a schedule at his convenience and take the time he needs to solve the doubts of his students. You can research various online tools for asynchronous communication and use the one that best suits your group of students.

3. Additional economic income: If you consider that you have worked on quality content, you can generate additional income through online platforms, these allow you to reach markets outside the area in which you reside, that is, you have more opportunities to get potential customers to sign up for your course. Teachers can generate even six-figure income annually.

4. Reduction of costs: The low costs that virtual education represents are attractive for students, as well as for teachers. Developing an online course has the advantage of lowering costs in terms of transportation, use of free digital resources, and time optimization. The development period of the course for the first time will surely take you several months, however, it is a content and material that you can reuse. Your modifications only depend on whether you want to update it or if you find useful resources that enrich student learning.

5. Professional projection: If you are looking for teaching opportunities outside the borders of your country, developing online courses is an excellent way to do so. Some teachers use online courses to complement their traditional course, this can generate an advantage for you since you will be placed as an expert in your field very easily. Work on a personal

branding strategy, since when you launch your course many will investigate who you are and their main source will be the web. Have a profile ready on LinkedIn, Facebook or your own website with up-to-date information it will make it easier for them to recognize you; This may even be the reason why they enroll in your course.

OTHER ADVANTAGES AND SOME DISADVANTAGES OF VIRTUAL EDUCATION (GFCGLOBAL, S.F.)

Advantages:

• Allow access to information immediately.

• Offers flexibility on time management when studying and the place. from which the connection to study is made.

• Offers autonomy over the learning process.

Disadvantages:

• If you are a person whose learning process is facilitated by face-to-face monitoring and/or have concentration problems, perhaps online education is not as functional for you.

• Given that virtual education knows no geographical barriers and we can access international training programs in many countries and, according to the legislation in this regard, there are failures when it comes to validating the titles obtained.

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