

COMPETENCIES IN DISTANCE EDUCATION AT THE UNIVERSITY OF MOA

COMPETENCIAS EN EDUCACIÓN A DISTANCIA EN LA UNIVERSIDAD DE MOA

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ABSTRACT

The review of curricular designs and the search for alternatives to ensure the teaching process was necessary in this research, since higher distance education in Cuba faces challenges related to the emerging scenarios of the knowledge society and the demands derived from the pandemic. The knowledge of students and professors in the Physical Culture program was explored regarding the use of distance education as a pathway for learning, establishing theoretical foundations and a diagnosis of the current state at the University of Moa. It is concluded that this program requires prioritized attention to consolidate the distance education modality as an essential strategy in blended courses.

KEYWORDS: digital environments; information and communication technologies; constructivism

RESUMEN

La revisión de diseños curriculares y la búsqueda de alternativas para garantizar el proceso docente, fue necesario en esta investigación, pues la educación superior a distancia en Cuba enfrenta retos vinculados a los escenarios emergentes de la sociedad del conocimiento y a las exigencias derivadas de la pandemia. Se exploró el conocimiento de los estudiantes y profesores de la carrera de Cultura Física, sobre el uso de la educación a distancia como vía para el aprendizaje, estableciendo fundamentos teóricos y un diagnóstico del estado actual en la Universidad de Moa. Se concluye que esta carrera requiere atención priorizada para consolidar la modalidad de educación a distancia como estrategia esencial en los cursos por encuentro.

PALABRAS CLAVE: entornos digitales; tecnologías de la información y las comunicaciones; constructivismo

INTRODUCTION

Martí's conception of education provides significant elements of great relevance. Institutions respond to the needs of the environment in which they develop and are aimed at the formation of individuals. The character of universities is defined by the education achieved within them, influenced by the spirit of the society that creates, sustains, and attends them.

Education constitutes one of the determining factors for the development of nations, making it necessary to turn it into a comprehensive and efficient process. However, it cannot confront current demands with its traditional structures and methods.

One of the most important responses to these needs, which gained major relevance in the 1970s, is distance education. This revolutionary modality can play an exceptional role in expanding the reach of educational systems through the

incorporation of new strategies, with significant social impact in many regions of the world, benefiting a large number of people.

This modality can solve the needs of lifelong, quality education in a more supportive and human world, enhancing people's capacity for relationships and facilitating the learning process with equity and inclusion.

With new stages and over three decades of experience in implementing distance education in Cuba, a model has emerged that responds to the new Cuban reality. Since the triumph of the Revolution in 1959, Higher Education has ceased to be elitist, as it is the desire of the State and society that, in principle, every Cuban can exercise their right to study the university career that best suits their desires and aptitudes.

The traditional scheme of the teaching-learning process, where the professor teaches knowledge and the student listens passively, at most taking notes and consulting a textbook, is becoming very limited in the current context. This context is characterized by the increasing push of new technologies and notable transformations in the roles of professors and students.

The student must develop skills to search for relevant information, know how to analyze it critically, summarize, synthesize, and apply it, relying on technologies that can mediate this process. In recent years, the introduction of information and communication technologies (ICT) into education has experienced significant growth. ICTs are accelerators of change, capable of improving students' modes of action, promoting collaborative work, fostering accessibility, and enhancing job performance.

Cuba has integrated the alternatives of educational technologies into its education system, programs that brought computers to all schools, and projects such as the *Cuba Educa* portal, a repository of curricula for all educational levels and a platform for networked education.

DEVELOPMENT

Studies by Burbules (2006) refer to the promises of technologies and their importance for distance education, but always accompanied by risks such as technological dependency and inequality in their use by the population or population groups. Along the same lines of thought regarding new technologies, Barroso (2002) referred to ICT as a transformative resource in learning processes, not merely as a tool.

After the triumph of the Revolution, higher education in Cuba has had significant moments stemming from the process of perfecting the Cuban educational system. This led to raising the educational level of the population and the need to offer new forms that would enable the continuation of studies.

Corona et al. (2020), conducted a study on the use of distance education during the Covid-19 stage in Cuba as an immediate measure to maintain teaching. This posed a major pedagogical and methodological challenge in the medical sciences program, especially due to technological limitations and teacher adaptation.

In recent research in the computer science program, Herrera & Barreda (2020) refer to the imperative need to modify methods in face-to-face classes and emphasize the use of ICT as a fundamental element for flexibility and constant updating, particularly for computer science students.

It is no secret that current generations of young people need educational responses aligned with their technological interests, making the incorporation of virtual games into classes as a new pedagogical dynamic vital (Cuba & Pérez, 2021).

In Cuba, one of the first pieces of evidence of distance education in the country is a series of articles dedicated to teaching readers in the newspaper *El Habanero*, written by Félix Varela y Morales in 1839. Retrieved from Hernández et al. (2022) in their article "Evaluation of the Implementation of the Distance Education Model of Cuban Higher Education"; that is, almost two centuries of Distance Education.

As part of the process of planning, organizing, and executing this study modality, measures and actions have been approved that serve as legal bases to initiate the process. The National Center for Distance Education (hereinafter CENED) is inaugurated to contribute to the development and excellence of distance and blended education, initiating a new stage of improvement for higher education starting in 2015. The Distance Education Model of Cuban Higher Education was developed. The regulatory documents of the Ministry of Higher Education for undergraduate and postgraduate training were perfected, such as Resolution No. 47/2022, Organizational Regulations of the teaching process and management of teaching and methodological work for university majors.

Resolution No. 140/2019, which approves the Postgraduate Education Regulations of the Republic of Cuba, and Instruction No. 01/2020, which presents the Manual for Postgraduate Management. The implementation of the Distance Education Model of Cuban Higher Education began at the undergraduate and postgraduate levels, for example: the Agricultural Process Engineering program at the Agrarian University of Havana "Fructuoso Rodríguez Pérez", and the distance master's programs in IT Project Management and Virtual Education, both at the University of Informatics Sciences (Hernández et al., 2022).

In the 1979-1980 academic year, distance education began, initially as "Directed Courses" with the creation of a Network of Centers (University of Oriente, University of Camagüey, Las Villas Central University, and University of Havana). The Faculty of Distance Education at the University of Havana was designated as the leading center until the 2005-2006 academic year, when it was decided to decentralize the Network of Distance Education Centers and incorporate distance education into the Municipal University Campuses (hereinafter MUC).

At the World Conference on Higher Education held in Paris in 2009 under the theme New Dynamics of Higher Education and Research for Social Change and Development, it was noted that "Higher education must intensify teacher training with curricula that

provide the necessary knowledge and tools for the 21st century. This will require new approaches, including open and distance education and the incorporation of ICT" (Cala et al., 2020).

Distance education has evolved with the emergence of new learning theories, especially with the advent of constructivism, which considers learning as a process in which the individual constructs knowledge, assimilating and accommodating to new schemas (learning step by step), and with the use of ICT as technological mediation.

The necessity to activate virtual classrooms worldwide has been of great value in maintaining medium standards of education and instruction, and Cuba was no exception (Jiménez & Fernández 2021).

There are various definitions of distance education in the literature: Moore & Kearsley (2007) state that the term distance education originates from the German word *fernstudim* (distance study) to describe how certain industrial principles could be applied to the teaching profession.

For the University of Moa, distance education was an additional challenge. As a national-scope institution where the majority of its enrollment lives in other provinces, it became necessary and vital to apply this study modality, using various options, primarily the Moodle platform. The article on the challenges of distance education while Covid-19 in the Cuban health system presents ideas and variants that had to be applied to achieve their objectives of continuous training for their students (González et al., 2020).

Reinoso (2020) argued that the construction of hypertexts is an enriching tool in distance education because it transforms materials into interactive and flexible spaces adapted to the needs of students in the Cuban context. Multiple factors gave rise to and subsequently expanded distance education, among which the following stand out: sociopolitical advances, the need for lifelong learning, advances in the field of educational sciences, and technological transformations.

The extreme variety of application forms and the extensive international diffusion of this modality is reflected in the numerous denominations that can be found in addition to distance education/teaching.

The idea that the distance education modality depends on a non-negligible group of conditions, infrastructure, and training was identified by Montejo et al. (2022), demonstrating that a teaching strategy or methodologies are not sufficient for this activity. These are closely linked to the aforementioned elements. Orozco et al. (2023) emphasize in their article that distance education is a process that must necessarily articulate the political, cultural, and technological aspects in Cuban universities. In this sense, they make it clear that without this integration, progress cannot be made in achieving the fundamental goal of distance education. It is important to highlight the context of each university. Despite so much diversity in naming this modality, all distance education systems share some common characteristics:

- ✓ Physical separation between professor and student.
- ✓ Support from a tutorial organization.
- ✓ Individualized learning.
- ✓ Two-way communication.
- ✓ Systematic use of media and technical resources.
- ✓ Technological approach.
- ✓ Existence of an institution that regulates, controls, and guarantees the development of all processes.

Nevertheless, limitations persist that hinder the distance education modality in the classrooms of the University of Moa:

- ✓ Lack of internet connection from their homes.
- ✓ Limited preparation of professionals and students to use social networks for the intended purpose.

- ✓ Limited presence of landline phones in homes.
- ✓ Defective computers and phones.
- ✓ Students residing in remote locations in different provinces of the country, with very few communication facilities.

MATERIALS AND METHODS

This study seeks to characterize a specific group or sector regarding the knowledge they possess in this field or environment. It is a qualitative study that relies on exploratory techniques, primarily surveys. León & Montero (2015); cited by Jiménez & Fernández (2021) in their article on the use of virtual platforms. For this study, a population of 58 continuing students and 15 professors from the Physical Culture program at the University of Moa was considered, totaling 73 individuals, based on the establishment of selection criteria: From the initial total of students and professors considered for the survey and study (73), the survey was completed by 42 students and 9 professors (51). The following table shows the confirmed data:

| | Variable | Frequency |
|---------------|------------|-----------|
| Average Age | Students | 24 years |
| | Professors | 33 years |
| Sex | Male | 37(72%) |
| | Female | 14(26%) |
| Academic Year | Second | 11(21%) |
| | Third | 12(23%) |
| | Fourth | 10(20%) |
| | Fifth | 9(18%) |
| Professors | | 9 |
| Total | | 51 |

Table 1: Physical Culture, frequency of participation according to participant characteristics: sex, academic year, and professor/student category.

Data were obtained through an online survey conducted with the support of the Google Forms platform. Additionally, some artificial intelligence tools, such as Napkin.ai, were used for analysis and graphing.

The exploration considered a questionnaire of three questions for professors and four for students. The first question was applied to both groups: in the case of students, it was based on knowing their level of experience in working with online platforms.

The second question explored the frequency with which they use the platform or platforms. As a third question, the study focused on the types of platforms normally used in class or the teaching process.

In the case of professors, they were asked if they have mastery in the use of different platforms to support the teaching process. Secondly, it was explored whether they plan activities that include the use of online platforms to reinforce the teaching process. Thirdly, it was researched whether they consider it appropriate for students and professors to have technologies for working on the platforms.

Processing was performed using descriptive statistics, through measures of central tendency to determine the mean, median, and mode, which allowed for analysis and drawing conclusions.

RESULTS AND DISCUSSION

When inquiring with students about their level of experience in using some type of platform or other online means to support the learning process, seven answered having a High level of experience (16%); 22 answered having a Medium level of experience (52%); and 13 answered having a Low level of experience (31%).

The data show the low use of online platforms in the learning process within the program (Figure 1).

Level of experience in using platforms

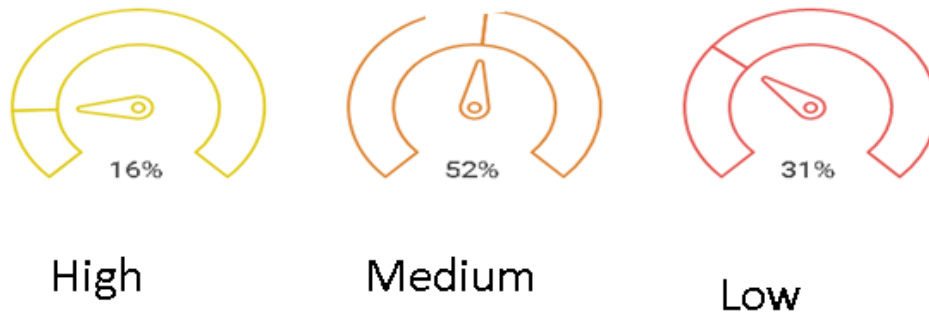


Figure 1. Level of experience in using some type of platform

When inquiring about the frequency with which they engage in distance education activities, 5 students do so frequently (12%); 15 do so occasionally (36%); and 22 do so rarely (52%). It is evident that the majority lack experience in this type of activity (see Figure 2).

Frequency with which students carry out distance education activities

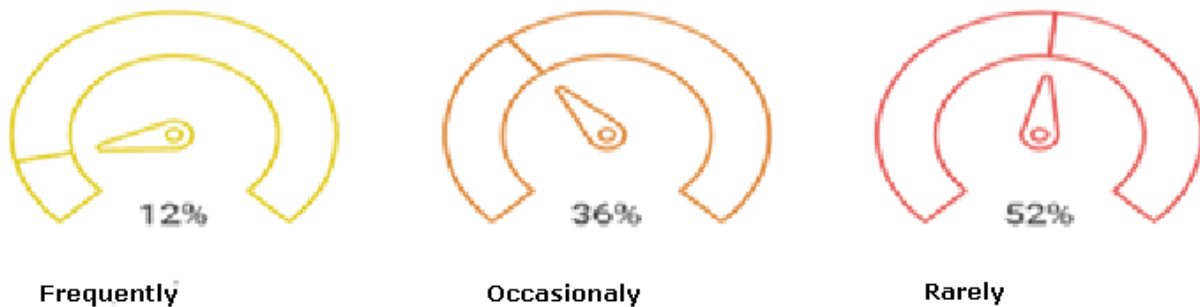


Figure 2. Frequency with which students do distance education activities

In the third question to students, they were asked about the type of platform or online space they use most for these activities; in this sense, 1 student uses Videoconferencing Platforms (0.2%), 6 use Moodle (14%), 19 use WhatsApp (45%), 11 use Email (26%), and 5 use Others (12%).

Most students use WhatsApp and email, demonstrating a lack of knowledge about the proper use of other means for learning (see Figure 3).

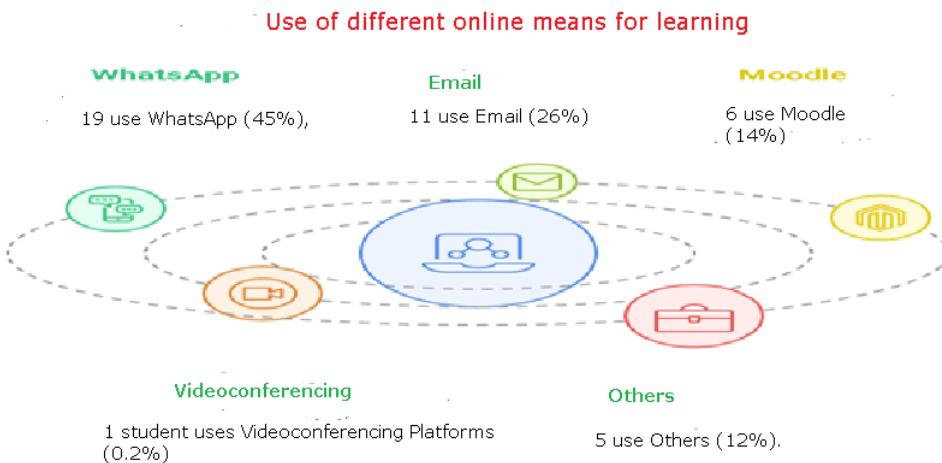


Figure 3. Use of different online means for learning

In the case of professors, the survey first inquired whether they are knowledgeable about different platforms or other online means for the teaching-learning process. From 9 possible professors, 4 answered having a high level of knowledge (44%); 2 have a medium level (22%); and 3 have a low level (33%).

The numbers show that over 50% do not have an Adequate level to carry out activities in the distance education process (see Figure 4).

Levels of knowledge of professors about the use of different online means

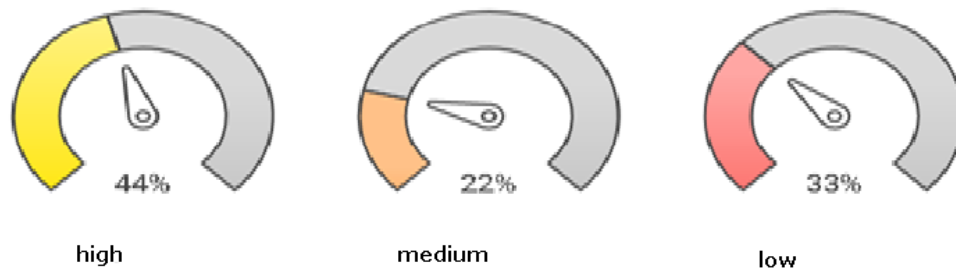


Figure 4. Levels of knowledge of professors about the use of different online means

The second question explored the planning of activities to guide students. In this regard, 6 professors answered Sufficient (66%), 2 answered Few (22%), and 1 answered Some (11%). In this question, it can be seen that over 60% of professors plan activities for distance education with their students (see Figure 5).

Planning level of activities on distance education

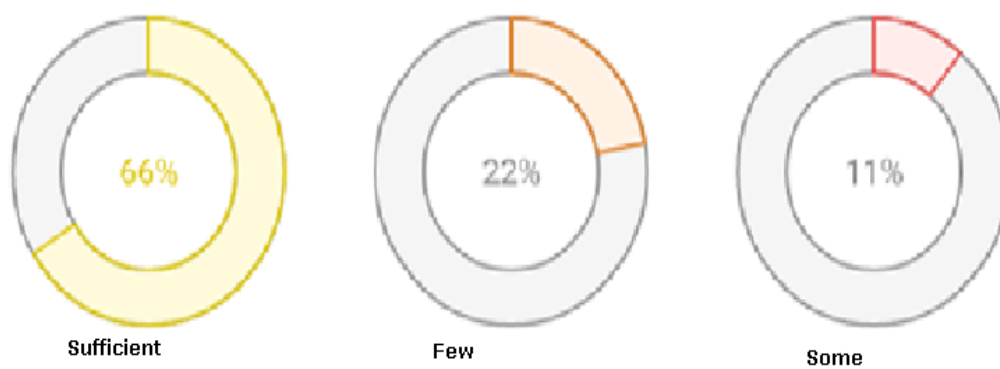


Figure 5. Planning level of activities on distance education

For the third question, it was researched whether professors consider the level of technology they and the students have to be sufficient to meet the demands of distance education.

In response, 2 answered it is adequate (22%); 5 answered not adequate (55%); and 2 answered somewhat adequate (22%).

Therefore, it can be affirmed that only 22% believe that students and professors in general have the appropriate technologies to meet the requirements of this type of education.

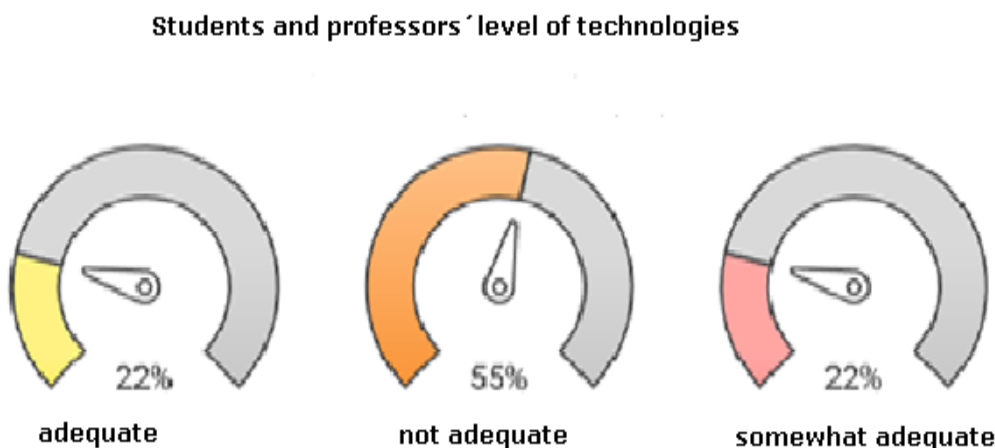


Figure 6. Students and professors' level of technologies

In current sceneries, the signs that characterize our time are recognized: globalization, neoliberalism, the rapid development of information and communication technologies, new educational actors, virtualization, the strategic value of knowledge, and innovation. I

Also, other features are shown, such as:

- ✓ The emergence of a new generation of young people (digital natives) who are growing up in a world permeated with technology.

- ✓ The demand for non-traditional education more directly linked to specific professional improvement objectives and generally of short duration.
- ✓ The emergence of so-called corporate universities, with strong technological bases and characterized by bringing education to the individual, not the individual to education.
- ✓ The massification with quality of higher education.
- ✓ Widespread use of information and communication technologies in all societal processes.

CONCLUSIONS

The literature review of theoretical premises allows for delimiting the scope of distance education in Cuba and the territory. The exploration conducted in this study shows that there is still much to be done in the adequate and efficient use of ICT and the different virtual platforms in pursuit of a better distance education process. The Distance Education Model of Cuban Higher Education is driven by an innovative didactic mediation supported by the use of information and communication technologies, in which the student, as an active subject in his own learning process, has high self-management, placing him in a leading role and guaranteeing quality in the training process.

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