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Textual mediators as an alternative to teaching learning and learning

Los mediadores textuales como alternativa de apoyo a la docencia

Os mediadores textuais como alternativa de apoio pedagógico

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ABSTRACT

The work contains the result of the application of a learning object composed by a didactic unit on the foundations and norms of International Humanitarian Law, in fourth year students of the degree course in Physical Culture of Pinar del Río University "Hermanos Saíz Montes de Oca". The objective of the research was to develop a learning object that would contribute to improve the knowledge of the foundations and norms of International Humanitarian Law of the fourth year students of the degree course in Physical Culture of Pinar del Río University "Hermanos Saíz Montes de Oca". In its elaboration, theoretical methods were used such as historical-logical, analysis and synthesis, inductive-deductive; also empirical methods such as observation, group interview, documentary analysis, student survey and statistical techniques such as percentage analysis. Among the main findings were that the printed bibliography on the subject to carry out the necessary consultations and the independent or self-prepared work by the students was insufficient. The textbook lacks images to reinforce knowledge It could be concluded that the learning object was a didactic tool that allowed the students of the Faculty of Physical Culture of Pinar del Río and other institutions to have digital access to the subject of the foundations and norms of International Humanitarian Law; that it strengthened the values in the students, especially humanism, contributed to the learning, use of computer and telecommunication techniques by the students of the Faculty of Physical Culture of Pinar del Río and other institutions.

RESUMEN

El trabajo contiene el resultado de la aplicación de un objeto de aprendizaje, conformado por una unidad didáctica sobre los fundamentos y normas del Derecho Internacional Humanitario, en estudiantes de cuarto año de la carrera de licenciatura, en Cultura Física, de la Universidad de Pinar del Río "Hermanos Saíz Montes de Oca"**.** Se propuso en la investigación como objetivo: elaborar un objeto de aprendizaje que contribuyera a mejorar el conocimiento sobre los fundamentos y normas del Derecho Internacional Humanitario de los estudiantes de cuarto año de la carrera de Cultura Física de la Universidad de Pinar del Río "Hermanos Saíz Montes de Oca". En su elaboración, se emplearon métodos teóricos como histórico-lógico, análisis y síntesis, inductivo-deductivo; además, métodos empíricos como la observación, entrevista grupal, análisis documental, encuesta a los estudiantes y técnicas estadísticas como el análisis porcentual. Entre los principales hallazgos, la bibliografía impresa sobre el tema, para realizar las consultas necesarias y el trabajo independiente o de autopreparación por los estudiantes, era insuficiente. El libro de texto está carente de imágenes que refuercen los conocimientos. Se pudo concluir que el objeto de aprendizaje constituyó una herramienta didáctica que permitió a los estudiantes de la Facultad de Cultura Física de Pinar del Río y otras instituciones tener acceso, de manera digital, a la temática de los fundamentos y normas del Derecho Internacional Humanitario; se fortalecieron los valores en los estudiantes, en especial el humanismo; se contribuyó al aprendizaje, utilización de las técnicas informática y telecomunicaciones por los estudiantes de la Facultad de Cultura Física de Pinar del Río y otras instituciones.

Palabras clave: objeto de aprendizaje; derecho internacional humanitario; Tecnología de la Información; Preparación para la Defensa.

RESUMO

O trabalho contém o resultado da aplicação de um objeto de aprendizagem constituído por uma unidade didática sobre os fundamentos e normas do Direito Internacional Humanitário, em alunos do quarto ano do curso de licenciatura em Cultura Física da Universidade de Pinar del Río "Hermanos Saíz Montes de Oca". O objetivo da pesquisa foi desenvolver um objeto de aprendizagem que contribuísse para melhorar o conhecimento dos fundamentos e normas do Direito Internacional Humanitário dos estudantes do quarto ano da carreira de Cultura Física da Universidade de Pinar del Río "Hermanos Saíz Montes de Oca". Na sua elaboração, foram utilizados métodos teóricos como histórico-lógico, análise e síntese, indutivo-dedutivo; também métodos empíricos como observação, entrevista em grupo, análise documental, levantamento estudantil e técnicas estatísticas como a análise percentual. Entre as achados principais estava que a bibliografia impressa sobre o assunto para fazer as consultas necessárias e o trabalho independente ou auto preparado dos alunos era insuficiente. Faltam ao livro didático imagens que reforcem o conhecimento. Pode-se concluir que o objeto de aprendizagem foi uma ferramenta didática que permitiu aos alunos da Faculdade de Cultura Física de Pinar del Río e outras instituições ter acesso digital ao tema dos fundamentos e normas do Direito Internacional Humanitário; que fortaleceu os valores dos alunos, especialmente o humanismo, contribuiu para a aprendizagem, uso de técnicas de informática e

PODIUM
REVISTA DE CIENCIA Y TECNOLOGÍA
EN LA CULTURA FÍSICA

telecomunicação pelos alunos da Faculdade de Cultura Física de Pinar del Río e outras instituições.

Palavras-chave: objeto de aprendizagem; direito humanitário internacional; tecnologia da informação; preparação para a defesa.

INTRODUCTION

The traditional view that teaching is successful when students read or listen to the teacher's lesson (ignoring the active and creative role of the student), the conception of the teacher and the text as the only sources of truth and knowledge, the perception of knowledge as the memorization of concepts, principles, formulas, etc, has given way to a more reflexive approach that qualifies the active participation of the student in the construction and reconstruction of knowledge through the contrast of the new information with previous ideas of the manipulation of the object of study itself, of the possibilities of interaction with classmates, with the teacher and with himself/herself, that is, that generates both an affective and cognitive involvement of the student in his/her own process of acquisition of knowledge, skills and competences.

Increasingly, the advantages offered by the Information and Communication Technologies are being involved in the teaching-learning processes, as a support to the teaching work, through services and didactic resources that can be used by the users, under the premise of making possible the autonomy of learning. Such learning must be structured in such a way that it facilitates the contents and are assimilated by the students. One of the initiatives that give rise to this type of learning are the so-called Learning Objects, which have been added to the collections of various libraries.

But where are they and what are they called learning objects?

The term learning object is attributed to Wayne Hodgins, (1992) who proposes the following definition: "any digital resource that can be used as a support for learning".

Another definition, with a technological focus on learning objects is coined by the Learning Technology Standards Committee (LTSC), (IEEE, 2002):

> "Learning objects are defined as any entity, digital or non-digital, that can be used, reused or referenced during learning, supported by technology. Examples of technology-supported learning include: computer-based training systems; interactive learning environments; intelligent computer-supported instructional systems; distance learning systems; and collaborative learning environments. Examples of Learning Objects include multimedia content, instructional content, learning objectives, instructional software and software tools, as well as individuals, organizations or events referenced during learning, supported by technology".

However, it did not stop there; the concept of the learning object has been handled in different ways and contextualized in different areas of knowledge. As a result of its versatility and its high value in scientific, academic and technological development, its repercussions have been valued after the study of outstanding research, such as (Jonassen, D. 2000; Medina, J. M. C. *et al.,* 2016; Cabero

Almenara, J. *et al.,* 2016; Barroso Osuna, J. M., & Cabero Almenara, J., 2016; Jardey Suárez, O., 2016 and Basantes, A. V *et al.*, 2017).

Therefore, the author assumes that learning objects are digital resources used to support learning, with some independence, so that they can be used and reused in various educational contexts.

On the other hand, it is pointed out that human beings learn from the dialectic relations that they maintain with what or those who teach them and with what they apparently do not teach, and in this constant learning, their level of development has, in relation to the subject or object that they teach, a very important role. From this perspective, it is recognized that the "level" of learning or of assimilation reached by a subject in the course of a particular activity depends on multiple variables, including the motivation and cognitive structure of the learner, the appropriateness of the context in which the activity is carried out, and the type of teaching that is given.

Throughout this process, it is recommended to consider the relationship between the affective and cognitive domains, the use of varied teaching resources and diverse and creative ways of working, the diversification of teaching methods and strategies, and the use of materials and models.

The development of computer science as a science has contributed to the improvement in the various disciplines and subjects of the means used by them for relevant student learning. These new techniques of computer science and communications (ICT) are now widely used by all sciences, with the aim of pooling knowledge, creating databases, educational software, updating themselves digitally, creating websites and multimedia to be used, following the required didactic guidelines, making the teaching-learning process efficient for students.

The process of technological appropriation in the educational field has been complex; its use is analyzed from two perspectives proposed by Parra, L. del S. V. (2012): the first refers to the process of incorporation with the aim of improving students' competences; the second stresses that the mere presence of ICT is not enough to generate significant and innovative changes in the teaching-learning processes. As Carneiro, Toscano & Díaz, (2009) state, a triple paradigm transformation is required: from education as an industry to education as a service, from schools that teach to schools that learn and, finally, from associationism to the constructivism of learning.

In the Physical Culture Faculty "Nancy Uranga Ramagoza" of Pinar del Río, not oblivious to the transformations of the contemporary world, the challenge of perfecting the teaching in the different subjects, both theoretical and practical, is taken up. One of the fundamental problems presented in the center is the scarce bibliography of some subjects, which makes it impossible for students to occupy the leading role that corresponds to them within the process.

This is why different researches are carried out in order to improve the teaching work, to which the formation of values and the political-ideological work in students is indissolubly linked, through the (ICT), with a view to their professional performance in the formation of new generations as a way of acting of the Physical Culture professional.

In order to adequately incorporate ICT in the teaching-learning processes, it is pertinent to consider the mediation process, which Chirinos, (2015) recovers as a model in which educational innovation and technology is used as a didactic-

pedagogical science for the construction of knowledge, based on the use of technological mediation tools such as educational software, the use of forums, wikis, vokis, glogster, virtual classrooms and chats, to mention a few.

One of the contents of the subject National Defense, with a certain degree of difficulty, due to the lack of specialized bibliography, is the International Humanitarian Law for which a series of actions have been developed with the aim of bringing it to the students.

After knowing these precedents, the following question arises: How to contribute with the Informatics and Communications Techniques (ICT) to improve the learning of the foundations and rules of International Humanitarian Law of the fourth year students of the Physical Culture career of the "Hermanos Saíz Montes de Oca" University, in Pinar del Río?

In order to respond to this need and motivate students in the knowledge of the foundations and norms of International Humanitarian Law, it was proposed, in the research, as an objective: to elaborate a learning object that would contribute to improve the knowledge of the foundations and norms of International Humanitarian Law of the fourth year students of the Physical Culture career of the University of Pinar del Río "Hermanos Saíz Montes de Oca".

MATERIALS AND METHODS

To carry out this work, theoretical, empirical and mathematical-statistical methods were used, taking as a basis the dialectical-materialist method of Marxist-Leninist philosophy, which allows the study of objects and phenomena in an objective way, in concatenation, movement and development, as well as offering the most general laws, categories and principles for their study.

Theoretical methods:

Historical and logical: it allowed us to start from the genesis of the problem and everything related to textual mediators.

Analysis and synthesis: this method was used to introduce the bibliographical knowledge, making it possible to combine the different contents, from the general to the particular, which facilitates establishing generalizations, ensuring a better determination of the instruments, as well as establishing the way in which they will be used, starting from the didactic function.

Inductive-deductive: it was used to address the objective and the field of action, to break down the essential elements of the textual mediators aimed at organizing a learning object according to the students.

Empirical methods

The observation was directly applied, which allowed to know the current state of the use of textual mediators in the National Defense subject.

The group interview made it possible to socialize criteria among teachers and students about the use of textual mediators and the difficulties they face.

The documentary analysis for the critical evaluation of the bibliography on the subject. The following were consulted: "The Hague Conventions on International Humanitarian Law"; "International Law of Armed Conflicts"; "Security and National Defense for Students of Higher Education (Text for the basic course)"; "Basic Text of the Discipline of Preparation for Defense, for students of the Universalization of Higher Education".

The survey of students was applied to find out what notions they had about the foundations and norms of international humanitarian law and the preference for including learning objects as materials for self-preparation.

RESULTS AND DISSCUSION

Mediation is characterized by intervention through teaching to generate the most favorable conditions for mobilizing the student's learning process; thus mediation is presented in didactic terms. In the teaching-learning process, with the integration of ICTs, two essential relationships can be distinguished (Frías, Y. 2008).

- Exchanges in the form of dialogues between the subject and teaching material of a digital nature through a communicative interface It is a dialogue of a simulated and asynchronous nature, as a communicative relationship between the student who wishes to learn and the materials designed by the teachers (subject-object relationship, mediated by other subjects).
- Socialization exchanges, using different communicative channels (direct or face-to-face and technological or mediated). It is a real dialogue, of maximum social interaction that may be synchronous or asynchronous and is directed at influencing positions, expectations and behaviors).

By using ICTs as supports for the teaching-learning process, a first mediation (the technological one) is incorporated, by generating new modes of dialogue and elaboration of knowledge, because it facilitates and reinvents new modes of exchange of information that favor the acquisition of knowledge.

With regard to ICTs, they can be introduced into the classroom in various ways, either as a teaching resource, as an object of study or as an element for communication and expression.

In this sense, it is necessary to take into account that, in order to use ICT, as a teaching aid, the following characteristics of an educational medium must be clear Salinas Silva, (2005, p. 11):

- The teacher must reflect on the educational reality that is presented in the classroom and on the characteristics of the students in order to identify what is expected of the environment, the place that it will occupy, the role that it will play, the changes that it will exercise.

- The activities carried out through a given educational environment should make it possible to adapt or adjust it to the teacher's plans.
- The means must make it possible to overcome such issues as the physical distance between students, the geographical distance or the distance of the contents.

There are different types of technologies applied to education:

- Transmissive technologies. These are instructor-centered and only allow the transfer of information.
- Interactive technologies: These are student-centered and allow the acquisition of skills by the student.
- Collaborative technologies focused on collaboration that leads to a change of mentality.

Of these three types of educational technologies, in the case of interactive technologies in which technological mediation has its advantages over physical mediation, the physical world establishes limits of space (classroom), access is immediate, and in the case of cyberspace, access is mediated by ICT or through the Internet.

What is going to allow this?

a) That the student learns at his/her own pace, controls the navigation, interacts with the environment and receives feedback, access and flexibility.
b) That the teacher is the facilitator of the information. Orientation and control of the process.

What are the educational implications?

1. Pedagogical potentialities.

- Motivational power - Attracts the student's attention.
- Symbolic power - Reduces time for learning.
- Impersonation power - Frees the teacher from the role of presenting and repeating information.
- Interactive power - individualization of teaching learning.

2. Levels of learning are achieved.

- Learning about ICTs: digital technological literacy (use as productivity tools)
- Learning about ICTs: subject application (use of communicative and interactive functions).
- Learning with ICTs: application as a cognitive tool and for interaction-collaboration (use as a complement to face-to-face classes or as a virtual classroom).

3. Its training scenario is the semi-presential modality.

Taking as a reference Frías, Y. and Malagón, M. (2009) in their work "La mediación como potencialidad de las tecnologías de la información y las comunicaciones en los procesos de enseñanza-aprendizaje", it can be stated that the use of ICT, as a technological mediator, expands the opportunities to learn, by propitiating new ways of dialogue and knowledge elaboration, as opposed to didactic mediation where a

pedagogical relationship is produced where teachers promote and trigger the learning process.

According to Bartolomé, (1999), technological mediators are composed of:

- A communicational design in which the planning and organization of the communication processes are included. (User-machine relationship).
- Learning design where reference is made to how to achieve the learning/conception of the learning that guides.

That is why, in designing our learning object, we took into account:

From the communication point of view:

- What kind of information was to be transmitted?
- What was the most appropriate channel?
- The combination of the different channels
- The location of the contents
- How to distribute and deliver it?
- How would the subject interact with the environment?
- What kind of material did we want to make and with what tools?

From the point of view of learning:

- What objectives were intended to be achieved?
- What contents were relevant?
- What activities would allow these objectives to be achieved?
- In what way were the learnings achieved to be evaluated.
- What would be the learning strategies to be developed?

The following principles were taken into account:

1. Motivation: to generate the desire to learn on the part of the students.
2. Preparation for learning: to establish the level of the group, their previous knowledge and interests in order to determine the new concepts to be included, as well as the resources to encourage study.
3. Individual differences: taking into account that people learn at a different pace and in a different way, the material was adapted to these differences.
4. Learning objectives: it was established what they are expected to learn using the mediator and thus have a greater probability of success.
5. Organization of content: a sequence was structured to facilitate learning.
6. Participation: activities were established to internalize information through practice and repetition, in order to achieve effective learning.
7. Feedback: Progress is regularly reported. This will increase learning.
8. Reinforcement: Learning is reported to be improved or certain issues are answered correctly. This will become a support for further learning.

When elaborating the learning object, what was raised by Francisco Mora Vicarioli, (2012) about the importance of the use of these principles in virtual education was taken into account "It can be believed that the learning object is a large entity, but, in reality, it must develop only one objective, it must contain activities and a final evaluation or check. This can be varied according to specific needs. It is a concrete material, with contents and evaluation activities. This is intended to broaden the

possibilities, to adapt the object for various courses and contexts, as opposed to a material that is more extensive and covers many contents.

The learning object consists of a web page entitled "Fundamentals and norms of international humanitarian law". It constituted the materialization of a task within the project of the "Working Group for the Production of Digital Didactic Media for Defence Preparation", assigned to the Month. This allowed to reach higher levels of knowledge about International Humanitarian Law.

This textual material can be reused in different virtual teaching-learning environments, from different digital resources and also allows its location and download from the main page of the university. It is packaged in the exelearning design program and can be distributed freely.

This proposal works as an information organizer and, consequently, helps to organize knowledge, makes the mastery of the content more enjoyable by being more motivating due to its language, headings and illustrations that facilitate learning. This type of packaging allows the existence of interspersed activities, well planned in the text, so that the student does not limit himself to memorizing, but applies and transfers the knowledge constantly. These activities imply a constant self-evaluation of learning. The elements of evaluation are varied in their purposes and in their forms, according to the different learning objectives. The results that were achieved provided ways and means of acting in the students in such a way that they generated changes, in accordance with the culture and principles demanded by the current Cuban society.

With the support of Computer Science teachers, from the PPD discipline, and students from the Student Science Circles of the Physical Culture faculty, a work team was created to elaborate this learning object.

For this purpose, the actions to be carried out by each one were distributed:

- Collect all the necessary information on the subject.
- Digitize all the information on the learning object.
- Editing of the videos and voices etc.
- Preparation of the evaluation instruments to be applied.

Once this was completed, the task of monitoring the criteria of students and teachers, both at headquarters and in the SUMs, regarding the learning object created and its application was undertaken.

Later on, the effectiveness of what was created was verified through visits to our headquarters in the province, where it was possible to verify that it was feasible and very useful for teachers and students, including those from other careers and teachings such as pre-university, through interviews, surveys, observation and analysis of the product of the activity.

As a result, we can state:

- The contents proposed serve to deepen the theme. In the way they are treated, they arouse the interest of students.
- It is novel because, through it, the time available to assimilate a great deal of knowledge is reduced, which facilitates differentiated work and introduces the student to work with computerized means.

- Individualization of learning.
- It is easy to use, requiring only minimal computer knowledge. It allows to be updated at the desired time, facilitates the copy of any text. Its size is appropriate for transporting it in a memory.
- It can cover the needs of bibliography.
- Bearing in mind that impact is the measure of the influence of research achievements, in this case, the following was taken into account:
- Social impact: it is being applied on our university campuses.
- Scientific impact: increase in the quality level of student preparation, use of ICTs in the National Defense subject.
- Methodological impact: Correspondence of the research with the needs raised for the methodology of the encounter class.
- Economic impact: it is possible to save the university, for the value of the textbook and the study guide, for each enrolled student, without valuing all that it contributes in the centers of other teachings where they already work with this object of learning.
- Technological impact. Increase in the degree of use of computer resources for the teaching-educational process.
- After having verified the application of the learning object created in the discipline, it allowed to establish an approximation to the weaknesses, strengths, opportunities and threats that it could have for its future success.

Strengths: its use in the campus of our province offers the possibility that both the students and the teachers can successfully carry out the teaching-learning process and constitutes a necessary tool of consultation for all personnel of the Physical Culture and Sport of other careers and teaching levels.

Opportunities: allows a considered saving of financial resources to our university and to the country, it can be a proposal to apply in other Centers of the Superior Education of the country.

Weakness: it is currently only available to the education sector.

Threats: that there is no awareness of the importance of using it.

Finally, the learning object elaborated constitutes a didactic tool that allows the students of the Faculty of Physical Culture of Pinar del Río and other institutions to have access, in a digital way, to the subject of the foundations and norms of International Humanitarian Law. It strengthens its values, especially humanism, and contributes to the learning and use of computer and telecommunication techniques.

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PODIUM
REVISTA DE CIENCIA Y TECNOLOGÍA
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The authors have participated in the writing of the work and analysis of the documents.