



VIRTUAL LEARNING ENVIRONMENT IN PRESENT TEACHING IN NURSING: A PROPOSED METHODOLOGICAL APPROACH

AMBIENTE VIRTUAL DE APRENDIZAGEM NO ENSINO PRESENCIAL EM ENFERMAGEM: UMA PROPOSTA DE ABORDAGEM METODOLÓGICA

AMBIENTE VIRTUAL DE APRENDIZAJE EN LA ENSEÑANZA PRESENTE EN ENFERMERÍA: UN PROPUESTO DE ENFOQUE METODOLOGICO

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ABSTRACT

Objective: to report the construction and use of a Virtual Learning Environment and Information and Communication Technologies in the teaching-learning process in nursing. **Method:** experience report, which was prepared strategies divided into three stages: The first refers to an action research in order to produce changes in professional nursing practice, the second is from the deployment of technologies in the discipline of Nursing Care in the Health of Children and Adolescents I, finally, we collected data aimed to examine how these technologies interfere in teaching. **Results:** the literature about the theme and the training of teachers and master for the use of technology in the virtual environment. **Conclusion:** the use of technology allows for greater interaction between teachers and students, facilitates learning and contributes to the construction of academic knowledge, allowing better approximation of the contents learned in the classroom with the reality of nurses. **Descriptors:** Information Technology; Nursing; Higher Education.

RESUMO

Objetivo: relatar a construção e utilização de um Ambiente Virtual de Aprendizagem e de Tecnologias da Informação e Comunicação no processo de ensino-aprendizagem em Enfermagem. **Método:** relato de experiência, no qual foram elaboradas estratégias divididas em três momentos: O primeiro refere-se a uma pesquisa-ação com vistas a produzir mudanças na prática profissional do enfermeiro; o segundo, constitui-se da implantação das tecnologias na disciplina de Assistência de Enfermagem na Saúde da Criança e do Adolescente I; por fim, foi realizada a coleta de dados visando a analisar como essas tecnologias interferiram no ensino. **Resultados:** o levantamento bibliográfico acerca da temática e a capacitação dos docentes e mestrandos para o uso de tecnologias no ambiente virtual. **Conclusão:** a utilização das tecnologias possibilita maior interação entre docentes e discentes, facilita o aprendizado e contribui para a construção do conhecimento acadêmico, permitindo maior aproximação dos conteúdos trabalhados em sala de aula com a realidade profissional do enfermeiro. **Descritores:** Tecnologia da Informação; Enfermagem; Educação Superior.

RESUMEN

Objetivo: presentar la construcción y el uso de un Entorno Virtual de Aprendizaje y Tecnologías de la Información y la Comunicación en el proceso de enseñanza-aprendizaje en enfermería. **Método:** relato de experiencia, que fue preparado estrategias divididas en tres etapas: la primera se refiere a una investigación-acción con el fin de producir cambios en la práctica profesional de la enfermería, la segunda es de la implantación de las tecnologías en la disciplina de Cuidados de Enfermería en la Salud de la Infancia y la Adolescencia I, por último, que recoge los datos tuvo como objetivo examinar cómo estas tecnologías interfiere en la enseñanza. **Resultados:** La literatura sobre el tema y la capacitación de los maestros y maestras para el uso de la tecnología en el entorno virtual. **Conclusión:** el uso de la tecnología permite una mayor interacción entre profesores y alumnos, facilita el aprendizaje y contribuye a la construcción de conocimiento académico, lo que permite una mejor aproximación de los contenidos aprendidos en el aula con la realidad de las enfermeras. **Descriptores:** Tecnología de la Información; Enfermería; Educación Superior.

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INTRODUCTION

Education is the basis for the formation of a democratic society based on ethical principles, political, social and cultural. Accordingly so that education can occur in its fullness, we can see the importance of higher education institutions were likely an academic effective and quality linked to the reality of (the) academic (as) through the use of Information Technologies and Communication Technology (ICT).

Thus, it is emphasized that the Federal University of Rio Grande (FURG), through its Educational Policy Project, aims seek education so full, developing creativity and critical thinking and providing the knowledge necessary for social transformation; beings form human cultural, social and technically capable; promote the harmonious integration between the human being and the environment.¹ Thus, it is believed that to address these goals Institutional you need to think and integrate pedagogical practices of teaching that go beyond traditional teaching. Therefore, visualized, specifically undergraduate degree in Nursing, the implementation of ICT and inclusion of the Moodle platform as a proposed methodological approach feasible and appropriate for use in the Information Society.

Modular Object-Oriented Dynamic Learning Environment (Moodle) is a Virtual Learning Environment (VLE) "which according to its creator, Martin Dougiamas, works with a dynamic view of learning in which social constructivist pedagogy and collaborative actions prominent place".^{2:18} Therefore, it is also considered that this is an easy to use software which enables the interaction, the collective construction of knowledge and academic learning. In this perspective, the implementation of Information and Communication Technologies (ICT) in the educational process through the Moodle platform, presents itself as an innovative teaching that can instigate academic learning and make them increasingly subject of their learning. Thus, it allows the teacher to create opportunities for the students to build their knowledge.³

Article drawn from the thesis "Use of Information Technologies and Communication in Classroom Teaching in Nursing", presented to the Graduate Program in Nursing at the Center for Health Sciences, Federal University of Rio Grande / FURG. Rio Grande - RS, Brazil. In 2011.

Also, this research aims to describe the experiences of developing and implementing

ICT through the use of Moodle in classroom teaching in nursing, aiming to contribute to the educational process and allow more of theoretical approach to professional practice, as well as include the effectively the technological resources that are already part of the reality of the academic, the construction of their learning.

• Project

This research project consists of a proposed innovative education classroom course in Nursing FURG being done specifically in the discipline of nursing care in the Health of Children and Adolescents I order later extension to other disciplines of undergraduate course in Nursing. Thus, it is noteworthy that was developed after project approval FURG the edict No. 15 DED / CAPES, of March 23, 2010, relating to "Promoting the use of Information and Communication Technologies in Undergraduate Courses." In this sense, the general objective underlying this proposal is to analyze how the implementation of ICT can affect the process of teaching and learning in the classroom course FURG Nursing, located in Rio Grande / RS in order to make it more dynamic, attractive and interactive.

The project development is divided into three stages, the first being that it is an action research, considered a kind of empirical research that "is designed and carried out in close association with an action or solving a collective problem and in which researchers and participants representative of the situation or problem are involved in a cooperative and participatory".^{4:14} This step was done all the planning of the educational process with the inclusion of ICT.

The second point relates to the implementation of ICT in the discipline. The third, it is a collection of data in order to understand how ICT interfere with teaching and was held at the AVA through forums and virtual logbook.

The realization of the project comprised the period between the month of November 2010 to July 2011 and obtained as all study academic participants the 4th semester of nursing graduating FURG enrolled in the discipline of nursing care in the Health of Children and Adolescents I during the 1st half of 2011, totaling 14 students.

Because it is a research involving humans, were seen all ethical aspects outlined in Resolution No. 196 of October 10, 1996, the National Council of health.⁵ Thus, the project was submitted to a Banking Exams Qualification and after the Ethics Committee

in Research in Health (STRAINS) FURG, and data collection began only after its approval by Protocol. 73/2010.

It is emphasized that the project considers the commitment of the public university with society in the formation of critical citizens, reflective, ethical and committed to their reality.⁶ Thus, we visualized a proposal to qualify the teaching-learning graduation, making the academic increasingly subject of their learning and ICT to meet the real needs of their professional practice.

The project was presented to the direction of the School of Nursing FURG and (the) teachers of the discipline of nursing care in the Health of Children and Adolescents I upon request from the proper permits to conduct the study as well as suggestions about the most effective way accommodate the proposed objectives.

The route took the linkage project between discipline and ICT, with constant maintenance building pedagogical training for nurses. Thus, we sought to overcome all geographical, temporal, cultural, economic, social and political, thus enabling the construction of a collective knowledge arising from the enhancement of knowledge, skills and abilities of each individual involved in the process.

About the use of ICT, we tried to get the knowledge about each of these technologies with a view to better utilization and exploitation of its potentialities in order to instigate the curiosity and critical thinking of students in different educational situations, thus enabling the construction and reconstruction knowledge.⁷

From this perspective, studies show that ICT promote interactive processes, enabling the transmission of information and knowledge construction. Thus, the interactionist model, the scholar is encouraged to investigate according to the mental constructs you already own, being valued their prior knowledge and urging him to build and internalize new knowledge. However, the teacher is considered the mediator, leading the students to restructure their own world.⁸

Regarding education in the information society, this requires support for schemes of learning, continuing education and distance learning and Internet-based networks, by fostering the schools, teacher training, self-learning and certification in information technology and communication scale, implementation of curriculum reforms aimed at the use of information and communication

technologies in teaching and educational activities at all levels of formal education.^{9:35}

In this sense, the development and implementation of this project aimed to consider the assumptions and pointed goal yet. Thus, for a better understanding and explanation of the study, following the description of all steps and results shown.

• Planning Phase

Initially, we carried out an action research that consists in planning, operation and evaluation of the results of the actions being performed by various professionals through continuous monitoring, until reaching a satisfactory.¹⁰

Thus, in order to address this phase took place from training in the use of technologies in AVA, taught by teachers of the Department of Distance Education (DLS) / FURG through workshops, to the production of educational content in media. So how ICTs are still little known and used in the practice of nurse teachers must learn to be open to both learning.¹¹ received up information about the Moodle platform, then the capacity to produce material media, held on 25 and 29 November 2010 and 08 December 2010.

Note that Moodle because it is an AVA, objective interaction between those involved in the teaching process, enabling the construction and reconstruction of knowledge, besides being easy and free software to use. In this context, it is visualized that technological innovations are present in our reality and are part of our daily lives. However, it is noted in relation to the deployment of these technologies in education, the need for knowledge about the technological resources available on school conditions to suit the reality of this technology and academics.

After the training process were defined three relevant issues, to be addressed in virtual learning objects, together with the supervisor of the project and teachers who work in the discipline. The subjects were selected Immediate Assistance and mediate the Newborn (RN), Physical Examination RN and Breastfeeding, with the first two issues were worked in two class hours and the third in four class hours.

The next step was to select the most appropriate media to the three topics chosen previously by searching Internet Web Sites. This stage included the selection of videos, papers, official publications of the Ministry of Health and Ministry of Education, among others. It is emphasized that this step was carried out with great care and attention both

in terms of the quality of the material being part listed, as respect to ethical issues. Thus, these were taken from reliable sources and at all times were referenced, respecting the authorship.

The next step was the production of educational content in electronic media, in which the content of each lesson was properly prepared to be worked into regular classes. After being with the educational content ready and selected media was held at the Storyboard class.

Storyboard is nothing more than a script of information elements to be reported, ie, it is a roadmap of the learning object, in which the scenes that compose it are simulated in the form of drawings, including interactive elements for websites and getting a logical which aids in the visualization of the final product therefore allows a better planning minimizes the occurrence of errors and production time.¹²

In this sense, the Storyboard allowed to list the content that would be shown in every moment and create links that would enable navigation between them, through ICT in the preparation of the final product. Subsequently, Storyboards were sent via email to the Common Core Team of the Department of Distance Education (DLS) FURG, aiming to provide a global view and allow obtain a clear idea of structure and design for proper application education.

Therefore, it is emphasized that the Common Core Team is part of the Digital Living Network Project: (re) signifying modes of teaching and learning in FURG. This project was approved in the announcement of 15 CAPES "Promoting the use of Information and Communication Technologies in Undergraduate Courses." The core policy constitutes a team of 19 professionals in the fields of distributed video management, production material, linguistic review, designer and layout, materials repository, physical and financial management, network / server, and scholarships. Thus, this team was extremely important for the development of research, since assisted in the preparation of various materials, as well as served as support for the structural development.

Thus, in the Common Core, the first sector that received the Storyboards was the review that evaluated the linguistic materials, making contributions and grammatical adjustments, and subsequently returning them to researchers for approval of changes. Considering approved, these were again sent for review linguistics who performed a final check and forwarded to the design team to

layout and inclusion of animations in educational content. Only after these steps is that the material produced was available in Moodle.

• Implementation phase

The second point relates to the implementation of ICT in the discipline of nursing care in the Health of Children and Adolescents I, the classroom course in Nursing. It is believed that the development of classes in new format this is an innovation for teaching practice at School of Nursing, seeking to expand the interactive processes between teachers and students, encouraging creativity and facilitate learning. Thus, on the first day of class teachers of the discipline is presented, requested that all academics are also present and after, exposed the plan every six months, now stressing the news about the development of the project "Use of Information Technologies and Communication in face nursing "as a study" pilot "for the School of Nursing.

On the second day of class, which took place on March 16, 2011, and the presence of teachers was the participation of the academic master's student who explained the objectives and methodology of the study and performed the invitation and collaboration for the study. After acceptance, they signed a consent form in duplicate.

On the same day was held presentation of the virtual environment by viewing the layout of your homepage with the logo of the discipline developed for the design, introduction to the environment with the desire to welcome and empower those with demo walkthrough for the use of educational content the AVA, making it possible to begin the development of the project. Was also prepared and delivered to the academic one folder with script instructions for use of the Moodle platform and performed the registration of all participants to allow access. It is noteworthy that throughout the execution of the study, the researchers provided support to academics about the virtual environment, as it is the training of the participants and in no time they could be harmed.

The third period occurred on March 23, 2011, in which the theme was worked Immediate Care and mediate the RN through use of various media formats available in AVA, namely the virtual forum, logbook, manuals Ministry of Health and materials developed by the researchers. On that day, there were some difficulties in relation to access to the platform by the academics.

Already the fourth period, took place on March 25, 2011 and the topic was approached Physical Examination RN. To introduce the lesson was watched a video about Reflex RN available in AVA, followed by the presentation of content in Power-Point format developed by the researchers and teachers. There was also made available to the Child Health Handbook of the Ministry of Health, auscultation heartbeat of a newborn that allowed the approach of theory and practice and finally, an exercise self-correctible that academics place in time extra-school. It should be noted that during this lesson there was again some problems related to access Moodle and power outages causing disruption of class to continue on March 29, 2011.

It is noteworthy that the fifth class held on March 30, 2011 involving the third and final content, Breastfeeding, went so quiet and academics showed great interest in participating. It was also started the lesson by viewing an introductory video of the Brazilian Society of Pediatrics on Breastfeeding, followed by exposure of the content by teachers and master through continuous interaction. In AVA, was also provided supplementary materials taken from the website of the Ministry of Health and papers showing recent and reliable data, in addition to encouraging scientific initiation.

To complete this step, we completed the last class on the 1st April 2011 with continued breastfeeding content. After completion of the mediation of content by graduate student and faculty discipline was watched a video about the correct grasp of the breast and later, all the students were sent to the Computer Lab to conduct an exercise Word Search and participation of the other activities available in AVA .

● **Phase of data collection**

The third and final point addressed is a collection of data in order to analyze how ICTs affect teaching through virtual forums and logbooks in the virtual environment.

Given this situation, it is emphasized that the AVA, interactivity is the communication mode highlighted, in which the teacher happens to be collaborative learning process, enhancing and enabling dialogue. Therefore, each subject involved in the process have the opportunity to express their opinions, exchange information and build their knowledge taking into account the collective learning. However, it is visualized that the growth and construction of knowledge depend on each, to be open to changes and especially the desire and interest in learning.

In this context, there were three virtual forums during the application of educational media in teaching. It is noted that the forum is a virtual space online group discussion happening asynchronously, in which the holdings in text and images are available in this space, hoping that someone in the class to be positioned about. At the forum, the teacher introduces text and provocations along with the students build bridges dynamic discussions on topics of learning.¹³

To participate in the forums, the academic selects a theme and put your comments and may also start a discussion and propose a new theme. Thus allows the issuance of opinion, arguments and answer questions. All entries are available in the forum links on the screen, so the learner can act on any one, without necessarily follow a sequence of messages posted in accordance with the thematic units of the course. Already the logbook began soon after the first application of educational content in media and continued until the last moment, allowing the academic to express, individually and reserved, his feelings, positions and comments, as this environment only teachers and graduate student had access.

The evaluation process conducted by collecting data led to the perceptions of (the) academic on the work done with the implementation of ICT, the strangeness they experienced any difficulties or facilities that have faced as well, which of media that most and least liked, justifying their answers. It is worth noting that the construction of instruments for data collection was part of the process of creating the AVA and comprised open questions in order to reach the objective. Thus, it is clear that the Information Society that produces and consumes information in real time depends on access and ICT, being necessary to the Higher Education Institutions revise their methodologies and provide subsidy for such development.¹⁴ Thus, the nurse will get more opportunities through new media and can contribute significantly to health.¹⁵

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FINAL REMARKS

The use of AVA with implementation of various information and communication technologies in the educational process in the nursing program, specifically in the discipline

of nursing care in the Health of Children and Adolescents I showed up as a proposed methodological approach feasible and profitable for everyone involved in the process of teaching and learning.

Thus it is clear through the study, the construction of educational content using ICT and AVA requires time and knowledge of (the) teachers and by the structure of higher education institutions so that the result is effective.

The moments of encounter between teachers and students belonging to the implementation phase of the project entitled "Use of Information Technologies and Communication in classroom teaching in Nursing", demonstrated unquestionable relevance to allow interaction and building collective knowledge essential to the quality of the educational process aimed in this study.

Given the above, it was evidenced by the information collected on online forums and logbooks that the use of ICT promotes academic performance, facilitates communication, improves interactivity, as well as encourages curiosity and reflection academic and makes teaching more attractive and dynamic. However, it is necessary to point out some difficulties encountered during the methodological approach, and they lack the time extra-school, the difficulty in accessing the AVA and the small number of computers in academic space-constrained schedules for their use.

Given this context, the study showed the entire path of building educational content through the use of ICT in a VLE, emphasizing at all times the quality and reliability of educational materials as well as the impact of such use in the academic community.

Finally, we see the importance of the University to incorporate these technologies into their teaching process and provide structure to allow its proper functioning. Besides having on its staff, teachers with ICT domain that they can exploit the potential of these technologies and enable the training of professionals prepared to meet the needs of the Information Society.

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