

The use of ICTs for the training of health professionals

Solange Cervinho Bicalho Godoy

Specialist; Federal University of Minas Gerais, Department of Basic Nursing of the School of Nursing.

Contact: solangecgodoy@gmail.com; Alfredo Balena; 190; Santa Efigênia; Belo Horizonte; Minas Gerais; Brazil.

Lia Raquel Moreira Oliveira

Phd and Aggregation; Institut of Education (IE) - University of Minho; Department of Curricular Studies and Educational Technology; Campus de Gualtar; Braga; Portugal.

Eliane Marina Palhares Guimarães

Federal University of Minas Gerais, Department of Applied Nursing, School of Nursing, Belo Horizonte, Minas Gerais, Brazil.

Date of Receipt: March 07, 2019 | Approval date: May 03, 2019

Abstract

Introduction: The accumulated experience with the incorporation of ICTs present a high resolubility. Objective: This study aimed to report the experience with the training process for health professionals mediated by ICTs in Portugal and Brazil. Method: He carried out the implementation of a training for the nurses inserted in the Hospital of Braga / Braga / Portugal with the participation of professors of the Federal University of Minas Gerais / Brazil, using the ICTs. Results: The evaluation of experience and analysis of the reference framework allowed us to understand that distance education (DLE) presents itself as a possibility for the democratization of knowledge for health professionals, serving as a strategy that assists in decision-making in the day-to-day health care. ICT is an important tool in the process of work and permanent education, making it a learning-work possibility that happens in the daily lives of people and organizations. Conclusion: The process of training health professionals should be based on the problems of praxis, considering the knowledge and experiences that people bring in their professional experience.

Keywords: ICTs; Permanent Education; DLE.

Resumen

El uso de las TIC para la capacitación de los profesionales de la salud.

Introducción: La experiencia acumulada con la incorporación de TICs en la salud presentan una elevada resolución. Objetivo: Este estudio tuvo como objetivo informar de la experiencia con el proceso de formación de los profesionales de la salud mediados por las TICs en Portugal y Brasil. Metodo: Hecha la implementación de un entrenamiento para enfermeras insertados en el Hospital de Braga/Braga/Portugal, con la participación de profesores de la Universidad Federal de Minas Gerais/Brasil, utilizando las TICs. Resultados: La evaluación de la experiencia y análisis del referencial permitió comprender que la educación a distancia (EAD) se presenta como una posibilidad de democratización del saber para los profesionales de salud, sirviendo como una estrategia que auxilia en la toma de decisiones en el día a día de la prestación de la atención asistencia sanitaria. Las TICs son una herramienta importante en el proceso de trabajo y educación permanente, haciendo una posibilidad de aprendizaje-trabajo, que ocurre en el cotidiano de las personas y organizaciones. Conclusión: El proceso de formación de los profesionales de la salud debe ser elaborado a partir de los problemas de la praxis, considerando los conocimientos y las experiencias que las personas traen en su vivencia profesional.

Palabras-clave: TICs; Educación Permanente; EAD.

Resumo

O uso das TICs para a capacitação dos profissionais da saúde.

Introdução: A experiência acumulada com a incorporação de TICs na saúde apresenta uma alta resolubilidade. Objetivo: Este estudo objetivou relatar a experiência com o processo de formação para profissionais da saúde mediada pela TICs em Portugal e no Brasil. Método: Foi realizada a implantação de uma formação para os enfermeiros inseridos no Hospital de Braga/Braga/Portugal com a participação de docentes da Universidade Federal de Minas Gerais/ Brasil, utilizando as TICs. Resultados: A avaliação da experiência e análise do referencial permitiu compreender que educação a distância (EAD) apresenta-se como uma possibilidade de democratização do saber para os profissionais de saúde, servindo como uma estratégia que auxilia na tomada de decisões no dia a dia da prestação da assistência a saúde. A TICs é uma ferramenta importante no processo de trabalho e educação permanente, tomando uma possibilidade de aprendizagem-trabalho, que acontece no cotidiano das pessoas e organizações. Conclusão: O processo de formação dos profissionais da saúde deve ser elaborado a partir dos problemas da práxis, considerando os conhecimentos e as experiências que as pessoas trazem na sua vivência profissional.

Palavras-chave: TICs; Educação Permanente; EAD.

Introduction

The accumulated experience with the incorporation of information and communication technologies (ICTs) in the Telenursing Project, since 2004, for the provision of health services, shows how much this resource presents a high res-olubility and low cost for the requalification and permanent education of the health workers. This initiative came about through the need to master new technical skills and constant transformations in the work process for the health workforce that works in Primary Health Care (PHC). It is understood that the use of technology enables articulation between training, management and care, and also allows for social participa-tion, which means integrated care, which favors effective communications regarding clinical events, risks, reference and counter-referral in real time among professionals involved in health care.

It is understood that the permanent education in health mediated by technology has been constituted as a process of significant training for the health workers in PHC, since the lack of resolution in this level of attention is evidenced when the population seeks alternatives considered accessible to solve their problems, looking for services that do not char-acterize the priority entrance to the health system, resulting, therefore, in a growing demand in the urgent and emergency services.

It is understood that the permanent education in health should be seen as teaching-learning practice and as a health education policy. It is an alternative that can allow a critical reflection on the work, collaborating for its transformation and reorganization of the work processes, through the problematization of experiences, which should be permeated by as-pects that go beyond technical skills and knowledge, through subjectivity and structured relationships among people in-volved in the health care process¹.

Specifically in nursing, permanent education in health through ICTs is a strategy that is being used in order to re-spond to the training needs defined by the scenario of the profession in Brazil. It is important to emphasize the compo-sition of the work force, which consists mostly of middle-level professionals, the geographical distribution of professionals, who usually concentrate in large centers, especially in the southeast and south regions, and the great diversity of ac-tions developed by professionals that involve less complexity activities to those of greater complexity and risk to the patient.

In this context, distance education (DLE) has been pre-sented as a methodological strategy for the access of nursing professionals to training opportunities. This education meth-odology allows simultaneous access of a large number of people, independent of time and location, and develops in an interactive environment of the World Wide Web, with the support of instructional resources.

Given this scenario in Brazil, the use of telehealth is un-derstood as the use of technology in health care processes becoming significant, since it covers the provision of health services, in addition to providing information, through per-manent education, to the professionals who need it in the daily performance of their activities in the basic service units.

The Telenursing Project aims to train nurses and nursing workers enrolled in basic health units (BHU), being devel-oped by the School of Nursing of the Federal University of Minas Gerais (EEUFMG) in partnership with the Municipal Health Secretariat of Belo Horizonte and other units of the UFMG (Hospital das Clínicas, Faculty of Medicine and Fac-ulty of Dentistry). The Project began in 2004 and in 2008 it became part of the Nucleus of Telehealth of Minas Gerais (NuTel MG) of UFMG, belonging to the National Telehealth Program (NTP), promoted by the Ministry of Health (MH), of which approximately 100 municipalities participate in the State of Minas Gerais registered by the program.

A study carried out with the objective of evaluating per-manent distance education for the nursing staff of the Basic Health Units, with 17 nurses working in the BHUs of the municipalities registered by the National Program of Tele-health from August to December 2011, identified that the tools used by the Telenursing project constitute an import-ant support for health professionals, making it possible to approach the university and share the doubts regarding clinical cases that present themselves in daily practice. It is understood that both videoconferencing and teleconsulting have a positive impact on the qualification and resolution of access to good information in primary care, when attending to the needs of professionals in their daily work².

Another study sought to understand the relationship be-tween the tools used by the Telenursing Project, considering the thematic areas of the 512 teleconsultories carried out in the period from January 2008 to December 2012 with the subjects listed by professionals from the BHUs of the munic-ipalities registered by the National Program of Telehealth for conducting videoconferences. One can observe the interest in the use of the technologies, demonstrated by the pro-fessionals of the BHUs of the municipalities enrolled by the National Program of Telehealth, as well as its incorporation in the work process. Teleconsulting and videoconferencing are recognized as key resources for professional training by bringing together BHUs and academy through immediate, remote access and real-time discussions³.

The Telenursing Project expands the knowledge in the health area, making available the technology access to the health team, where and when necessary, helping in the res-olution of health problems for different areas of scope and realities.

In view of these considerations, we sought to know the Health System of Portugal and to develop training activities

mediated by the ICTs for the nurses of the Hospital of Braga, constituting a partnership with UMinho/ Braga / Portugal and UFMG/Brazil. It is understood that assistance support through a network of communication and information between institutions and professionals makes it possible to reach a large number of people dealing with various health sciences matters, with discussions and clarifications of doubts, which allows the professional to confront the challenges of the globalized world, where access to information is increasingly democratized.

Method

This descriptive study analyzes and evaluates the distance training sessions, with international videoconferences for nurses working at the Hospital de Braga with the participation of UFMG professors. It employed a network interconnection created for the National Telehealth Program in support of a communication and information technology to make the videoconferences.

In this proposal it created a partnership with the Hospital de Braga, the Institute of Education and the Nursing School of UMinho University and the UFMG School of Nursing. The Telenursing project of EEUFMG acted in coordination and organization, building a line of work based on the thematic discussions proposed by professionals. The videoconferences of telenursing were previously scheduled and disseminated in all places where the actors of the proposal are inserted. The topics covered were selected by the community itself from doubts of daily practice. During presentations, the doubts were answered live by the speaker in an absolutely interactive process. For the opening of the videoconferences, presentations were made on the perspectives of the permanent education in health in nursing in the National Telehealth Program. After each presentation on alternate days, two videoconferences were held, the first one addressed the “Telemonitoring of serious patients” and the second, “Conflict in health organizations”, in order to meet the initial nursing demand of the Hospital de Braga raised by the Department of Formation of the Nursing Care Area of the referred hospital. Before each videoconference the reading and acceptance of the free informed consent form was made for the lecturers, in order to authorize the availability of the class material and the videoconferences recorded, which will be later placed in the repository of the Hospital de Braga, in the Digital Library, which the nursing team has access with the login and password itself.

After the videoconferences, the project carried out with the participants an evaluation that included objectives, contents, audiovisual resources, technical support, impact on the training and evaluation of the speaker, as well as a survey of topics to be treated by videoconference according to a schedule to be defined.

The collected data were organized and subsidized the elaboration of a report contemplating the evaluations registered in the form completed by the participants in the videoconferences. In this opportunity will be made the survey of themes and a proposal of a schedule with the support of the Nursing Schools, UMinho and UFMG.

To analyze the data collection, a qualitative analysis was carried out with the nuclei: distance education and a strategy of permanent education in health. With the nuclei built the following categories were formed, permanent education, technology and health professionals, selecting them from reading and writing. After the exhaustive reading on the theme, the thematic nucleus Distance education: a strategy of permanent education was built.

Results and Discussion

Distance education: a strategy of permanent education

DLE emerged as a means of meeting the need of those who were unable to enter formal education. This new modality of teaching addressed the learning without attributing to the need of the physical presence of the students in the schools. He used other communication vehicles, such as mail, radio, telephone, followed by television. In this way, the characteristics of DLE, in its beginnings, both in the format and in the language, showed that it was directed to a less favored population and presented many fragilities⁴.

In the area of health, the DLE has been consolidating with innovative experiences in the health area, which adds in its pedagogical process a problematizing methodology with a multiprofessional participation for adults inserted in the world of work. The focus is on the training of these subjects, returning to the health needs of the population.

The DLE comes with the purpose of reaching other teaching and learning methods, preserving the ability to think, reflect, and discuss. The distance modality enables a space of formation that allows greater democratization of information and knowledge. In this way, DLE has broken the barriers of time and space, which according to Decree No. 2,494, dated February 10, 19985, of Brazilian educational legislation, defines it as a form of education that enables self-learning, mediated by didactic resources systematically organized, presented in different media of information, used alone or combined, and transmitted by the various means of communication. Thus, DLE can be seen as a perspective, which emphasizes the construction of knowledge, mediated by network technology⁵.

One of the strategies for the development of PES is DLE, which has proven to be an effective strategy for education, especially for adults in the labor market. The number of courses in this modality has grown, spread throughout

the world using the internet or similar network systems as teaching and learning methods.

The DLE is a facilitator for PES, considering the accelerated growth of knowledge and its diffusion, breaking the barriers of distance and time. With the implementation of the National Policy of Permanent Education in Health, through the GM/MS Ordinance n° 1986, it presents a proposal for strategic action that integrates practices to the daily in a methodological, reflexive and scientific way. The PES has as principle that the content to be studied must be generated from doubts and knowledge needs emerged in situations experienced by the workers themselves. It intends to promote changes in the training and development of health professionals and to undertake articulated work between management spheres, health services, educational institutions⁶.

Attention should be paid to the differences between Continuing Education practices and PES, where CE works uniprofessional and PES works multiprofessional. Regarding the insertion in the labor market, the CE seeks an autonomous practice and PES is an institutionalized practice. CE focuses on specialty issues and PES health problems. The main objective of the CE is the technical-scientific update and the PES is the transformation of technical and social practices. The periodicity of CE is sporadic and PES is continuous. As for the methodology, CE is based on pedagogy of transmission through lectures, conferences, speeches in different places of work environments, and PES is based on pedagogy focused on problem solving, usually through dialogue supervision, workshops; performed in the same work environments. The results that the CE hopes to achieve reach the appropriation of individual practices and, the PES seeks institutional change, the active appropriation of scientific knowledge and the strengthening of team actions⁷.

In this context, DEL is a facilitating medium for PES, due to the accelerated growth of knowledge and its dissemination, which can break the barriers of distance and time. Thus, in the area of health, the National Telehealth Program expanded the process of interaction between academy - health services and the computing resources, considering the personal diversities and the exchange of experiences.

The Telenursing Project, part of the National Telehealth Program, aims to use technologies for continuous and professional training. Teleconsulting and web conferencing are carried out, with the teleconsulting constituting a dialogue between professionals and academy, as a source of information for decision-making⁸.

This training policy in Brazil with the NTP, which was established by the Ministry of Health/Brazil, aims to strengthen the Unified Health System (UHS), guaranteeing access to continuing education with Distance Learning Education (DLE) and contributing to the health professionals of the FHP (Family Health Program) face the difficulties of daily work with the support of new information and communication technologies.

In the study carried out with the nurses of the Hospital of Braga on the evaluation of the experience in participating in the project Telenursing of UFMG in partnership with the Nursing Schools of UMinho and UFMG, through videoconferences it can be observed that 90% did not present any experience with this methodology of education and that 88% were interested in participating in the opening of DLE courses for professional updating, such as teamwork; importance of telehealth in improving nursing care; discussions of clinical cases in nursing care area in orthopedics; professional ethics and how to develop strategies for resolving conflicts. This study aimed to contribute to the use of DLE in the health area, as a possibility to improve knowledge and skills for nurses working in health services.

Thus, DLE contributes to the reflection on learning to learn, from the exchange of experiences among professionals that enables the transformations in the practice of care to the user in health services. Being a PES strategy, it presents itself as a possibility for the democratization of nurses' knowledge and do, helping to update the advances promoted in the health area, generating continuous processes of access to knowledge and filling gaps between professional knowledge and practice. Through the PES process, nurses have the possibility to look at their own work practice, expand the capacity for analysis and make allies in the construction of a social and health project that meets the precepts of the Unified Health System implemented in Brazil. A qualified nursing is of vital importance for the formation of a critical, reflective and citizen professional, capable of acting in social transformation, committed, dialogically, with care, with a view to guaranteeing the quality of care.

Final considerations

The common use of innovative technology platforms have increasingly played an important role in the dissemination of public health measures to a large public, showing how investment in mobile health is a way to improve the health of the general population quickly and efficient. It can be concluded that ICT in health education is a significant strategy for nursing training, as it provides the opportunity to access distance updating initiatives. It is understood that the use of distance technologies in the health area is a driving force and structuring in the adoption of innovative models in the activities developed by the different actors of the health team and also in the management of the processes related to the use and provision of the service.

References

1. Ceccim RB, Feuerwerker LCM. O quadrilátero da formação para a área da saúde: ensino,

- gestão,atenção e controle social. *PHYSIS: Rev Saúde Coletiva*. 2004;14(1):41-65.
2. Godoy SCB, Guimarães EMP, & Assis DSS. Capacitação profissional: a opção pela Telenfermagem. *Rev Docência do Ensino Superior*. 2013;3;62-9.
 3. Guimarães EMP, Godoy SCB, Villela LC, Maia C, Assis DSS. A Teleconsultoria como orientação para a educação permanente em saúde: uma primeira aproximação. 17ºSempe: Seminário Nacional de Pesquisa em Enfermagem; 2013; Rio Grande do Norte. Natal: ABEn; 2013. 1222-4.
 4. Ortiz MCL, Ribeiro RP, GaranhaniML. Educação à distância: uma ferramenta permanente de enfermeiros que trabalham com assistência perioperatória. *Cogitare*. 2008;13(4),558-65.
 5. Brasil. Ministério da Educação e Cultura. Decreto n. 2.494, de 10 de fevereiro de 1998. Dispõe sobre a Educação a Distância como forma de ensino que possibilita a auto-aprendizagem. *Diário Oficial da União, Brasília, DF*. 11 Fev. 1998.
 6. Brasil. Ministério da Saúde. Gabinete do Ministro. Portaria nº 198/GM/MS de 13 de fevereiro de 2004. Institui a Política Nacional de Educação Permanente em Saúde como estratégia do Sistema Único de Saúde para formação e do desenvolvimento de trabalhadores para o setor e dá outras providências. *Brasília*. 2004;141(32):37-41.
 7. Almeida MJ. Educação permanente em saúde: um compromisso inadiável. *Olho Mágico, Londrina*. 1999;5(n. spe):41-2.
 8. Godoy SCB, Guimarães EMP, Assis DSS. Avaliação da capacitação dos enfermeiros em unidades básicas de saúde por meio da telenfermagem. *Esc Anna Nery*. 2014 Mar;18(1):148-55.

Indication of responsibility: All authors participated in all phases of the article.

Financing: Own incentive.

Conflict of interest: The authors declare that there is no conflict of interest.

How to cite this article: Godoy SCB, Oliveira LRM, Guimarães EMP. The use of ICTs for the training of health professionals. *Latin Am J telehealth, Belo Horizonte*, 2018; 6 (1): 016 - 020. ISSN: 2175_2990.