

## Health professionals' education: the experience of the School for the improvement of the Unified Health System in the Federal District of Brazil

Wania Maria do Espírito Santo Carvalho (<https://orcid.org/0000-0002-5509-7669>)<sup>1</sup>

Maria Dilma Alves Teodoro (<https://orcid.org/0000-0002-4183-5982>)<sup>2</sup>

**Abstract** *This paper describes the experience of the School for the Improvement of the Unified Health System in the Federal District of Brazil (EAPSUS, acronym in Portuguese), which, together with the Superior School of Health Sciences and Technical School of Health of Brasília, is maintained by the Health Sciences Teaching and Research Foundation (FEPECS, acronym in Portuguese). This group of schools works jointly to provide health education in the Federal District. EAPSUS is responsible for the education of staff at the Department of Health of the Federal District of Brazil, using Pedagogy of Problematization as its theoretical frame of reference. It seeks to tailor teaching and learning to the needs of health services, building health professionals' capacity to examine practice reflectively and construct alternative actions. EAPSUS adopts a unique approach as a government school, developing contextualized educational actions. Education is a key component of an ambitious design that aligns concepts, guiding principles, and instruments with the strategic planning of the centers and the Federal District Health Plan. FEPECS conforms to the logic of a public health school, given that it provides higher education, professional education, and promotes the professional development of SUS staff and administrators in the Federal District.*

**Key words** *Permanent education, Public health*

---

<sup>1</sup> Fundação de Ensino e Pesquisa em Ciências da Saúde, Secretaria de Saúde do Distrito Federal. SMHN Quadra 03/Conjunto A/ Bloco 1, Asa Norte. 70710-907 Brasília DF Brasil. [waniaescarvalho@gmail.com](mailto:waniaescarvalho@gmail.com)

<sup>2</sup> Fundação de Ensino e Pesquisa em Ciências da Saúde. Brasília DF Brasil.

## Introduction

The debate surrounding permanent health education (PHE) emerged in the 1970s within the Pan American Health Organization's (PAHO) Human Resources Development Program. According to a PAHO report, the majority of countries in the Americas would need to make sweeping changes to their health systems in order to achieve health for all by the year 2000. To this end, the report proposed that health professionals' training should be the responsibility of health systems and pointed to PHE as one of the pathways for promoting professional development, improving working practices, and strengthening local healthcare services<sup>1,2</sup>.

In Brazil, the creation of the Unified Health System (*Sistema Único de Saúde* - SUS) and Article 200 of the Constitution - which provides that "It is incumbent upon the unified health system, in addition to other duties, as set forth by the law: to organize the training of personnel in the area of health"<sup>3</sup> - laid the ground for the development of policy in the area of health professionals' training. In 2004, in furtherance of its constitutional duties, the Ministry of Health issued Ministerial Order 198/GM/MS, creating the National Policy for Permanent Health Education (*Política Nacional de Educação Permanente em Saúde* - PNEPS)<sup>4</sup>.

The institutionalization of the PNEPS within the SUS has stimulated reflection on health education where the central focus has been the discussion regarding the duality between two notions: PHE as a pedagogical proposal capable of changing health practices; and continuing education (CE), which emphasizes the transmission of knowledge and has limited capacity to promote the necessary changes<sup>5,6</sup>. The alleged precedence of permanent education over CE is by no means a consensus in the academic literature and is by no means evident in educational practices in the area of health<sup>7-9</sup>.

Some authors understand that PE can include CE<sup>10</sup>, while others suggest that CE is more far-reaching<sup>11</sup> or that the two concepts are synonymous, as in adult education<sup>12</sup>. As a result, both notions may be used in a manner that is not necessarily consistent with the concept proposed by the PNEPS.

The aim of this text is not to discuss the concepts of permanent education and continuing education or nomenclature. Rather, in light of these concepts and in alignment with the proposal of the PNEPS, it presents how the School for the Improvement of the Unified Health Sys-

tem (*Escola de Aperfeiçoamento do Sistema Único de Saúde* - EAPSUS) has operated its educational actions from the perspective of a pedagogical plan oriented towards the everyday practice of health professionals, as opposed to formal education in the area of health.

Created by Decree 34.593 issued on August 22, 2013, EAPSUS is one of a group schools maintained by the Health Sciences Teaching and Research Foundation (*Fundação de Ensino e Pesquisa em Ciências da Saúde* - FEPECS). Created on January 15, 2001 by Law 2.676, which came into force on January 12, 2001, FEPECS is a public nonprofit scientific, technological, and educational foundation attached to the Department of Health of the Federal District of Brazil (SES/DF) and run in accordance with the principles laid out in Law 9.394 (December 20, 1996). As well as EAPSUS, the foundation maintains the Superior School of Health Sciences (*Escola Superior de Ciências da Saúde* - ESCS) and Technical School of Health of Brasília (*Escola Técnica de Saúde de Brasília* - ETESB).

Health training responsibilities are well defined within FEPECS. The ETESB is responsible for technical professional training, provided via technical and post-technical courses, while the ESCS provides academic training, offering degrees in medicine and nursing, specialist training courses, and academic and professional master's programs, as well as medical and multiprofessional residencies. EAPSUS on the other hand provides professional development and refresher courses for staff at the SES/DF and partner institutions in the Government of the Federal District. Given the complementary nature of their educational activities and missions, close coordination of actions between the schools, and alignment of their pedagogical plans with the guiding principles of the PNEPS, these educational institutions are uniquely positioned to provide health training in the Federal District.

With respect to *cursos livres* (literally "free courses" or courses not recognized by the Ministry of Education) - refresher, extension, and professional development courses, commonly called permanent or continuing education - all those who work in the health sector recognize that there is excessive demand for educational actions to address situations and problems whose causes are often not knowledge-related. As a rule, these actions, uncritically called training, bear a reductionist view of education and the teaching-learning process. The prevailing view of health administrators is that the limited effective-

ness of health actions is due to lack of professional competence<sup>13</sup>. Accordingly, every program of action generates demands for training, which is often limited to the imposition of requirements on professionals. Through this lens, the supposed lack of professional capacity can be corrected by the endless provision of courses, which consume all manner of resources and ultimately fail to meet expectations in terms of professional practice and quality of service delivery.

It can be said that the incapacity of the majority of these educational proposals to promote change lies fundamentally in the decontextualized manner in which they are developed and, more particularly, in how, pedagogically speaking, they are organized and implemented. While on the one hand we recognize the legitimate demands of the health sector when it comes to educational actions, determined by the emergence of new theoretical and methodological contributions and by the need to reorganize services, update protocols, and implement programs of action, we also defend that the responses to these demands should have a sound pedagogical approach and be tailored to individual needs by offering a range of educational activities. At the beginning of the 2000s, Libânio<sup>14</sup> highlighted that one of the most significant phenomena in contemporary social processes was the expansion of the concept of education and diversification of pedagogical action. And this assertion is still relevant today.

Professional education in the context of the SES/DF is a complex field in so far as it requires quality up to date themes and content coupled with innovative methodological approaches tailored to the diverse characteristics of professionals staff, including: the wide variety of qualifications in various areas of health; diverse cultural, geographic, and academic backgrounds; and lack of time for training.

In addition, education takes place in a context of institutional and social pluralism – one of the hallmarks of modern societies – where structural changes, particularly those witnessed in recent years, pose a number of challenges for the health sector. These challenges manifest themselves through the emergence of new tasks and the incorporation of new technology tools that demand the constant (re)organization of work processes. Working in this setting of continuous change requires cognitive effort and a wide range of competencies, such as autonomy, adaptability, cooperation, negotiating capacity, leadership, and communication, developed both in educa-

tional processes aimed at SES staff and within the school's team itself.

In this respect, the first challenge faced by EAPSUS was to develop initiatives that involved technical staff in teaching-learning and knowledge and experience sharing processes and others aimed at pedagogical reflection and providing refresher training courses for facilitators, instructors, and collaborators. It was also important to encourage staff to reflect, harness their potential, and develop new competencies to work collectively towards developing workable solutions to identified problems in order to ensure the quality of teaching-learning processes.

With regard to the SES, we believe that proposed changes in the area of education require relentless negotiation with technical areas at every demand and should be jointly implemented on a gradual basis.

#### **EAPSUS's proposal: guiding principles, methods, and key lines of action**

Working in healthcare has its specificities because it is a reflective process in which decision-making incorporates the articulation of different types of knowledge from scientific, instrumental, and technological bases mediated by ethical and political dimensions. It (increasingly) demands commitment and proactivity from professionals who must be able to couple personal experiences with up-to-date knowledge and information and have the flexibility, willingness, and creativity necessary to make changes and overcome the daily challenges faced by health services. As in other fields, complexity, heterogeneity, and conceptual and technical fragmentation are features of the health work process and pose a daily challenge to health workers.

In more general terms, it falls on education – whether permanent or continuing – to address the issues that arise in this context, posing the following challenge for the school: to construct educational processes that are capable of updating knowledge and promoting reflection, given that, more than “learning to do”, it is necessary to build the capacity to implement change.

To this end, it is also necessary to implement change in educational processes. This requires education focused on the quality and relevance of professional practice to ensure the provision of the highest quality of care. To achieve this, it is necessary to forge health professionals capable of restoring one of the essential dimensions of healthcare: the relationship between human beings<sup>15</sup>.

To promote a rupture with the traditional model of teaching and learning, EAPSUS draws on Pedagogy of Problematization as its theoretical frame of reference. Pedagogy of Problematization proposes that health professionals acquire knowledge from their own reality and thus promotes joint reflection and experience sharing. “Problematizing education” opens up the possibility of building knowledge from significant experiences. Contents are therefore offered in the form of problems, whose relationships must be discovered and constructed through the teaching-learning process. Drawing on meaningful learning<sup>16</sup>, content is related to prior knowledge, enabling professionals to assign their own meaning. In this way, professionals are able to actively interact with systematized content as the main actor in the knowledge construction process. This pedagogical process develops the momentum for broader change, promoting participatory management and ensuring that health professionals play a more central role in the provision of quality healthcare.

Paulo Freire is widely regarded as the leading figure in Pedagogy of Problematization. According to Freire<sup>17</sup>, study problems should be contextualized in a real scenario, identified with all its contradictions and instabilities. In Freirean thinking, education is not conceived as merely “depositing” content in subjects void of knowledge – which Freire calls the “banking” concept of education –, but rather understood as the problematization of man and his relationship with the world<sup>18</sup>. Problematizing education is grounded in dialogic relationship and joint learning<sup>19</sup> and seeks to interpret reality, thus enabling emancipatory learning. Reading the world means understanding your own world, since, based on his reading of the world, man, open to the different knowable objects that surround him, is capable of transcending his perceptions and broadening his knowledge<sup>20</sup>.

From a pedagogical point of view, problematizing seeks to overcome the practices that limit information transfer. It challenges people to think from a global, but mainly local, perspective, encouraging them to gain a deeper insight into their own contexts, raise hypotheses, confront ideas, and arrive at their own judgments of facts and, therefore, solve problems.

With respect to the organization of the pedagogical process, it is necessary to ensure an alternate movement of *continuity and rupture* in relation to the professionals’ knowledge. To this end, the definition of content should be based

on an existing cognitive structure and what the professionals already know so that new content is related to prior experience – *continuity*. On the other hand, it is necessary to arouse new needs and challenges through critical analysis, enabling the professional to surpass prior experiences, stereotypes, and previously elaborated syntheses – *rupture*<sup>21</sup>. This whole process is guided by the action-reflection-action method (transformative *praxis*).

Problematization methodology is a manifestation of constructivism and defends that the higher purpose of education is to prepare subjects to become aware of their world and act intentionally to transform it. When it comes to healthcare, it is necessary to encourage health professionals to engage in a continuing learning process, where they are active, observant, capable of formulating questions and expressing opinions, and motivated by the perception of real problems and the capacity to solve them.

Besides knowledge acquisition, an educational action should enable professionals to develop core competencies such as the recognition and acknowledgement of the value of experience, creation of synergy between knowledge and the unique nature of each work situation, capacity to identify gaps in training and self-motivation to seek new training opportunities, and the pursuit of complementarity with the other and strengthening group work<sup>22</sup>.

With regard to interpersonal relationships, motivated by the encouragement and challenge provided by the methodology, professionals enhance their capacity to observe, analyze, and assess, mediated by exchanges and cooperation between group members. This process enables them to overcome conflicts, develop group learning, and create (or adapt) viable, culturally compatible technologies.

It is in this way that, in alignment with the methodological framework adopted by the PNEPS, the school aims to invert the logic of the teaching-learning process, incorporating teaching and learning into everyday practice so that professionals examine practice reflectively and construct alternative actions<sup>22</sup>.

One of the major challenges in effecting changes in the conception of the educational actions promoted by EAPSUS was understanding that, given the size of the SES/DF, which currently has approximately 33,700 staff, training demands are broad-ranging, complex, and diversified.

Given the size of this challenge, the school defined some points to help put the theoretical

(and methodological) principles that underpin its pedagogical plan into practice:

1. Courses are organized by health region and provided for a maximum of 30 participants from specific services or groups of services. This approach aims to avoid courses with only limited staff coverage (which is a common practice internalized within the SES) where only two representatives of each region or service are invited (or summoned) individually to take the course. Despite the quality of these courses and performance of the participants, they have limited ability to transform the reality of individual services.

2. Teaching materials and methods are organized into a sequence of activities comprising of moments of concentration in the classroom and group and individual tasks. The latter include observation of a reality, problem identification, gathering of relevant data and epidemiological information and, especially, tasks that capture professionals' perceptions of the problem or context. As part of the process, the courses include classroom learning activities in at least one of their stages. The moments spent in the classroom aim to analyze practice and propose (and develop) new actions. These moments are also crucial for planning institutional mediation tasks to create or extinguish organizational contexts that favor or hinder specific practices.

3. As a final product, participants are required to propose intervention projects whose level of complexity is determined by the course load and area of knowledge addressed. The presentation of the intervention projects to regional and local administrators and the rest of the staff at the service/group of services enhances project potential and can trigger change and promote the incorporation of new knowledge and technologies into services.

When developing educational actions, discussions with the technical areas that have requested training are centered around reflection on essential aspects in response the following question: *what problem needs to be addressed and in what way does the solution undergo a pedagogical intervention?* Responding this question helps to construct the core elements of the courses and define the content necessary to achieve the objectives, which should be meticulously described and discussed. The meetings with the different technical areas of the SES are productive and constitute an educational process themselves, in so far as they provide a new way of looking at the services. More often than not, this stage of joint construction produces unexpected results, rang-

ing from unrestricted adherence to the pedagogical plan to its total rejection. This is frequently motivated by operational issues, time limits, lack of belief and awareness, or even the conclusion that solving the identified problem does not fall with pedagogical action.

Specific curricula are developing in workshops conducted with staff from the technical areas that have requested training. This process entails carrying out the almost "artisanal" task of constructing a sequence of activities involving different stages shaped around a real problem. These activities use a suite of techniques, procedures, or activities intentionally selected and organized according to the nature of the problem and the context in which it manifests itself. The organization of this sequence of activities is inspired by the Arch Method, developed by Charles Magueréz. Adopting the approach proposed by Bordenave and Pereira<sup>23</sup>, this process comprises five stages: 1) Observation of the reality; 2) Identification of key points (causes and effects related to the observed reality); 3) Theorization, 4) Solution hypotheses; and 5) Application to the observed reality. During the discussion of solution hypotheses, after having observed the problem and understood its nature, professionals propose adequate and viable solutions. Problematization uses various teaching techniques, including oral presentation and learning operational routines, small group work, case and protocol discussions, readings, and audiovisual materials. Different sets of teaching techniques tailored to meet specific objectives are used<sup>24</sup>. Teaching aids and material are tested and validated with the first class via process or development-based formative evaluation conducted throughout the teaching-learning process<sup>25</sup>. These evaluations help the professionals along the way to achieving the desired objectives while at the same time assessing the quality of the material and relevance of the chosen teaching techniques.

In addition to the variety of training courses it offers, EAPSUS has worked to decentralize educational actions, building partnerships and encouraging interventions in coordination with other organizations by using mechanisms designed to help the organization meet its intended objectives, which deserve special attention in teaching and learning contexts.

The project *O Trabalho com Grupos no Contexto Pedagógico* (Working with Groups in Pedagogical Contexts), which aims to develop the competencies of the professionals working with education in the SES/DF, is an educational action

that should enable the SES to make a tough decision in the medium-term: the interruption of the purchase of educational services and hiring of educational institutions to program and provide course packages, as well as the interruption of piecemeal and fragmented training.

Within the context of education policy, it is possible that the SES itself will become capable of identifying and defining its needs and priorities for developing the professional competencies of its staff. In this respect, given that the centralization of educational actions and pedagogical capacity is not one of the aims of the school, it is intended to decentralize and disseminate pedagogical capacity within the SES.

To this end, the school is focusing on educational actions aimed at strengthening the capacity of health regions to respond to specific education needs, targeting Permanent Health Education Center staff.

#### **Permanent Health Education Centers**

In 1996, work education centers (WECs) were created in each of the administrative centers of the SES/DF, enabling the decentralization of responsibility for the planning and implementation of actions aimed at human resource development. In 1999, the WECs began to act as capacity building hubs of the Family Health Program and Decree 28.011 (May 30, 2007) changed the name to Permanent Health Education Center (PHEC). As part of its functions, EAPSUS assumed responsibility for providing support to and the technical coordination of the CHECs. Given the urgent need for the development of technical capacity and institutional strengthening, a process of permanent education for PHEC staff was initiated in 2016. The point of departure for this process was the review of the Bylaws governing the PHEC and, in accordance with the functions set out in this document and based on the knowledge needs identified by the group, the project *Strengthening the Permanent Health Education Centers of the SES/DF* was created. The project comprises weekly eight-hour workshops with the teams where theoretical and practical content is organized into sequences of activities using teaching resources such as lectures and presentations, films, readings, and group discussions. For each specific demand made by the group to EAPSUS, an appropriate pedagogical strategy is identified and teachers and professionals are invited to conduct discussions on a voluntary basis. Individual and group tasks are also encouraged,

together with supervisory visits to health regions and intervention projects in accordance with the school's guiding principles.

The aim of strengthening technical capacities and promoting the exchange of experiences between the different centers is to decentralize educational actions. The centers are expected to be capable of working jointly to avoid fragmented and overlapping educational actions. An evaluation is conducted of all workshops. Apart from helping to guide activities in the right direction, the results of the evaluation process have shown that this educational action has the potential to promote change.

#### **Thematic Actions Aimed at Staff and Health Services**

The experiences gained with the PHECs led to an ambitious educational action called Thematic Actions Aimed at Staff and Health Services (TAASHS). Education actions undertaken through this initiative consist of periodic workshops designed to respond the needs of a specific group of professionals, focusing on administrators. At the first workshop the group defines the content and frequency and load of the action. The activities used during the meetings are designed to encourage the group to look at its own reality, identify problems, and propose solutions. The TAASHS team is made up of a coordinator, facilitator, and teachers and professionals with relevant experience invited to participate in specific activities.

This strategy helps to optimize the time of professionals, facilitating team meetings, given that the workshops are usually held at times scheduled for team meetings, and enhances the operational capacity of the school. In the period 2017/2018 over 10 simultaneous actions were undertaken via this initiative.

Other ideas for pedagogical interventions arise during the meetings held with the technical areas to receive and discuss demands. Cross-cutting themes of interest to different types of health workers and administrators may also be addressed through wider actions such as seminars, forums, workshops, and talks. The school has increased its focus on these types of actions, which are undertaken in partnership with other educational institutions in the field of health. The core element that guides these actions provides that they should be tailored to the reality of healthcare in the Federal District, present relevant available knowledge, information, and technology, and propose pathways for solving common problems.

EAPSUS also works in partnership with the Education Department of the Under secretariat for Personnel Management, providing pedagogical support for the actions developed by the department. It has also participated in committees, care networks, and specific programs designed to address broader health concerns. The opportunity to discuss and propose converging and complementary educational actions in these spaces has proved to be a powerful and promising experience.

In 2018, the school developed the quality label *Chega Mais* (come closer) in partnership with the area for adolescent health of the SES and United Nations Populations Fund. The label was designed for services that provide care for adolescents and young people across the Federal District. Educational actions were provided to all the services that applied to use the label, which is valid for two years and proposes continuous evaluation of service delivery. This action encouraged and recognized the teams' work and incorporated education in a creative and efficient manner.

### Final Considerations

The trajectory described above shows how, through the organization of staff education activities, EAPSUS has materialized into an organizational entity with its own identity and purpose, which may be defined as a government school.

The term government school gained a certain level of normativity, at least potentially, when it was included in the Constitution by Constitutional Amendment 19 of 1998 as a result of administrative reform. This amendment provided for the creation of government schools, defined as institutions specifically created to provide training for public employees in furtherance of the requirements for career progression. Paragraph

2 of Article 39 provides that the Union, states, and Federal District shall establish government schools to promote training and development of public employees<sup>26</sup>.

EAPSUS is rather unique as a government school in so far as it develops contextualized educational actions directed at SUS staff based on the needs raised by the SES/DF. Its institutionalization includes the establishment of requirements to ensure the continuity of educational activities increasingly aligned with the government's health policy.

The education of SES staff should be understood as a key component of an ambitious design that aligns the dissemination of concepts, guiding principles, and instruments with the strategic planning of the centers and, in particular, with the Federal District Health Plan. However, it is still necessary to enhance this process by incorporating a broader conception of education in order to meet health sector demands in a complementary and synergistic manner.

On the other hand, it is evident that the schools maintained by FEPECS also conform to the logic of a public health school, given that they provide higher education, professional education, and promote the professional development of SUS staff and administrators in the Federal District, constituting a locus for the development of the federal district's health training policy.

Given its specific functions, EAPSUS should work together with the SES/DF to develop an education policy that delineates career structures, defines an appropriate mix of competencies, and guides educational actions using a broader approach.

We understand that the path is long and full of challenges and that much more still needs to be done; however, we seek to tread it always looking for unique, creative, and powerful institutional responses.

### **Collaborations**

WMES Carvalho - elaboration of the pedagogical political project of EAPSUS, elaboration of the article and revision of the text. MDA Teodoro - preparation of the article and revision of the text.



## References

- Rovere M. Gestion estratégica de la educación permanente en salud. In: Haddad J, Roschke MALC, Davini MC, organizadores. *Educación Permanente de Personal de Salud*. Washington: Organización Panamericana de la Salud; 1994. Série Desarrollo de Recursos Humanos nº100. p. 63-106.
- Marin AJ. *Educación permanente de personal de salud en la región de las américas*. Washington: OPAS; 1988. Fascículo I: Propuesta de reorientación. Fundamentos. Serie de desarrollo de recursos humanos, nº 78.
- Brasil. Constituição da República Federativa do Brasil de 1988. *Diário Oficial da União* 1988; 5 out.
- Brasil. 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 a formação e o desenvolvimento de trabalhadores para o setor e dá outras providências. *Diário Oficial da União* 2004; 14 fev.
- Brasil. Ministério da Saúde (MS). *Política Nacional de Educação Permanente em Saúde*. Brasília: MS; 2009. (Série B. Textos Básicos de Saúde).
- Davini MC. Práticas laborais em los servicios de salud: las condiciones del aprendizaje. In: Haddad J, Roschke MA, Davini MC, organizadores. *Educación permanente de personal de salud*. Washington: Organización Panamericana de la Salud; 1994. p. 109-126.
- Peduzzi M, Guerra DADG, Braga CP, Lucena FS, Silva JAM. Atividades educativas de trabalhadores na atenção primária: concepções de educação permanente e de educação continuada em saúde presentes no cotidiano de unidades básicas de saúde em São Paulo. *Interface (Botucatu)* 2009; 13(30):121-134.
- Ferraz F, Backes VMS, Mercado-Martinez FJ, Prado ML. Políticas e programas de educação permanente em saúde no Brasil: revisão integrativa de literatura. *Saúde & Transformação Social* 2012; 3(2):113-128.
- Miccas FL, Batista, SHSS. Educação permanente em saúde: metassíntese. *Rev Saude Publica* 2014; 48(1):170-185.
- Marin AJ. Educação continuada: introdução a uma análise de termos e concepções. In: Collares CAL, Moyses MAA, organizadores. *Educação Continuada*. Brasília: Cadernos CEDES; 1995.
- Haddad J, Roschke MALC, Davini MC. *Educación Permanente de Personal de Salud*. Washington: Organización Panamericana de la Salud (OPAS); 1994. Série Desarrollo de Recursos Humanos nº100.
- Ramos MN. *Trabalho, educação e correntes pedagógicas no Brasil: um estudo a partir da formação dos trabalhadores técnicos da saúde*. Rio de Janeiro: EPSJV, UFRJ; 2010.
- Merhy EE. O desafio que a educação permanente tem em si: a pedagogia da implicação. *Interface (Botucatu)* 2000; 9(16):172-174.
- Libâneo JC. Pedagogia e pedagogos: inquietações e buscas. *Educar Editora da UFPR* 2001; 17:153-176.
- Cyrino EG, Toralles-Pereira ML. Trabalhando com estratégias de ensino aprendizagem por descoberta na área de saúde: problematização e a aprendizagem baseada em problemas. *Cad Saude Publica* 2004; 20(3):780-788.
- Ausubel DP. *A aprendizagem significativa: a teoria de David Ausubel*. São Paulo: Moraes; 1982.
- Freire P. *Pedagogia do Oprimido*. Rio de Janeiro: Paz e Terra; 1975.
- Brighente MF, Mesquida P. Paulo Freire: da denúncia da educação bancária ao anúncio de uma pedagogia libertadora. *Pro-Posições* 2016; 27(1):155-177.
- Freire P. *Educação como prática da liberdade*. 19ª ed. Rio de Janeiro: Paz e Terra; 1989.
- Libâneo JC. *Democratização da escola pública. A pedagogia crítico social dos conteúdos*. São Paulo: Loyola; 1987.
- Schwartz Y. Os ingredientes da competência: Um exercício necessário para uma questão insolúvel. *Educação & Sociedade* 1998; 19(65):101-140.
- Ceccim RB, Feuerwerker L. O Quadrilátero da Formação para a Área da Saúde: Ensino, Gestão, Atenção e Controle Social. *PHYSIS: Rev. Saúde Coletiva* 2004; 14(1):41-65.
- Bordenave JD, Pereira AMP. *Estratégias de ensino-aprendizagem*. 25ª ed. Rio de Janeiro: Vozes; 2004.
- Berbel NAN. *Metodologia da problematização: Fundamentos e aplicações*. Londrina: Ed. INP/UUEL; 1999.
- Araújo Júnior MS. *Avaliação Diagnóstica, Formativa e Somativa*, 2010. [acessado 2018 Maio 15]. Disponível em: <https://www.webartigos.com>
- Fernandes CCC. Escolas de Governo: conceito, origens, tendências e perspectivas para sua institucionalização no Brasil. *VIII Congresso CONSAD de Administração Pública*, Brasília, 2015.

Article submitted 30/01/2019

Approved 06/02/2019

Final version submitted 27/03/2019

