Competency-based training in nursing: Limits and possibilities

A FORMAÇÃO EM ENFERMAGEM POR ÁREA DE COMPETÊNCIA: LIMITES E POSSIBILIDADES

LA FORMACIÓN EN ENFERMERÍA POR ÁREA DE COMPETENCIA: LÍMITES Y POSIBILIDADES

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ABSTRACT

Objective: To analyze the possibilities and limits of competency-based training in nursing. **Method:** An integrative review of the literature on the subject was carried out, and an analysis was made of the results of a survey evaluating a nursing course based on areas of competency. A dialog was then established between the review and the results of the research. **Results:** On the question of which theoretical type of competency the articles from the literature relate to, there is a predominance of the constructivist perspective, followed by the functionalist approach and the dialog-based approach. In the dialog between the literature and the research, limits and possibilities were observed in the development of a training by areas of competency. **Conclusion:** The dialog-based approach to competency is the proposition that most approximates to the profile defined by the National Curriculum Guidelines for training in nursing, and this was also identified in the evaluation survey that was studied. However, it is found that there are aspects on better work is needed, such as: partnership between school and the workplace, the role of the teacher, the role of the student, and the process of evaluation.

DESCRIPTORS
Education
Nursing
Nursing education programs
Professional competency

RESUMO

Objetivo: Analisar possibilidades e limites da formação em enfermagem por competência. **Método:** Revisão integrativa da literatura acerca do assunto e analise dos resultados de uma pesquisa de avaliação de um curso de enfermagem desenvolvida por áreas de competência, estabelecendo um diálogo entre a revisão e os resultados dessa pesquisa. **Resultados:** Quanto à vertente teórica de competência desses artigos, houve um predomínio da matriz construtivista, seguida da funcionalista e da dialógica. No diálogo entre a literatura e a pesquisa observaram-se limites e possibilidades no desenvolvimento de uma formação por áreas de competência. **Conclusão:** A abordagem dialógica de competência é a proposição que mais se aproxima do perfil definido pelas DCN para a formação em enfermagem, identificada também na pesquisa de avaliação analisada. No entanto, verificou-se que há aspectos que precisam ser mais bem trabalhados, como: parceria escola e serviço, papel do docente, papel do estudante e processo avaliativo.

DESCRITORES
Educação
Enfermagem
Programas de educação em enfermagem
Competência profissional

RESUMEN

Objetivo: Analizar posibilidades y límites de la formación en enfermería por competencia. **Método:** Revisión integrativa de la literatura sobre el asunto y análisis de los resultados de una investigación de evaluación de un curso de enfermería desarrollada por áreas de competencia, estableciendo un diálogo entre la revisión y los resultados de esa investigación. **Resultados:** Cuanto a la vertiente teórica de competencia de esos artículos, hubo un predominio de la matriz constructivista, seguida de la funcionalista y de la dialógica. En el diálogo entre la literatura y la investigación se observaron límites y posibilidades en el desarrollo de una formación por áreas de competencia. **Conclusión:** El abordaje dialógico de competencia es la proposición que más se aproxima del perfil definido por las DCN para la formación en enfermería, identificada también en la investigación de evaluación analizada. Aunque, se verificó que hay aspectos que precisan ser más bien trabajados, como: aparcería escuela y servicio, papel del docente, papel del estudiante y proceso de evaluación.

DESCRIPTORES
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INTRODUCTION

In discussions on the training of healthcare professionals, one aspect that stands out is a concern to recognize and create a more appropriate means of learning of items of knowledge that arise in the context of the work itself, in a framework of organizations that live in a scenario of structural uncertainties[1-2].

Several factors have created new demands on the field of nursing[3-4]. They include: the rapid changes in the healthcare sector in the final decades of the twentieth century; the new technologies of biomedicine; the changes in the population structure; the increase in diversity of work; and the orientation toward the market. In Brazil, one of the results of the movement of renewal in training in this area has been the preparation of the National Curriculum Guidelines (*Diretrizes Curriculares Nacionais* – or DCNs) for the course in Nursing by the Education Ministry[5], which orient professional training for the requirements of the twenty-first century. With a view to development of the DCNs, encouragement has been given to initiatives to widen social responsibility and the pact of proposals for defining professional competency.

The competencies and abilities of the DCNs for the Graduation Course in Nursing emphasize a quest for integral healthcare, providing orientation as to adaptation of the curriculum to the needs of and requirements of the Single Health System (SUS)[6]. They aim for a more flexible curriculum; for integration of disciplines, of theory with practice and of work with academic practice; and for institutional autonomy; and one of their central aspects is competency-based training.

In the classical literature there are three conceptual approaches to competency, the conductivist or behaviorist approach (with focus on *doing* to achieve an expected result[1,7-8] and on the relationship between efficiency and adaptation to the employment market); the functionalist approach (with focus on what a person should do or should be able to do, based on the definition of tasks, without them necessarily being articulated in terms of attributes or even between themselves)[1,7-8] and the constructivist approach (with focus on the combination of knowledge, experience and behaviors that are exercised in a given context, being validated only when applied in a professional situation, with a list also being maintained of activities with a view to obtaining the results[7,9].

Together with these approaches, there is the **dialog** approach, which was first put forward in Australia, and centers on development of capacities or attributes (cognitive, psychomotor or in terms of affection), which, combined, comprise different ways of successfully carrying out the essential and characteristic actions of a given professional practice in the context in which they are applied[8,10-11]. This conception, as well as taking into account the context and the culture of the work location where the action takes place, seeks to incorporate ethics and values as elements of competent performance and considers that it is possible to be competent in different ways[7].

The DCNs consider that professional competency is the capacity 'to mobilize, articulate and put into action values, knowledge and abilities that are necessary for efficient and efficacious performance of activities required by the nature of the work'[5], and to have as its orienting factor a tendency in favor of meeting the needs of the market. They point to other possibilities of interpretation and construction of curricula for graduation courses because they present general and not very clear orientations[12]. Thus, discussions on this area of subjects continues to be open.

OBJECTIVE

Based on these discussions, which are still open, and the absence of Brazilian publications on the subject, this study aims to analyze the possibilities and limits of competency-based training in nursing, based on the dialog between what is being indicated in the literature, and the results of an experiment carried out from this point of view.

METHOD

This study makes an integrative review of the literature – which we could define as a qualitative and exploratory research into a theme or object of attention, seeking a new way of looking at the subject[13]. This was begun with an advanced search in electronic databases of the Latin-American Health Sciences Literature System (*Sistema da Literatura Latino-Americana em Ciências da Saúde*, or *Lilacs*), in the National Library of Medicine (*Medline*), and in the Scientific Electronic Library Online (*Scielo*). The keywords used were: competency, "and" training "and" nursing, and their corresponding words in the English language, published in 2001 or later. The number of articles found were 38, 85 and 24, respectively. Of this group, the following criteria for inclusion were used: Articles that discuss graduation in nursing, training in general, and not the specialties. A total of 41 articles were selected.

As well as this search, an assessment was made of a survey assessing the Nursing Course of the Medical Faculty of Marília[14]. This was based on the perception and the work of students concluding their courses in 2005 and 2006, was taken into consideration, and also the evaluations of users, managers and supervisors about the practice of these graduated students. Seeking to expand the analysis of that survey, other material that characterizes the course, and an article that discusses part of the results of that survey[15], were also consulted. The reason for including the analysis of that faculty in this study is that it is one of the pioneer institutions in the development of changes in the curriculum in the area of health[16].

As to path taken in terms of method, initially the selected articles were analyzed, seeking: (a) to identify the

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implicit or explicit concept / approach to competency that was put forward; (b) to analyze the recommendations of the articles' authors for development of a competency-based curriculum; and (c) to identify difficulties and challenges indicated in the articles. An analysis was then made of the evaluation survey report, and of the material comprising the course that was the subject of the evaluation, seeking to characterize the curriculum of the course, and the results it obtained, by means of the evaluation survey. Finally, the review of the published literature was compared with the results of the selected evaluation survey, aiming to establish a picture of the difficulties and the possibilities of training in nursing based on areas of competency.

RESULTS AND DISCUSSION

Of the 41 articles selected, 26 were Brazilian and 15 from the rest of the world. In terms of type of study, the sources were classified as: qualitative field survey, 36.9%; report of experience, 34.2%; theoretical reflection, 15.8%; bibliographical review, 7.9%; and quantitative and quantitative-qualitative field research, 2.6% each.

As to the theoretical direction taken in representation of competency in these articles, the constructivist approach predominated, followed by the functionalist approach, and then the dialog-based approach; in some articles it was not possible to make this characterization, since the study was a theoretical reflection (Table 1)

Table 1 - The references studied, by type of approach to competency – Marília, São Paulo State, Brazil, 2001–2009.

Competency approach	Number of articles	References
Constructivist (**)	17	18, 21-22, 25, 29, 33, 34, 36, 38, 43, 46, 48, 49, 51-53, 55
Functionalist (**)	9	3, 20, 23, 27, 35, 37, 40, 44, 45
Constructivist (*)	4	17, 26, 41, 47
Dialog-related (**)	7	19, 30, 32, 39, 42, 50, 54
Dialog (*)	2	28, 56
Unidentified	2	24, 31

(*) Approach referred to in the study. (**) Description of approach attributed by author of this paper.

FOCUSING ON THE CONCEPT OF COMPETENCY

Among the meanings associated with the concept of competency by the authors of the articles that were studied, the following stand out: (a) application of information/knowledge in practice[17-20]; (b) application/integration/mobilization of knowledge, attitudes and abilities to resolve problems and/or confront situations[3, 21, 31] and (c) formation of schemes of thought and action[32]. In spite of the variation in meanings, in general competency is associated, explicitly or implicitly, with the notion of being capable of doing a certain thing in a situation, this being something that involves learning, and not a gift that people inherit. In some of them, learning is translated into knowing how to learn, involving successive constructions, deconstructions and reconstructions of knowledge, attitudes and abilities. Together with this logic, pre-stipulated requirements are highlighted for a given role or for the social relations that regulate or validate whether a certain person is capable of doing something that he or she aims to do or is called upon to do. Whether connected with this notion or not, it is seen that *doing* is directly related to solving problems efficaciously, reinforcing the need to have competency attested through the degree of capacity to resolve situations that is achieved.

IMPLEMENTATION OF AN INTEGRATED, COMPETENCY-ORIENTED CURRICULUM

In the literature that was researched, it is recommended that construction and consolidation of a teaching policy project should result from: discussion of the transformations that are occurring in the world of work in the health sector; reflection on the needs of the clientele; and competencies for a nurse's training that are built up by health professionals in their daily practice[30, 33-34]. It is also recommended that, to achieve a curriculum in terms of competency, an articulation should be achieved between the basic cycle and the clinical cycle; between teaching, service and community; between practice and theory, through integration of contents; and that there should be an approach to transversal themes, rather than fragmented knowledge[29].

The integration of theory and practice can be limited to ensuring that the theory learned is followed and applied at the moment of practice, as in the functionalist model[35]; or that knowledge and practice need to be constantly approximated to each other and compared[36] with emphasis on learning from the situations that arise from practice, recognizing the importance of practice in the development of new knowledge, as in the constructivist approach[18], or that knowledge should emerge from practice, from the real world, as in the dialog-based approach[32].

For the planning and implementation of a competency-based curriculum, according to the articles that were reviewed, the following become necessary: (a) construction of partnerships in the community, sharing values about the care of patients and in the teaching-learning process[3, 37]; (b) meeting of the demands of the present Health and Education Policies, and of Nursing Teaching itself[38]; and (c) reflective practice with a view to learning from the real situations of the world of work, with differentiated interventions that cause improvement in care and, consequently, strengthening of the Single Health System[18-19, 26, 39-42].

Among the authors it is also clear that there is a need

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for strategies for implementation of the competency-based curriculum, and that they depend on the approach used in its construction[20, 23, 27, 43-45]. For example, for those that use the functionalist approach, the strategies suggested focus on training of abilities, and can take place based on clinical skills developed in the laboratory in practice[44]. In the constructivist approach, by contrast, the strategies need to cause the teachers to lead the student to achieve the competencies in the nurse's practice of care, through understanding and practicing the skills of learning to learn, learning to do and learning to be[46], and may use problem-based learning centered on the student[17-18, 26, 36]; interactive teaching-learning strategies, guided by practice and efficacious in learning critical thought, aptitudes and abilities both for taking of clinical decisions and for discussion of clinical cases[47-48]; situations with simulated patients[25]; and the formation of a critical-creative professional, making full use of his or her sensitivity and enabling the construction of meanings and interpretations that press this process forward[49].

In the dialog-based approach to competency, the authors recommend the need for a didactic of clinical training, a problem-based approach, and analysis of practices[50] and strategies of teaching-learning centered on presentation and resolution of problems/situations that are lived through in the daily work: education being understood as continuous, something that is constructed over the length of a whole life, between people who live and share together in society[37].

In relation to the process of evaluation, the following is recommended: payment of structured attention to the cognitive dimension, with assessment of specific attitudes and abilities[25]; evaluation of the dynamics of work, while in progress, and jointly, strengthening partnerships[17]; and self-evaluation as a way of developing a critical capacity and reflecting on the limits, and possibilities, of the process[20,51-52]. In terms of evaluation, it is also observed that the dialog model provides the idea of a co-participated evaluation based on process (teachers and students), forming responsibility and defining the standards for evaluation of performance[28].

And finally, the importance of quality and quantity of human, material and physical resources was pointed out[53-54], since an institution needs to perceive that its growth should be linked to the acquisition of competencies by its workers, that is to say, professional growth (both individual and collective) should be a target not only of each individual worker, but also of the institution[55].

DIFFICULTIES AND CHALLENGES IN IMPLEMENTING A COMPETENCY-BASED CURRICULUM

According to the studies that were reviewed, the difficulties and challenges found related to: the scenario of practice, and its integration with work; the qualification of the body of teaching staff to work on an innovative pro-

posal; the pupil's relationship with the work involved in the new practice; the construction of this curriculum, itself; and, finally, evaluation of the competencies required for professional certification.

Some authors listed situations in the interface with work that act against installation of a competency-based curriculum, such as: the cost of the partnership between nursing schools and the health system[23]; the absence of scope for carrying out internships[40]; the absence of articulation and communication between academic institutions and work; and the communication between those formulating, and those carrying out, education policies and health policies[33].

In relation to the teaching staff, the following factors were raised as difficulties: the limited number of theoretical constructions about the process of teaching-learning that the individual teaching staff, even if they are highly qualified, have[17]; people being unprepared for the various emotional reactions presented by students[22]; absence of training of teaching staff to work with this type of curriculum[44]; and difficulty in accepting the changes introduced in the way in which students are to learn, and exercise healthcare[40]. Resistance is observed, not only from the teaching staff, but also from the students, since the students come to the situation expecting a traditional teaching method and practice[40]. Another challenge is the process of evaluation, which needs to be de-mystified, providing a grounding for the relationship with the student which is democratic and committed to the student's learning[56].

EVALUATION OF A COURSE DEVELOPED BY AREAS OF COMPETENCY

The Nursing Course of the College of Medicine of Marília (*Faculdade de Medicina de Marília,* or *Famema*) has been working, since 1998 – well before the DCNs, with a curriculum that is integrated and oriented by competency in the dialog-based approach, having as a notion of competency the capacity to mobilize various different resources to provide a solution to a series of professional practice situations in a way that is relevant and efficacious[2, 10].

In this approach, competency is inferred through observation of performance in each task set, and is organized in **the areas of activity of individual and collective health supervision, management of the work and scientific investigation**, and dealt with using an approach that has an increasing degree of dominion and autonomy as the course progresses.

The Famema Nursing Course was evaluated based on a qualitative survey, in which possibilities and limits in the implementation of this curriculum were pointed out[14]. The results of the survey[14] indicated that the course's graduates are able to demonstrate the critical capacity of learning to become familiar with new areas, and learning to learn, in the sense of exercising their thought, attention

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and memory, selecting the information that can be put in context in relation to the daily reality with which they lived. A diversity of ways of understanding the teaching-learning process on the part of the teachers was also identified, which represents a difficulty for change of practice.

In relation to the areas of competency put forward in the curriculum of the Famema Nursing Course, considering the **area of competency in individual care for health needs,** it was observed, in the survey, that course graduates succeed in developing it by putting the work scenario into context, in a movement of action-reflection-action, identifying those needs based on: the clinical history and examination; formulation of the person's problem through raising of hypotheses and diagnostic investigation; and preparation, execution and assessment of the plan of care.

The results of the survey[14] show that the course graduates are successful in putting this area of competency into practice through humanized care. The biological knowledge is important, but psychological and social knowledge are necessary aspects for this care.

In relation to the **area of competency in community healthcare**, in which the tools of epidemiology and health planning are used, and actions are taken according to effectiveness, accessibility and equity, the results of the survey[14] indicated that they did give value to the social aspect and, in spite of the focus being on the individual, the graduates succeeded in extrapolating this to the health of the collective.

As to the **area of competency in administration and management of the healthcare work process**, in which participation not only in the preparation, execution and evaluation of the work plan in the collective space of the organization, but also of the process of permanent education of the health team is expected, it was observed, in the survey[14], that the student presents a much widened movement, because he/she succeeds in mobilizing knowledge in action, in the integrated approach to care, and in a process of co-management.

In the survey[14], this area of competency was also perceived by the manager, when he/she indicates that the pupils of Famema take decisions more securely, have greater responsibility, and manage to face more diverse situations than the pupils of other institutions where the emphasis is on complying with targets and obligations. However, this area of competency was also indicated as a limit, requiring a greater investment.

The survey carried out on the training of nurses at Famema indicates that this is the way forward, and that it is possible to implement a competency-based curriculum on the logical basis proposed. However, further work is needed on some aspects – which are also pointed out in the studies identified. These aspects include: the partnership between school and work; the role of the teacher; the role of the student, and the process of evaluation.

A DIALOG BETWEEN THE DESIRABLE AND THE POSSIBLE

The evaluation of the Famema Nursing Course reveals what in the literature is conceived as a curriculum developed by areas of competency based on the dialog-based approach, focusing not only on the cognitive domain, but also dealing with psychomotor aspects and aspects related to attitude. Corroborating this statement, the result of the survey showed that the course's graduates, when in the world of work, mobilized the necessary cognitive, affective and psychomotor resources developed during their undergraduate studies. For this, the vital partnership of the institution with the health services does require some attention, that is to say, these findings indicate that for us to work with a competency-based curriculum, and especially one of the dialog-based type, we need to devote care to the established relationships, whether outside or inside the school. The educational institution partner should open to the world of work, and the services should be provided in a way that is open to the real needs of the population.

The articles indicated a limit in relation to partnership, as to sharing of costs between the nursing schools and the health systems[23], and the lack of scope for carrying out internships[40]. When Famema looks at the partnership element, it does not come up against this fragility, because it is something that takes place within the public services, and its partnership with the services is something that has been established for several decades, which enables teaching-learning activities to be carried out within the scenarios of the Family Health Units (*Unidades de Saúde da Família*, or USFs). However, the organization of the services, especially in health, is subordinated to policy decisions, which inevitably obliges the institution to establish new agreements in accordance with the policy rules of the moment.

Another limit identified in the work surveyed was the teaching staff's unpreparedness to deal with the various emotional reactions presented by the students[22], the resistance to accepting the changes that were introduced in the students' manner of learning and providing care[40], and the non-acceptance that the students are capable of acquiring the skill of self-learning[44]. The surveys also indicate resistance on the part of the student, since what the student is seeking is a traditional teaching practice[40].

The literature that was reviewed, and the report on the research into Famema, suggest that transforming the process of training requires changes in the conception of Health, in the construction of Knowledge, in the practices carried out, and in the relations established between students, teachers and health professionals. That is to say, it calls for transformation not only of conceptions and practices, but also of the power relationships between the universities and the health services, and could give rise to resistance as a result of the effort to de-structure something that has been structured. Such difficulties can be

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overcome through dialog and through the inclusion of all those involved in the process for shared construction of the proposal, both on the side of the student, and that of the professor.

CONCLUSIONS

Although the DCNs for the nursing course set out the professional competency that is expected from future nurses, and the principal points of orientation with a view to meeting the needs of the Brazilian Single Health System (SUS), they do not impose the conception that should be adopted for a competency-based curriculum, and the discussions and the decision-making remain with the ambit of each school, as observed in the literature that was researched.

In the group of articles reviewed, different understandings were seen on a definition of competency, which indicates that it is an expression with multiple meanings. It is important to understand clearly which meaning is intended, because this is directly linked to the organization, and the success, or otherwise, of the curriculum that uses competency as an orienting factor in what it hopes to achieve.

Seeking, as we are, to produce a qualified professional as proposed by the DCNs, it is our opinion that the dialog-based approach is the proposition that is closest to the construction of this profile, since to develop a curriculum on this approach one seeks to articulate: the relationship between the school and the world of work – in the sense of creating a reflexive practice (action-reflection-action), with a view to transforming reality; integration of practice and theory; and a productive interaction of the various domains (cognitive, affective and psychomotor) that are mobilized in the action.

This proposal calls for various changes, which go beyond changes of teaching methods or of the curriculum matrix. It calls for a change of paradigm in relation to the role of the school in the training of professionals and, consequently, in the role of the teacher. Considering that the basis of the proposal for change, in question, is democratization of the process, through a social product that is built with the deliberate intervention of subjects, and which depends on the correlation of forces for change in the constituted powers, it is the conclusion of this paper that there is a need for the construction of shared spaces as a precondition for the changes that are envisaged.

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