Relevance y level of application of management competencies in nursing

Gloria María Ángel-Jiménez[1]
Claudia Patricia Lopera-Arrubla[2]

1   RN, M.Sc., Professor. Universidad Pontificia Bolivariana, Colombia.
    email: gloria.angel@upb.edu.co

2   RN, M.Sc., Professor. Universidad de Antioquia, Colombia.
    email: majo@.udea.edu.co

Relevance y level of application de las management competencies in nursing

▐ **Abstract** ▐

Objective. The study sought to identify the relevance and level of application of the main management competencies in nursing. **Methodology.** Study contains qualitative and quantitative components with a descriptive approach. We took as categories of the study the relevance and application of management competencies and curricular strategies for their formation. A survey was applied to a convenience sampling of 140 individuals from the nursing faculties involved and from different levels of healthcare in the city of Medellín and its Metropolitan Area; lastly, a semi-structured interview was made of six experts from the university educational sector in Medellín. **Results.** The most relevant generic competencies were: leadership (81.4%), team work (75.0%), effective communication (55.7%); while the specific competencies highlighted quality management of personnel and care. Innovation and creativity competencies (19.3%), strategic thought (17.1%), and adaptability or flexibility (10.0%) obtained lower frequencies. The level of application of specific competencies, according to components of strategic management, programs and projects, quality, human talent, and caretaking of individuals was above 90%. **Conclusion.** The management competencies identified were relevant and of high applicability for the people consulted. The complexity paradigm as central axis may contribute to their formation.

Key words: management; education, nursing; competency-based education.

Relevancia y nivel de aplicación de las competencias de gestión en enfermería

▐ **Resumen** ▐

Objetivo. Identificar la relevancia y el nivel de aplicación de las principales competencias de gestión en Enfermería. **Metodología.**

Estudio con componentes cualitativo y cuantitativo con enfoque descriptivo. Se tomaron como categorías de estudio la relevancia y aplicación de las competencias de gestión y estrategias curriculares para su formación. Se empleó una encuesta que fue aplicada a una muestra a conveniencia de 140 personas, procedentes de las facultades de Enfermería involucradas y de los diferentes niveles de atención en salud de Medellín y Área Metropolitana; por último, se hizo entrevista semiestructurada a seis expertos del sector educativo universitario de Medellín. **Resultados.** Las competencias genéricas más relevantes fueron: liderazgo (81.4%), trabajo en equipo (75.0%), comunicación efectiva (55.7%); mientras que en las específicas se destacaron la gestión de la calidad, del personal y del cuidado. Las competencias innovación y creatividad (19.3%), pensamiento estratégico (17.1%) y adaptabilidad o flexibilidad (10.0%) obtuvieron frecuencias menores. El nivel de aplicación de las competencias específicas según los componentes de gestión estratégica, de programas y proyectos, de la calidad, talento humano y de cuidado de las personas fue superior al 90%. **Conclusión.** Las competencias de gestión identificadas fueron relevantes y de alta aplicabilidad para las personas consultadas. El paradigma de la complejidad como eje central puede contribuir a su formación.

Palabras clave: gerencia; educación en enfermería; educación basada en competencias.

Relevância e nível de aplicação das concorrências de gestão em enfermagem

⊨ **Resumo** ⊨

Objetivo. Identificar relevância e o nível de aplicação das principais concorrências de gestão em Enfermagem. **Metodologia.** Estudo com componentes qualitativo e quantitativo com enfoque descritivo. Tomaram-se como categorias de estudo a relevância e aplicação das concorrências de gestão e estratégias curriculares para sua formação. Empregou-se uma enquete que foi aplicada a uma mostra a conveniência de 140 pessoas, procedentes das faculdades de Enfermagem envolvidas e dos diferentes níveis de atendimento de saúde de Medellín e a Área Metropolitana; e se fez entrevista semiestruturada a seis experientes do setor educativo universitário de Medellín. **Resultados**. As concorrências genéricas mais relevantes foram: liderança (81.4%), trabalho em equipe (75.0%), comunicação efetiva (55.7%); enquanto nas específicas se destacaram a gestão da qualidade, do pessoal e do cuidado. As concorrências, inovação e criatividade (19.3%), pensamento estratégico (17.1%) e adaptabilidade ou flexibilidade (10.0%) obtiveram frequências menores. O nível de aplicação das concorrências específicas segundo os componentes de gestão estratégica, de programas e projeto, da qualidade, talento humano e de cuidado das pessoas foi alto. A formação em concorrências implica estratégias pedagógicas contextualizadas, integradoras, conformes com a complexidade do conceito. **Conclusão.** As concorrências de gestão identificadas foram relevantes e de alta aplicabilidade para as pessoas conferidas. O paradigma da complexidade como eixo central pode contribuir a sua formação.

Palavras chave: gerência; educação em enfermagem; educação baseada em competências.

Introduction

Management is understood as the set of activities carried out in coordinated manner to reach that established within a planning process. It includes those activities that contribute to accomplishing objectives and goals and involves better use of resources. Additionally, it seeks to transform a situation into another. Hence, the importance of guiding efforts to accomplishing that proposed, making decisions within the process, measuring what has been carried out, and comparing it to what was expected.[1,2]

In nursing, management is identified as a human and social process aimed at mobilizing individuals and resources from the environment

to maintain and favor care.[3] It is also conceived as "the application of professional judgment in planning, organizing, motivating, and controlling caregiving, in timely, secure, and comprehensive manner, which ensure continuity of care and are supported by the institution's strategic policies and guidelines".[4]

Nursing management constitutes a fundamental component of the professional role by contributing to reach the objectives of healthcare organizations and improve standards regarding care; additionally, it offers the profession the possibility of improving its visibility within the social setting and achieving greater development. Given the importance it has, it is expected that professionals obtain a good formation in management; nevertheless, the research conducted accounts for certain weaknesses that must be addressed in this field. Some of these are: lack of a management model that permits ensuring the effectiveness of nursing actions,[5] weaknesses in the planning process,[6] deficiencies in decision making, and resolution of conflicts[7] and deficiencies regarding leadership in general.[8-11]

To accomplish good performance of the management role, it is necessary for nursing professionals to meet a series of competencies. Diverse[12-14] authors have studied them from other disciplines, like organizational psychology and administration. In nursing, research carried out in other countries accounts for the competencies applying at the management level, among which there are: leadership, strategic vision, team work, focus on the client, communication, decision making, negotiation, interpersonal relations, flexibility, entrepreneurship, creativity, systemic vision, planning, organization, management of processes and of human resources, among others.[4,15,16] This panorama shows that progress has been made in the study of management competencies, although research is still scant regarding the management profile of professionals in the different positions within the organization.[15]

In Colombia, the study of management competencies in nursing has not specifically been the object of work. The general approach of nursing competencies has been led by the National Learning Service (SENA, for the term in Spanish) and the Colombian Association of Faculties and Schools of Nursing (ACOFAEN, for the term in Spanish), as well as by some academic units that have ventured into competency curriculum.[17] Work has been carried out centered on labor and professional competencies, like that conducted by Castañeda and Ospina,[18] which identified nursing competencies by category and reaffirmed the need the profession has of advancing to a higher level of occupational competency, a higher degree of professional autonomy, and exercise of direction. Their work also proposed the necessity of analyzing and defining competencies according to the population needs, work scenarios, and formation purposes; submitting them to consideration by employer and formation institutions for validation and recognition of scientific-technical, technological, humanistic, and social knowledge.

Prior studies have enhanced knowledge on competencies in nursing, but do not exhaust investigation in this field and less so regarding the topic of management; on the contrary, suggest it to have significances and clearer disciplinary and professional actions. Due to this, our research sought to identify the main management competencies for the performance of nursing professionals and indicate some strategies that must be implemented within the educational setting.

Methodology

The research used a qualitative and quantitative methodology, with descriptive approach. The approach to the object of knowledge was conducted during 2009 - 2010, through the following techniques:

a) *Survey*: inquired on the competencies related to management, identified from the authors' experience and the prior documentary review. The instrument divided the management competencies into generic aspects, which apply in different professional settings, and into specific aspects – those dealing with

nursing management, which is structured around: the strategic, programs or projects, quality, care, human talent and resources. Relevance and application of competencies were measured in a scale from one to four, where one was equal to none, two equaled little, three equaled sufficient, and four equaled much. The definition of this scale considered that described within Project Tuning[19] to assess the importance and performance of the competencies. The instrument elaborated was subjected to a prior pilot test. The survey was applied to the directors and faculty staff from the nursing faculties in the participating universities, to directors from healthcare and/or nursing institutions, to nursing care professionals, and to public health coordinators linked to the Local Healthcare Directions of the municipalities in the Metropolitan Area of Valle de Aburrá (Antioquia, Colombia). The collection process included the two participating nursing faculties, 38 healthcare institutions from Medellín, and nine municipalities from the Metropolitan Area. The sample was constituted by 140 participants. The information gathered in the survey was processed through the Epi Info software version 3.51 and underwent descriptive-type quantitative analysis, based on absolute and relative frequencies;

b) *Interview with experts*: this sought to delve into the concept of competency and the strategies for its formation. A semi-structured interview was developed around these themes. It was aimed at six experts from the university educational sector in Medellín, who were selected based on the "snow-ball" strategy, bearing in mind, as criteria, their knowledge and prior experience on the topic of competencies and related curricular processes. The interviews were recorded and transcribed for qualitative analysis through which similarities and differences were identified related to the central themes and, finally, these were contrasted with the product of the documentary review.

The ethical aspects considered were: request for institutional permits and the informed consent from the participants; the individual's right to refuse to participate was respected, and, additionally, anonymous surveys were conducted to respect the right to confidentiality.

Results

The information presented ahead will emphasize on those aspects referring to the management competencies identified as having greater relevance and application, according to the consultation; thereafter, the results obtained on competencies and their formation will be presented through consultation with experts.

Identification of management competencies. Consultation of management competencies was aimed at a sample whose distribution, according to the position, was the following: institutional or nursing directors (30.0%), hospital care nurses (20.0%), nurses from promotion and prevention programs (5.7%), nurses who fulfill double functions, administrative and care (4.3%), municipal directors, municipal public health coordinators and community nurses (4.3%), and nurses working in teaching or teaching administration (35.7%). Also, the distribution of this sample, according to the nature of the sector in which they work, revealed that 50.0% represented the private sector and the other 50.0%, the public sector.

The generic management competencies and the degree of relevance of each of them can be seen in Table 1: the ones with the highest relevance (by adding the sufficient and much categories) were: ethical commitment and organizational sensitivity (100% each), focused on people and domain of scientific and technological knowledge (99.3% each), and effective communication (99.2%).

Table 1. Degree of relevance of the generic management competencies

Generic competencies	Degree of relevance			
	% None	% Little	% Sufficient	% Much
Ethical commitment	0.0	0.0	7.1	92.9
Leadership	0.0	1.4	10.7	87.9
Effective communication	0.0	0.7	12.1	87.1
Team work	0.0	0.0	14.3	85.7
Focused on quality	0.0	1.4	16.4	82.1
Organizational sensitivity	0.0	0.0	17.9	82.1
Focused on people	0.0	0.7	23.6	75.7
Problem solution	0.0	1.4	22.9	75.7
Domain of scientific and technological knowledge	0.0	0.7	23.6	75.7
Focused on objectives	0.0	2.1	30.0	67.9
Innovation or creativity	0.0	4.3	28.8	66.9
Negotiation capacity	0.0	5.7	32.9	61.4
Strategic thought or understanding	0.0	3.6	40.0	56.4
Adaptability or flexibility	0.0	2.9	44.3	52.9

Thereafter, each participant selected the five competencies that, according to their criterion, they considered the most important in the field of nursing management. This prioritization permitted establishing the following distribution of such competencies: leadership (81.4%), team work (75.0%), effective communication (55.7%), ethical commitment (51.4%), domain of scientific knowledge (44.3%), focused on quality (38.6%), solution of problems (28.6%), organizational sensitivity (26.4%), Innovation or creativity (19.3%), focused on people (17.9%), strategic thought (17.1%), focused on objectives (13.6%), negotiation capacity (12.9%), and adaptability or flexibility (10.0%). Assessment of the degree of relevance of the specific competencies defined for the study is shown in Table 2, where it can be seen that the specific competencies with the greatest relevance are quality management (97.8%), human talent management (97.1%), and healthcare management (95.0%).

Application of the previous specific competencies, discriminated in their components, is presented in Table 3

Formation of competencies

This section considers the results derived from consultation with experts related to their general conception about the competencies and considerations they propose on the formation said competencies.

Concept of competencies. The results on this theme permit identifying two views on the concept of competencies. The first conception shows the competency as a person's capacity to apply knowledge, abilities, skills, and values to the development of activities. The following testimony accounts for this view: *It is all the knowledge a person has, the skill, the ability, the value that permits said person to perform in X function... the knowledge, ability, and skill applied to performing a function that in our case is productive* (E3).

Table 2. Degree of relevance of the specific management competencies

Specific competencies	Degree of relevance			
	% None	% Little	% Sufficient	% Much
Human talent management	2.1	0.7	10.0	87.1
Healthcare management	2.9	2.1	8.6	86.4
Quality management	0.7	1.4	12.1	85.7
Resource management	3.6	2.9	24.3	69.3
Strategic management	1.4	7.1	25.7	65.7
Management of programs or projects	1.4	12.1	37.1	49.3

The second conception identified stems from the theory of complexity, the theory of systems and/or the theory of understanding, as can be appreciated in the following expressions: *A competency is a complex structure that generates links among knowledge, abilities, skills, the context, values..., links that from the theory of systems are mobile; today they are one way and tomorrow they are another way... they reconfigure themselves... competency has to do with strategic intelligence; how can I think a problem strategically. I believe the competency has to do with this: what can you do with that complex structure, how can you set it into action. For me, a competency is that – a complex structure and by being a complex structure the odds are on another side... a competency, in my way of seeing, cannot remain reduced to an instrumental type of issue, rather, it has be hand-in-hand with comprehension processes; competency has to lead us to generating thought because it is the only way I can set into action that which I know (E1).*

I believe that from the practice and also from all the tracking that has been done, what we conclude on the concept of competency is the strategic comprehension a subject has of teaching and subject has of learning... and comprehension, why?, because we could say that it is one of the highest levels or level of greatest reach of thought development... and the strategy permits a subject to effectively and efficiently solve problems... the term competency, for me, *continues being comprehension of the strategic context to resolve whatever is available in terms of that context (E2.)*

Formation of competencies. When speaking of formation of competencies, the experts consulted alluded to the following categories: central paradigm, formative intentionalities, study plan, methodologies, and evaluation. The results presented ahead show that it is necessary to be clear about what will be understood by competencies in each academic unit. In other words, what will be the conceptual central paradigm that identifies them and, in agreement with this, the formative intentionalities, the structure of the study plan, the methodologies, and type of evaluation to conduct must be established. The results propose the need to rethink the whole curricular process in light of the central paradigm. They consider that the formation of management competencies must be addressed as a complex process; given that what is managed are totalities. Some testimonies that support the previous results are:

Conceptual clarity or central paradigm. An initial requirement is to be clear on the concept of competencies. Its conception determines the formative process. In this regard, one of the experts consulted proposes that: *the first step, in terms of formation of competencies is to define what competencies will be for us and in light of that establish what will be the model (E4).* Another expert expresses the following: *the formation of competencies varies depending on the paradigm*

Table 3. Level of application of the specific competencies according to their components

Specific competencies	Level of Application			
	% None	% Little	% Sufficient	% Much
Strategic management				
Carry out assessment based on the SWOT matrix	6.4	15.7	41.4	36.4
Elaborate strategic plan	4.3	11.4	37.9	46.4
Mobilize necessary people and resources	3.6	14.3	37.9	44.3
Execute actions that lead to accomplishing the plan	1.4	9.3	35.7	53.6
Monitor compliance of the strategic plan	4.3	11.4	34.3	50.0
Evaluate the results obtained	4.3	13.6	25.7	56.4
Management of programs and projects				
Design the program or project	5.0	19.3	35.7	40.0
Procure and mobilize the resources required	7.1	21.4	45.0	26.4
Carry out intra- and extra-institutional contacts required	5.7	21.4	41.4	31.4
Monitor the execution of programs and projects	4.3	17.1	43.6	35.0
Evaluate accomplishments	2.9	16.4	38.6	42.1
Quality management				
Apply the plan, do, verify, and act cycle	0.7	6.4	17.9	75.0
Define and standardize nursing processes	2.9	5.7	22.1	69.3
Monitor or audit the quality of processes	2.9	7.1	20.0	70.0
Formulate, calculate, and analyze indicators	5.0	9.3	24.3	61.4
Propose and analyze problems with support of tools	4.3	13.7	26.6	55.4
Formulate improvement plans	2.1	6.4	24.3	67.1
Evaluate effectiveness of improvement plans	3.6	7.1	22.9	66.4
Healthcare management of people				
Carry out comprehensive assessment of patients	5.7	4.3	13.6	76.4
Elaborate the healthcare plan for each person	5.0	8.6	12.9	73.6
Prioritize actions of the plan	5.0	7.1	11.4	76.4
Mobilize necessary personnel, processes, and resources	4.3	8.6	22.9	64.3
Carry out required intra- and extra-institutional contacts	7.1	12.9	36.4	43.6
Monitor or supervise compliance of the plan	4.3	9.3	18.6	67.9
Act upon critical situations of patients	3.6	6.4	14.3	75.7
Evaluate accomplishments of expected results	5.7	11.4	12.9	70.0
Human talent management				
Plan or calculate required personnel	7.9	6.4	20.0	65.7
Carry out programming of personnel under charge	5.7	5.0	21.4	67.9
Involve personnel in accomplishing the objectives	2.1	5.7	15.7	76.4
Coordinate tasks through effective communication	2.1	4.3	12.1	81.4
Elaborate educational programs aimed at personnel	5.7	7.9	25.0	61.4
Evaluate the performance of staff under charge	5.7	5.0	15.0	74.3
Resource management				
Determine required resources	5.0	6.4	27.9	60.7
Mobilize processes to acquire resources	5.7	10.7	33.6	50.0
Carry out resource audit activities	8.6	14.3	29.3	47.9
Carry out resource control	8.6	10.7	27.1	53.6

adopted, the current views around the formation of competencies are on the side of the theory of complexity, the theory of systems; integrative, totalizing views (E1).

Definition of intentionalities. In light of the central paradigm and the conceptions derived from it, it is necessary to determine the intentionalities of the formative process, which can vary. For one of the experts: *enhancing strategic thought and intelligence constitutes the intentionality of formation... being able to construct the rule, the course of action in a given moment, when the context is read* (E1). For another, *"the intentionality is given in terms of strategic comprehension... Students must be formed in each of the courses of the nursing program so they can make decisions from comprehension, conceived as a process of strategic thought development* (E2).

Study plan. The structure of the study plan must favor the formation of competencies. Two of the participants offer the following expressions on this theme: *the formation of competencies implies redesigning the study plans, must be structured around problems not themes; for example, structure the study plan around the child, adolescent, adult... conceived in comprehensive manner, located within a context, as totalities... Everything must be integrated given that a competency is not developed with a course; rather, it is a sequence, a concatenation* (E1). *The plan is structured by sequences and in articulated manner; in some first levels, formations and transformations are enhanced in observational terms, then in analytic terms, after that in explicative terms, and so forth* (E2).

Methodologies. The methodologies have to be changed, given that they must agree with the intentionalities and with the design of the study plan. If the study plan is designed by problems, the methodologies, consequently, must agree with this. In this sense, the experts propose that *it is necessary for faculty staff to employ new work modalities, so everything is not merely discourse, because it is not a matter of filling in but of constructing from what is available, of favoring the creation of links* (E1); in addition,

formation must favor cognitive and meta-cognitive processes; cognitive processes are related to logical reasoning, memory, attention, perception... the meta-cognitive processes have to do with the strategy to solve problems that arise... generally, cognitive settings are used: repeat, bring, memorize; and other autonomous work environments must be generated, tutorial work, Problem-based learning... (E2).

Evaluation. The evaluation models must be rethought; they must be according to the formation by competencies. *The methodologies must be changed and, logically, the ways of evaluating must change* (E1). *That evaluation of competencies must be a comprehensive evaluation... competency is not only measured through knowledge and less so in the work environment; it is measured through total performance...*(E4).

Formation of management competencies. The formation of these types of competencies agrees with their general formation, which, in turn, has its particularities. In this respect, it is considered that *management competencies must be thought in terms of totality because what is managed are totalities, an ecology, a subject within an environment and within a specific space are managed* (E1); additionally, *we must define which are the levels of development of managerial thought that must be obtained in a first level, in a second level... because it is not the isolated competency of whomever sought to carry it out, rather intentional, explicit, and with follow up* (E2).

Discussion

Generic competencies

The results obtained permit declaring that generic competencies, placed into consideration, are important for nursing management - according to the individuals consulted. This also coincides with that reported by other research conducted in the field of nursing.[4,15,16]

It is worth noting that, among the prioritized generic competencies, the axiological component is represented (ethical commitment) that professionals should have, the knowledge component (scientific and technological domain), and the abilities component, in this case of interrelation (leadership, effective communication, and team work). This integrality has been recognized as fundamental in management by authors like Lourenção and Benito,[20] who propose that healthcare management implies integration of knowledge, abilities, and attitudes for ethical, secure, and quality care.

Leadership deserves a special consideration because it occupied the first place among the competencies prioritized by the participants. It is conceived as a complex competency that includes the capacity to involve a group in accomplishing the vision and objectives proposed; clearly communicating the path to follow; motivating and generating enthusiasm among collaborators; giving them behavioral patterns; empowering them, providing the necessary resources, and stimulating them.[12] This competency is not only relevant for those consulted, but also for the professional and trade organizations, which consider that it is imperative to nursing professional leaders who can promote professional and organizational development. From this perspective, leadership must be the object of special attention in formation through the development of transversal curricular strategies determined beforehand.

Analysis of some of the prioritized competencies, like leadership and ethical commitment, shows that these are complex constructs that must be considered in the formation. This situation confirms that in terms of conceptualization and formation of competencies, it is imperative to opt for integrative views because the concept is complex and it is realized into a context also mediated by complexity.[21] On the issue of prioritized competencies, it is also important to highlight that those dealing with change (adaptability, flexibility and innovation, and creativity) occupied the last levels, given that this is a current constant and demands that every professional be capable of conforming to it; besides promoting and managing it.[22] Cunha and Ximenez[23] stress that, within a context that permanently evolves, the profile of the individuals is modified given that institutions need workers who can respond to this. A similar situation to this was identified by Ángel[11] in the research conducted on conceptions about leadership in the healthcare and educational sector, whose results demonstrated that the practice of "defying the process" is not associated to the theme of leadership in nursing and this includes behaviors like seeking opportunities to change, innovate, experiment, and assume risks.

To highlight, the competencies of strategic thought and focused on objectives obtained low frequencies in the prioritization carried out, given that both have to do with the capacity to plan and direct work, central aspects of management, and the exercise of leadership.[6,22] Today, nursing professionals cannot be conceived without the capacity to analyze the context, project a vision of the future, and guide their work based on proposed objectives and goals. Within the scenario of complexity, the competency of strategic thought it is basic to read and interpret the context and make decisions.

Specific competencies

Results on the degree of relevance of the specific competencies show quality management, caregiving, and personnel in the first places. The primacy of these competencies, although not very superior against the others, indicates the fields the nursing professional must currently dominate. It should be highlighted that the competency of quality management, in the first place of importance, may be because of the exigency of the institutional context that emerges following the processes of qualification, certification, and accreditation being carried out in the country. This finding evidences that it is necessary to study the characteristics and needs existing within the environment to critically adapt programs in this sense; the formation of competencies demands it thus.

Regarding the competencies with the lower frequencies in terms of relevance, strategic

management is highlighted, which can make the difference in the professional field. This could mean that the individuals consulted consider that strategic management is exclusive of the upper levels of organizations, ignoring the importance it has in each field of action and level. This result is combined with those obtained in the consultation of the generic competencies upon speaking of strategic thought, essential according to the experts consulted, given that today all professionals must be able to quickly read contexts that are permanently reconfigured and, from there, direct the action.[23-25] Some of the components of the specific competencies have a low level of application, that is, there is insufficient deployment of these in practice. This is the case of the assessment of service based on the SWOT matrix; the formulation, calculation, and analysis of indicators; the proposal and analysis of problems with the support of tools; evaluation of the accomplishment of the results expected in the field of caring for people; and, lastly, the elaboration of educational programs aimed at the personnel, among others. It should be analyzed if these performances are no the competence of nursing professionals in organizations or if they have a low level of application because they are not exhibited in practice. In addition, it must be considered that it is essential to involve the professional in the whole management process, given that managers who direct, coordinate, and lead cannot be conceived without having participated in planning and without evaluating its accomplishments. Evaluation of the competencies that least apply in practice or of those components occupying lower places of application, exposes, again, the competency of strategic management. A tendency to seeing nursing professionals as executors and not as strategists is noted.

Formation of competencies

Regarding the formation of competencies, the discussion must focus on the importance of opting, within the curricular field, for systemic, integrating, trans-disciplinary views, contextualized to address this issue, given that the concept as such is complex; similarly, is the context in which it is applied. In this sense, some of the experts consulted and other authors who have been working on the theme for some time coincide in considering that the simple and instrumental conception of the competencies must be overcome. This is the case of Tobón,[21] who defines them as "complex processes that people set into action – performance – creation to solve problems and carry out activities (of daily life, as well as social and labor-professional life), contributing to the construction and transformation of reality, which integrate knowing how to be (self-motivation, initiative, and collaborative work with others) with knowing how to do (performance based on procedures and strategies) in systemic context, and knowing how to recognize (analyze, interpret, and discuss), bearing in mind the specific requirements of the environment (conditions of eligibility), personal needs, and processes of uncertainty, with intellectual autonomy, assumption of the consequences of the actions, and search for human welfare".

The theoretical review of the theme of formation of competencies also showed other findings similar to those proposed during the practical consultation aimed at curricular experts, which are important to consider in this discussion. The first indicates that education must center on the comprehensive formation of human beings who have the capacity to manage their own life project; not only human beings trained to do work.[21,26] In addition, it must prepare students to confront the uncertainty of a changing world, both within a political as in social and labor contexts.[21,24-26] It must also go from being an education centered on teaching to education centered on learning,[19] which favors meta-cognitive processes,[25,27] critical apprehension of reality, and comprehension of the systems that comprise it to intervene it and transform it, given that only thus can we favor the formation of strategic thought in students.[27]

From other perspectives, it is also considered that curricular design, modalities, and learning-teaching methods, as well as evaluation criteria and procedures must be coherent with the aforementioned. Likewise, some methodologies are privileged, like the case study, learning based

on problems, cooperative learning, and the learning contract.[28] It is also considered necessary to plan and sequentially expose the set of experiences to be developed with the students throughout the teaching learning process to achieve the competencies proposed. The curricular process must be intentional, reasoned, and deliberate.[21,28] To end, it is important to add that the formation of the nursing management competencies identified will only be accomplished if this process is part of an educational project centered on competencies characterized by pertinence and theoretical and methodological coherence. This requires for the individuals involved to have sufficient motivation and understanding of the theme; thereby, the first strategy to implement should be the collective reflection to that respect, given that, as already noted, this type of formation implies going from a paradigm centered on teaching to another centered on learning; besides, it requires no longer thinking of competencies in instrumental manner and starting to conceive them as complex processes that people set into action in life and not only in the labor world.

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