

## Teaching science in nursing: challenges of learning through research in the undergraduate context

*Ensino da ciência na enfermagem: desafios do aprender pela pesquisa no contexto da graduação*  
*Enseñanza de la Ciencia en Enfermería: retos del aprender para la investigación en el contexto del pregrado*

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### EDITORIAL

The dynamics of the times reiterate the challenge for the professions to keep up to date in the face of the demands that require knowledge from professionals to face social problems and improve people's quality of life and well-being. Therefore, it is in their ability to adapt and to provide the required responses to the uncertainties that are revealed in the aspects of sociopolitical changes, social inequities, and biological changes, as observed in the COVID-19 pandemic, that a profession is kept alive and strengthened in the course of history.

However, such adaptive flexibility requires ontological vigilance so that the identity of a profession does not perish before the global movements of science, since being political as well, such movements reveal interests capable of projecting hegemonic knowledge and segregating emerging knowledge<sup>(1)</sup>. For this reason, Nursing, which is a profession, academic discipline, and science in development, must be understood according to its ontology for an epistemological identity delimited in the sciences of the imprecise and related fields. Therefore, it must be conceived as an area of knowledge whose specificities require methodological domains that contemplate the disciplinary nature of the profession, without this labeling Nursing as an underdeveloped Science.

In the current conjuncture, it is therefore fundamental that nurses' training allows coherence with the demands of a plural society that has gone through a severe pandemic; that is inserted in an accelerated dynamic of consumption and sharing of information; and that requires assertive decision-making based on the best evidence, capable of supporting the professional and protecting the patient.

Humanity requires nurses the ability to fulfill their social role. Thus, in addition to the issues imbued in the art of care, nursing Science must be the foundation of nursing practice. Therefore, the understanding of research as a formative principle<sup>(2)</sup> of the student is corroborated, and the undergraduate course is a strategic context for awakening their scientific spirit. Furthermore, as a space for human interactions for the connections of nursing know-how, the undergraduate course may favor the rupture of the thought that places science teaching as an object of exclusive value to *stricto sensu* graduate courses.

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Despite the above, it should be noted that teaching research is not synonymous with teaching science, although the latter results from the former. Thus, not all research reaches science<sup>(3)</sup> and this should be problematized when nursing students are subjected only to the linear and decontextualized teaching of research that results, at most, in a set of methodological procedures. This is, therefore, a fragmented practice whose weakened connections undermine the achievement of meanings about the nature of science that underlies the knowledge revealed in the research results.

To learn science in undergraduate studies, research must be practiced from a relational perspective by students and teachers, because knowledge itself is a relational phenomenon<sup>(4)</sup> whose interactions should be able to present meaning to those involved. This process results in meaningful learning - which involves the production of meanings - without which it is not possible to establish connections between the cognizing subject (student) towards (projected/constructed image) the object of interest of knowledge<sup>(5)</sup>.

Therefore, the involvement of nursing students in science teaching should not be limited to their participation in an isolated research discipline or their undergraduate thesis. Thus, among the challenges of science teaching is the teacher's ability to arouse the student's interest in research and to present connections with the reality experienced by him/her during the undergraduate course. In this perspective, the student's critical capacity should be the focus of learning through research that begins with the development of skills to know and to want to question reality, as well as to have a genuine interest in scientific answers. However, for this to occur, the teacher must assume his or her role before science and the formation of the future nurse. The teacher, even if he/she does not intend to become a professional researcher, needs to think of him/herself as a teacher-researcher, capable of not only consuming research with his/her students but also producing new scientific knowledge<sup>(2)</sup>

In this sense, the practice of the college professor is only coherent with his social role when, among other challenges, he assumes research as the formative principle of the student and science as the matrix that maintains current and pertinent knowledge with the nature of the profession in which he is in charge of forming human resources. Otherwise, there is the risk that the teacher will remain disconnected from the current demands of society and knowledge, and the student, a future professional, will be born obsolete for the job market. However, as a relational process, the teaching of science does not need to occur only in the teacher-student relationship, but also in the interactions that can be established in research groups, especially in those that involve the nursing professional, because, in this way, the student will be able to envision other possibilities for the understanding of nursing science.



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