

## Meaningful learning: theory as a framework for the elaboration of mini-courses by nursing undergraduate students\*

### Aprendizagem significativa: a teoria como um arcabouço para elaboração de minicursos por acadêmicos de enfermagem

### Aprendizaje significativo: la teoría como un arcabuz para la elaboración de mini cursos por académicos de enfermería

Received: 19/01/2018  
Approved: 05/10/2018  
Published: 29/01/2019

Júnia Lanny Sousa Silva<sup>1</sup>  
Larissa Cândida Melo<sup>2</sup>  
Bibiane Dias Miranda Parreira<sup>3</sup>

This study aims at reporting the experience of nursing undergraduate students who are part of the *Programa de Educação Tutorial* (Program of Tutorial Education), regarding the planning and development of mini-courses as extracurricular activities. It sought to describe how these activities are elaborated in a public university, and had as its theoretical and methodological framework the Theory of Meaningful Learning, proposed by David Ausubel. This theory highlights two conditions for learning to be meaningful. The first is related to the integration between the new knowledge and the previous knowledge of the student, and the second relates to the need for the content being presented to be logical and psychologically meaningful. Thus, there are many reasons that lead students to seek extracurricular activities, such as mini-courses, and this requires them to have autonomy and responsibility, which, therefore, also has a connection to the search for new and coherent knowledge.

**Descriptors:** Education nursing; Knowledge bases; Learning.

Este estudo tem como objetivo relatar a experiência de acadêmicos de enfermagem integrantes do Programa de Educação Tutorial, quanto ao planejamento e desenvolvimento de minicursos como atividade extracurricular. Procurou-se descrever como são elaboradas essas atividades numa universidade pública, tendo como arcabouço teórico e metodológico a Teoria da Aprendizagem Significativa, proposta por David Ausubel. Essa teoria destaca duas condições para que a aprendizagem seja significativa, sendo que a primeira se refere à integração de novos conhecimentos aos conhecimentos preexistentes do aprendiz e a segunda à necessidade de que o conteúdo apresentado, seja lógico e psicologicamente significativo. Desta forma, vários são os motivos que levam os estudantes a buscarem atividades extracurriculares como os minicursos, e essa busca exige que os mesmos tenham autonomia e responsabilidade, o que tange também, nesse sentido, a busca por conhecimentos novos e coerentes.

**Descritores:** Educação em enfermagem; Bases de conhecimento; Aprendizagem.

Este estudio tiene como objetivo relatar la experiencia de académicos de enfermería integrantes del Programa de Educación Tutorial, como el planeamiento y desarrollo de mini cursos como actividad extracurricular. Se buscó describir cómo son elaboradas estas actividades en una universidad pública, teniendo como arcabuz teórico y metodológico la *Teoría del Aprendizaje Significativo* propuesta por David Ausubel. Esta teoría destaca dos condiciones para que el aprendizaje sea significativo, siendo que la primera se refiere a la integración de nuevos conocimientos a los conocimientos preexistentes del aprendiz y la segunda es referente a la necesidad de que el contenido presentado sea lógico y psicológicamente significativo. De esta forma, varios son los motivos que llevan a los estudiantes a buscar actividades extracurriculares como los mini cursos, y esa búsqueda exige que los mismos tengan autonomía y responsabilidad, lo que toca también, en este sentido, la búsqueda por conocimientos nuevos y coherentes.

**Descriptores:** Educación en Enfermería; Bases del conocimiento; Aprendizaje.

1 Undergraduate student in Nursing Member of the Programa de Educação Tutorial - PET Nursing. Federal University of Triângulo Mineiro (UFTM), Uberaba, MG, Brazil. ORCID: 0000-0002-5223-8147 E-mail: juniasssilva@gmail.com

2 Undergraduate student in Nursing Member of the Programa de Educação Tutorial - PET Nursing. UFTM, Uberaba, MG, Brazil. ORCID: 0000-0001-6862-300X E-mail: larissa-cmelo@hotmail.com

3 Adjunct Professor of the Nursing Graduate Course at UFTM, Uberaba, MG, Brazil. ORCID: 0000-0001-7369-5745 E-mail: bibianedias@yahoo.com.br

\***Founding:** Higher Education Secretariat at the Ministry of Education/SESU-MEC.

## INTRODUCTION

**E**ducational transitions, such as the one from high school to higher education, bring on their wake many changes, which require the students to have autonomy. Being autonomous means that the individual is clear, safe and stable about themselves, with structured and intentional behaviors as they seek objectives<sup>1</sup>.

A higher level of autonomy is understood to be related to a better adaptation to the academy, thus relating to how well the undergraduate student can correspond to the academic demands and be successful. The autonomy leads the student to become aware of the importance of constantly seeking knowledge and building their social and professional identity.

Therefore, the presence of autonomy also enables the student to seek knowledge, and consequently, complementary activities, that is, activities beyond those that are proposed by the conventional syllabuses, which oftentimes have shortcomings, and do not present the students with opportunities to work and/or get a more in-depth look regarding certain subjects, developing abilities and knowledge that are important for their professional formation. Thus, the student manages to seek other ways to complement their graduation, to overcome the shortcomings found in the regular education through the development of extra-curricular/complementary activities<sup>2</sup>.

The students who dedicate more time to the academic dimension, through participation in extracurricular activities, have a better academic performance, less chance of evasion, are more satisfied and integrated in the university context, and create a professional identity<sup>2</sup>, in addition to boost their start in the job market<sup>3</sup>.

Extracurricular activities include lectures, theoretical courses, discussion groups, optional subjects, participation in assistant professors extra classes, conferences, seminars, symposia, scientific initiation projects, teaching, research and extension projects, mini-courses, among others<sup>4</sup>.

To this end, the students of the Nursing Program of Tutorial Education (*Programa de Educação Tutorial - PET*) at the Federal University of Triângulo Mineiro (UFTM), hereby PET Nursing --a program developed by students under the tutelage of a professor, guided by the indissociable pillars that are teaching, research and extension, as a type of complementary/extracurricular activity --, planned and conducted mini-courses, which are short-duration events, aiming to present the broad strokes of a specific theme connected to the field of work of the audience<sup>5</sup>. The mini-courses provide positive and meaningful contributions to the formation of the students, seeking to increase their offer in the academy.

To this end, the PET, as the norms of the Ministry of Education require in the National Curricular Guidelines (2001) provides activities that strengthen the undergraduate courses and contribute to the formation of the student in all aspects<sup>5,6</sup>, in addition to enabling the knowledge acquired by the students to be disseminated. Similarly, Sousa et al.<sup>7</sup> highlight the possibility of carrying out researches in other fields of knowledge, to verify how does meaningful education take place, so that these findings allow for the presentation of new methodologies, the strengthening and the dissemination of the theory in the health field.

The involvement with extracurricular activities may also support the undergraduate students whose complaint is the distance between the theories thought in class and the professional practice<sup>3</sup>.

Therefore, this article aims at reporting the experience of nursing undergraduate students who are part of the PET, regarding the planning and development of mini-courses as extracurricular activities.

## METHOD

This is an experience report whose theoretical reference is the *Theory of Meaningful Learning*, by David Ausubel. The condition of men is that of not having all knowledge, discovering that it is necessary to

invest in a constant search for updated knowledge and in their actions in the world. That is the general basis of the educational process<sup>7</sup>.

A qualitative perspective in the narrative-descriptive format was used. The authors acted as protagonists in the development of this research - as nursing undergraduate students who are part of the PET-Nursing from the Federal University of Triângulo Mineiro. The starting point for the construction of this experience report is the reading of the records of these activities since they were implemented, in 2006.

This corroborates the theoretical proposition according to which new knowledge must be acquired from meaningful material, which is associated to the pre-existing knowledge of the students and lead them build meanings that are unique for them<sup>8</sup>. Meaningful learning is a constructivist approach. The National Curricular Parameters from 1997 consider it, believing that learning, to be meaningful, requires a strong association between the contents studied and the knowledge previously constructed by them<sup>9</sup>.

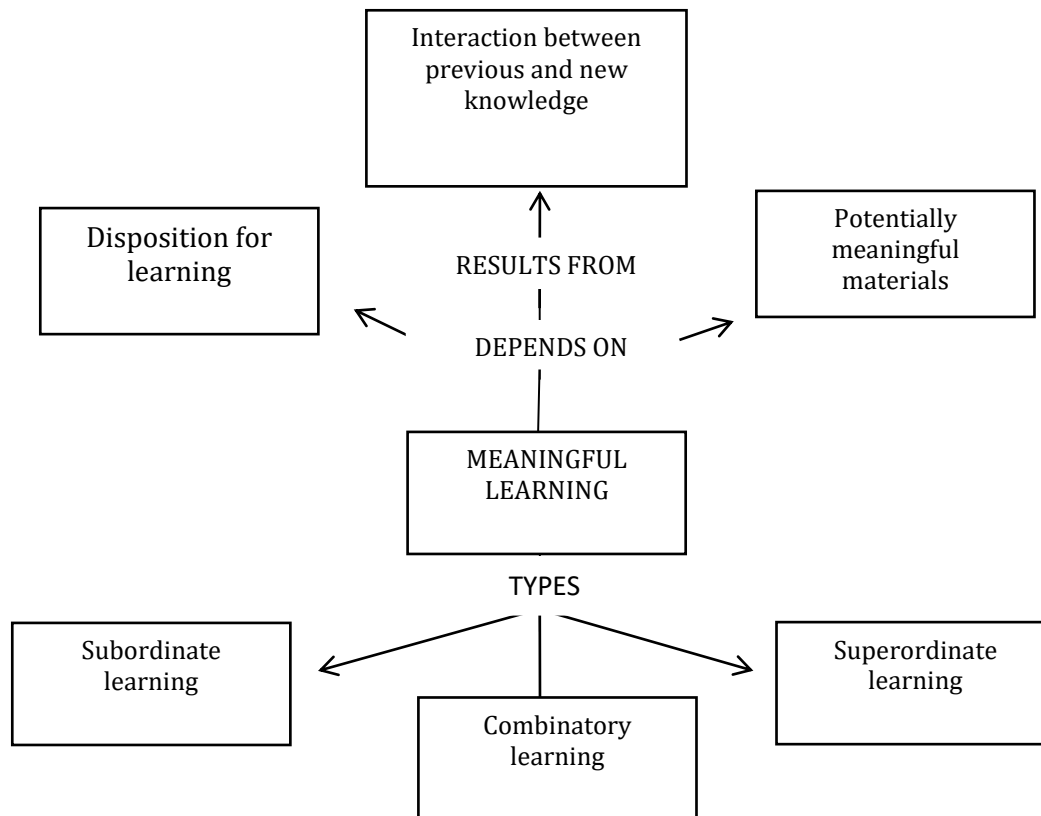
Therefore, meaningful learning is characterized by the interaction between previous and new knowledge. This interaction is not supposed to be literal and arbitrary, which means that, in this process, new knowledge can acquire meaning for the subject, and previous knowledge can acquire new meanings.

For learning to be meaningful, two conditions are required: the first, refers to the disposition of the student to learn, that means, to the association between new and pre-existing knowledge in a non-automatic way, so that pure memorization of new content is eschewed, but their incorporation and association to knowledge already installed is possible. In addition, they must want to relate the new knowledge to their previous cognitive structures, enriching this new knowledge and giving it new meaning<sup>10,11</sup>.

The second condition is the need for the content presented to be logical, coherent and psychologically meaningful, allowing the students to select what content they consider to be meaningful or not, each individual from their previous experiences. There are three types of meaningful learning: subordinate, superordinate, and combinatorial<sup>10</sup>.

Subordinate learning takes place when the new and potentially meaningful knowledge acquire meaning for the subject, who learns through a support process, cognitively based on general previous knowledge already had, that means, the person already has previous knowledge on a certain subject, and through meaningful learning this initial idea is modified, and becomes increasingly elaborated, being able to increase the potential for new knowledge and work as a berth for them<sup>11</sup>.

Image 1. Meaningful learning: forms and tools.



Source: Adapted from Moreira<sup>11</sup>.

The learning is superordinate when new knowledge start to subordinate those who originated it by a process of abstraction, induction and synthesis. This process happens as if the individual did not have a general idea about a certain topic, and gradually, through a process of meaningful learning and inductive reasoning, created associations between new knowledge, thus finding knowledge<sup>11</sup>.

Combinatory learning, on the other hand, takes place as the attribution of meaning to knew knowledge requires the interaction of many other sets of knowledge already in the cognitive structure of the person. However, it is not more specific than the original knowledge<sup>11</sup>.

**RESULTS**

Considering their preoccupation with the transformation and with a type of learning that integrates the previous and new knowledge of the students, the undergraduates in the PET-Nursing group organize mini-courses, which are activities

performed since the foundation of the university, in 2006.

A retrospective listing of the themes already discussed shows: periodicals and scientific databases, basic life support, tastings, PowerPoint, reading and elaboration of textual techniques, infusion therapy, basic notions of injuries and bandaging, and public speaking.

Averages from eighteen to thirty people participate of each mini-course, who include the tutor of the group, professors and other invited parties.

Since the first contact with the choice of the theme to be taught, the PET students and their tutor suggest content to be addressed, armed with the same feeling of interest about what is going to be taught, and with the desire to connect the new content to the experiences and knowledge already acquired during graduation.

The themes that are suggested and proposed by the group are discussed, so that the theme eventually chosen is potentially meaningful and more than just a theme to be explained, raising the motivation of the

students and opening their eyes to its relevance for a professional future whose special feature is that it is the art of caring.

The schedule for the activity is selected by a consensus of the group, so that all can participate, while also considering the availability of those who will teach the course.

Therefore, the location of the activity is selected according to the theme agreed upon. The number of meetings and the length of each mini-course varies according to the time required by each lecturer to discuss each theme, usually varying from one to four two-hour meetings. The pedagogical resources being used are also a decision of the lecturer, who usually use a slide presentation and/or debates, in a dynamic and interactive way.

At the end of each activity, all participants receive a participation certificate, and the members of the PET carry out a self-evaluation regarding their performance, knowledge, perceptions and expectations before and after conducting the mini-course.

To do so, guiding questions, elaborated by the members of the group themselves are applied before and after the activity. The "*petians*", aim to disseminate the knowledge acquired in society and in the university environment itself, with other students.

## DISCUSSION

Learning throughout life is essential for nurses in every level of practice. Learning according to their convenience, considering the interest in future opportunities of professional development, has been a much discussed theme recently, whenever there is an intention to implement new strategies for nursing teaching and professional development<sup>12</sup>.

For nursing students, stand out the need for the development and implementation of a teaching-learning strategy that values the relevant experiences of the group of students throughout their educational journey. This is done considering that the search for knowledge, if shared and

discussed with the other members of the group, encourages the interest and the initiative for knowledge integration, favoring the teaching-learning process<sup>13</sup>.

The initiatives for education, such as the one mentioned, which uses methods such as socialization, have been considered important activities for the students, since they allow them to share the knowledge and experience of others, which contributes for their personal and professional growth, their mistakes and right choices being paths to learning<sup>13</sup>.

The academic education has been permeated by the integration of the students in other learning initiatives in addition to those in the traditional syllabus, such as: carrying out lectures, theoretical courses and groups of discussion, as in the insertion of optional or mandatory subjects in the syllabus, in addition to the encouragement of scientific research, favoring different aspects and approaches, and the education using a broader range of content<sup>4</sup>.

One must consider that nursing is a science focused on the person, and one of its main characteristics is its strong commitment to society, to offer it responses which are adjusted to its needs, promoting the free-choice of individuals in health decisions and adapting to bioethical principles. Therefore, nursing professionals must, in their education, deal with a broad set of knowledge, that can serve as a base for optimal actions<sup>14</sup>.

Meaningful learning is, within this approach which seeks strategies for the complementary formation of future nurses, the capacity of encouraging changes in the attitudes towards the production of knowledge, making possible a learning process which is propelled by communication mechanisms that seek autonomy in the relations.

Currently, factors which limit the development and the professional formation are represented by the models of education proposed. Nurses do not recognize themselves in their teaching-learning approaches, which lead them to abandon the course<sup>15</sup>.

**CONCLUSION**

This study reiterates the importance of proactively carrying out extracurricular activities such as mini-courses. Many reasons lead students to seek these complementary activities, an action which requires autonomy.

From this perspective, the extracurricular activities related to the mini-courses made it possible to offer complementary initiatives to the education of nurses in the academic environment, initiatives that are guided by learning processes that seek to broaden the knowledge of the students.

Among the main aspects which favored meaningful learning in this experience, are: the collective suggestion of themes to be addressed, and the fact that the students end up feeling motivated to become integrated in the activities. An autonomous student is more secure and seeks behaviors towards new and coherent knowledge.

**REFERENCES**

1. Alves AF, Gonçalves P, Almeida L. Acesso e sucesso no ensino superior: inventariando as expectativas dos estudantes. *Rev Galego-Port Psicol Educ.* [Internet]. 2012 [cited in 15 jun 2017]; 20(1):121-31. Available from: [https://ruc.udc.es/dspace/bitstream/handle/2183/12112/RGP\\_20\\_2012\\_art\\_8.pdf?sequence=1&isAllowed=y](https://ruc.udc.es/dspace/bitstream/handle/2183/12112/RGP_20_2012_art_8.pdf?sequence=1&isAllowed=y)
2. Fior CA, Mercuri E. Formação universitária e flexibilidade curricular: importância das atividades obrigatórias e não obrigatórias. *Psicol Educ.* [Internet]. 2009 [cited in 12 ago 2017]; 29(1):191-215. Available from: <http://pepsic.bvsalud.org/pdf/psie/n29/n29a10.pdf>
3. Oliveira CT, Santos AS, Dias ACG. Percepções de estudantes universitários sobre a realização de atividades extracurriculares na graduação. *Psicol Ciênc Prof.* [Internet] 2016 [cited in 20 ago 2017]; 36(4):864-76. DOI: <http://dx.doi.org/10.1590/1982-3703003052015>
4. Silva NCM, Lunes DH, Resck ZMR, Soares MI, Souza Junior DI, Vieira NF. Estratégias de ensino das terapias alternativas e complementares na graduação em enfermagem: revisão integrativa. *Rev Eletrônica Enferm.* [Internet] 2013 [cited in 16 jun 2017]; 15(4):1061-7. DOI: <http://dx.doi.org/10.5216/ree.v15i4.20568>
5. Ministério da Educação (Br). Programa de orientação tutorial-PET: manual de orientações básicas. Brasília, DF: Ministério da Educação; 2006. 25p. Available from: [http://portal.mec.gov.br/index.php?option=com\\_docman&view=download&alias=338-manualorientabasicas&category\\_slug=pet-programa-de-educacao-tutorial&Itemid=30192](http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=338-manualorientabasicas&category_slug=pet-programa-de-educacao-tutorial&Itemid=30192)
6. Fernandes JD, Rebouças LC. Uma década de Diretrizes Curriculares Nacionais para a Graduação em Enfermagem: avanços e desafios. *Rev Bras Enferm.* [Internet]. 2013 [cited in 15 de mar 2017]; 66(1):95-101. Available from: <http://www.scielo.br/pdf/reben/v66nspe/v66nspea13.pdf>
7. Sousa ATO, Formiga NS, Oliveira SHS, Costa MML, Soares MJGO. A utilização da teoria da aprendizagem significativa no ensino da enfermagem. *Rev Bras Enferm.* [Internet]. 2015 [cited in 16 set 2017]; 68(4):713-22. DOI: <http://dx.doi.org/10.1590/0034-7167.2015680420i>
8. Ausubel D. Aquisição e retenção de conhecimentos: uma perspectiva cognitiva. Lisboa: Plátano Edições Técnicas; 2000. Apresentação da teoria da assimilação da aprendizagem e da retenção significativas; v. 1, p.1-19. Available from: [http://www.uel.br/pos/ecb/pages/arquivos/Ausubel\\_2000\\_Aquisicao%20e%20retencao%20de%20conhecimentos.pdf](http://www.uel.br/pos/ecb/pages/arquivos/Ausubel_2000_Aquisicao%20e%20retencao%20de%20conhecimentos.pdf)
9. Ministério da Educação (Br). Parâmetros Curriculares Nacionais: introdução aos parâmetros curriculares nacionais. Brasília, DF: Ministério da Educação; 1997. Available from: <http://portal.mec.gov.br/seb/arquivos/pdf/livro01.pdf>
10. Pelizzari A, Kriegl ML, Baron MP, Finck NTL, Dorocinski SI. Teoria da aprendizagem significativa segundo Ausubel. *Rev PEC.* [Internet]. 2002 [cited in 20 set 2017]; 2(1):37-42. Available from: <http://portaldoprofessor.mec.gov.br/storage/materiais/0000012381.pdf>

11. Moreira MA. Afinal o que é aprendizagem significativa? Rev Currículum [Internet]. 2012 [cited in 10 jun 2017]; 25(1):29-56. Available from: <http://publica.webs.ull.es/upload/REV%20CURRICULUM/25%20-%202012/02.pdf>
12. Nedder MM, Levine SA, Galligan C, Avery KR, Eagan-Bengston E, Reilly KM. Blogging as innovative method of peer-to-peer educational sharing. Crit Care Nurse [Internet]. 2017 [cited in 16 set 2017]; 37(1):1-9. Available from: <http://ccn.aacnjournals.org/content/37/1/e1.full.pdf+html>. DOI: 10.4037/ccn2017642.
13. Hermida PMV, Barbosa SS, Heidemann ITSB. Metodologia ativa de ensino na formação do enfermeiro: inovação na Atenção Básica. Rev Enferm UFMS. [Internet]. 2015 [cited in 25 out 2017]; 5(4):683-691. Available from: <https://periodicos.ufsm.br/reufsm/article/view/16920/pdf>. DOI: 10.5902/2179769216920
14. Fernández-Cervilla AB, Dorado-Piris AI, Cabrer-Vives ME, Barquero-González A. Esta-

- do atual do ensino de terapias complementares na formação superior de enfermagem na Espanha. Rev Latinoam Enferm. [Internet]. 2013 [cited in 25 out 2017]; 21(3):1-8. Available from: [http://www.scielo.br/pdf/rlae/v21n3/pt\\_0104-1169-rlae-21-03-0679.pdf](http://www.scielo.br/pdf/rlae/v21n3/pt_0104-1169-rlae-21-03-0679.pdf)
15. Myra Viljoen RN, Isabel Coetzee RN, Tanya Heyns RN. Critical care nurses' Reasons for poor attendance at a continuous professional development program. Am J Crit Care [Internet]. 2017 [cited in 10 out 2017]; 26(1):70-6. Available from: <http://ajcc.aacnjournals.org/content/26/1/70.full.pdf+html>. DOI: 10.4037/ajcc2017412

#### CONTRIBUTIONS

**Júnia Lanny Sousa Silva** and **Larissa Cândida Melo** took part in the creation, design, analysis and data interpretation, as well as in the writing of this article. **Bibiane Dias Miranda Parreira** took part in the writing of the article and in its critical review.

#### How to cite this article (Vancouver)

Silva JLS, Melo LC, Parreira BDM. Meaningful learning: theory as a framework for the elaboration of mini-courses by nursing undergraduate students. REFACS [Internet]. 2019 [cited in *insert day, month and year of access*]; 7(1):82-88. Available from: *Insert Access link*. DOI: *insert DOI link*.

#### How to cite this article (ABNT)

SILVA, J. L. S.; MELO, L. C.; PARREIRA, B. D. M. Meaningful learning: theory as a framework for the elaboration of mini-courses by nursing undergraduate students. **REFACS**, Uberaba, MG, v. 7, n. 1, p. 82-88, 2019. Available from: *<insert access link>*. Access in: *insert day, month and year of access*. DOI: *insert DOI link*.

#### How to cite this article (APA)

Silva, J.L.S.; Melo, L.C. & Parreira, B.D.M. (2019). Meaningful learning: theory as a framework for the elaboration of mini-courses by nursing undergraduate students. *REFACS*, 7(1), 82-88. Recovered in: *insert day, month and year of access insert access link*. DOI: *insert DOI link*.