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EXPERIENCE RELATE

ACADEMIC MONITORING OF ADULT HEALTH FROM THE PERSPECTIVE OF COGNITIVE THEORY: AN EXPERIENCE REPORT

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ABSTRACT

Objective: To report the experience of a monitoring activity in Higher Education from the perspective of the cognitivist approach of teaching. **Method:** Experience report on the monitoring activity in the subject of Adult Health, in the Nursing course, in a Higher Education Institution (HEI) of the Federal District, conducted in the second half of 2019. We used different didactic instruments that addressed the diseases included in the teaching plan of the subject of Adult Health, such as the games called hangman, tic-tac-toe and find the pair, which were adapted for the monitoring context, as well as directed studies, clinical cases and conceptual maps. We used cognitivist theory for theoretical framework. **Results:** The use of the didactic instruments presented positive results in the monitoring practice, since they contributed to the creation of environments that facilitated the teaching-learning process, the exchange of experience, the cooperation, the association of theoretical and practical knowledge, the autonomyand the socialization among the monitors. **Final considerations:** We believe in the importance of disseminating this report to encourage other students, teachers, researchers and educators to learn about and use the cognitivist teaching approach.

Keywords: Teaching. Learning. Education, Nursing.

INTRODUCTION

The monitoring consists in a teaching and research activity that reinforces the idea of the pillars of the university, enabling the student to approach the experience with the teaching practice and the better integration between both, which enables the student-monitor to deepen theoretical and practical knowledge of different subjects and provide opportunities for teaching-learning, in accordance with thesyllabusof a given academic subject[1-4].

The monitoring activity allows the rupture of the student's paradigm as a passive agent and enhances the association established theory and practice, stimulates the student's creativity and reasoning, in addition to enabling more expression and autonomy to him/her[5-6].

A study developed in the United States, with the objective of examining the impacts of a monitoring program on exam scores and failure rates among nursing students, showed better grades and low failure rates among students who attended monitoring[7].

According to the National Curricular Guidelines (DCN, as per its Portuguese) of higher education courses[8], the use of active methodologies in monitoring activities is recommended, as it stimulates the critical reflective thinking of those involved, the autonomy and the ability to solve problems in the teaching-learning process[9-12].

The cognitivist is among the teaching approaches that enable the use of the active methodology, which emphasizes that learning is structured as a process of acquiring schemes, occurs from changes in the individual's cognitive structure, in the way he/she perceives, selects, organizes the objects and events around him/her, as well as the meanings that he/she attributes to them[13].

In this approach, learning can occur from

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cooperative activities, which motivate individuals to learn, such as games and case studies, in order to lead them to investigate, think and then develop critical-reflective thinking, since motivation is recognized as an important element in the learning process, as the individual's internal needs, curiosities and expectations are what lead him/her to learn [13].

Bearing in mind that monitoring is important in the training process, that the use of active methodology contributes to the teaching-learning process and that the cognitive approach allows the use of active methodology, we believe that this study can contribute to providing greater influence on this teaching approach in accomplishing the monitoring of the different areas of knowledge and is justified by the need to seek discussions around the theme. Accordingly, this article has the objective of reporting the experience of a Higher Education monitoring from the perspective of the cognitive approach of teaching.

METHOD

Descriptive study,typified as an experience report, performed from the experience of four monitors in the subject of Adult Health, held in the Nursing course, in a private Higher Education Institution (HEI) in the Federal District, in the second half of 2019.

Every half, this HEI publishes notices of extracurricular activities in the scholarship and/or volunteer modality for students from the nursing course, including academic monitoring. There is a selection process based on the student's grade average and an interview. When selected, the student begins his/her activities under the supervision of the professor responsible for the subject, which in this case was Adult Health, which has the objective ofaddressing the health-disease process, the pathophysiology of illnesses and the application of the Nursing Process for adult care at different levels of health care.

The monitoring activities took place in accordance with the programmatic content of the subject, three days a week, on the premises of the HEI, in the morning and afternoon shifts, with a weekly course load of six hours. On average, 15 students participated in the activities, and this number increased on dates close to the exam period.

Problem situations were used throughout monitoring (games, directed studies, clinical cases and conceptual maps) which implies proposing challenges to students and requires active participation by them for meaningful learning through observation, experimentation and confirmation, relating previous knowledge and new learning schemes linked to the cognitive approach of teaching, which was used as a theoretical framework for the discussion of this report[13,14].

RESULTS AND DISCUSSION

Preparation of teaching instruments

The monitoring consisted of accomplishing theoretical-practical activities and addressed the contents of the subject of Adult Health, such as, for example, concepts, pathophysiology, signs and symptoms of diseases, based on the use and adaptation of the different didactic instruments already mentioned, as described in Table 1.

For meaningful learning to occur, schools must provide potential spaces for the development of educational practices that enable concrete learning situations[15]. Therefore, during the monitoring period, the different teaching strategies mentioned above were used.

The directed study enables the student to develop skills on different topics and encourages him/her to be the protagonist of his/her learning, while it favors an active approach, stimulates the ability to analyze, interpret and evaluate, incites cognitive processes and enables the development of creativity, critical thinking and content fixation[16].

During the preparation of the directed studies, the monitors developed the ability to synthesize the content in order to emphasize the main ideas of the addressed topics. A research conducted in Mato Grosso, with students of the Engineering course, whose objective was to check the influence of the use of directed study on learning, showed that its application favored the development of creativity and critical thinking[17].

Regarding the use of games, the "hangman" was adapted to work nursing care for patients with dysfunctions in the different organic systems. This game consisted of revealing the

clinical manifestations of the addressed diseases with the help of tips that were associated with the pathophysiological changes of the individuals[18]. When preparing this activity, the monitors were required to remember the concepts of the established diseases and the signs/ symptoms corresponding to each one.

Table 1. Distribution of theoretical content taught in the subject and monitoring of Adult Health and the respective strategies used, Brasilia-DF, 2019.

Theoretical content of the subject and Adult Health monitoring	Strategyused in monitoring	Objective
Nursing care for patients with cardiovascular dysfunctions and gastrointestinal tract dysfunctions.	Directed Study.	To urge the student to consolidate the knowledge acquired from the referred subject through critical thinking and the association of ideas, in order to develop intellectual autonomy.
Nursing care for patients with stroke, as well as with genitourinary and renal dysfunctions.	Directed Study.	
Nursing care for patients with respiratory system dysfunctions and with hematological disorders.	Clinical case and games (Hangman; Tic-Tac-Toe and Find the Pair).	To enable the students to develop clinical reasoning and critical thinking, search for information about the theme, adopt a decision-making model and associate previous knowledge acquired in various subjects of the Nursing course with the content addressed in Adult Health.
Nursing care for patients with endocrine/metabolic system dysfunctions and hematological disorders.	Clinical case and games (Hangman; Tic-Tac-Toe and Find the Pair).	
Nursing care for patients with cancer and with endocrine/metabolic system dysfunctions.	Clinical case and games (Hangman; Tic-Tac-Toe and Find the Pair).	
Review of the addressed subjects.	Clinical case and games (Hangman; Tic-Tac-Toe and Find the Pair).	To stimulate the students' long-term memory, in order to enable them to make associations and relationships of the subjects addressed during the half.

Source: The authors.

Other games used were "tic-tac-toe" and "find the pair"[19]. Regarding the "tic-tac-toe", adaptations were made in order to address the pathophysiology of diseases and their clinical manifestations. At first, the students were divided into groups, each group received a symbol that represented it, so that they should draw and enumerate in the matrix of the tic-tac-toe game.Each number was equivalent to a question about a particular disease previously taught in the subject, in conjunction with one of the assumptions of the cognitive approach, which establishes that the ability to learn new concepts depends on the individual's previous knowledge[13].

The game "find the pair" was adapted by the monitors based on their knowledge about the memory game[19]. This game consisted of twelve types of diseases and the objective was to find the largest number of pairs of cards that presented the relationship between the disease and its pathophysiological mechanisms. Accordingly, the cards were placed on the table, and the scheduled time was 5 to 10 minutes for the students to choose the cards (with questions), look for the answers, and form the pairs, since the questions and their answers had the same shape and color.

Application of the Didactic Instruments

When understanding motivation as essential for learning[13], we noted that the didactic instruments used in this monitoring contributed to the creation of motivating environments that facilitated the exchange of experience and the cooperation among the monitors, by prioritizing, fostering and encouraging the development of their knowledge.

The ludic and active experience provides the student with better absorption of content and sharing of new knowledge[10], in addition to enabling the recovery and/or development of

cognitive functions through the senses and visual and/or auditory stimuli used in games. It is recognized that cognition happens as the brain perceives, learns, remembers and thinks about all captured information, through the five senses, smell, taste, vision, hearing and touch, related to the perception of the environment and external internal[13].

When acquiring knowledge from different subjects, the information is retained and obtained with precision and, in the long or short term, through the stimuli presented during the games, the student tends to internalize what he/she has learned, modifying the pre-conceived concepts and thus understanding the new content[20].

In the case of this monitoring, we noted that the games used provided the monitors with ability to deepen their knowledge about the addressed contents, thus developing creativity to create and conduct the dynamics and add new knowledge in the teaching-learning process.

In accordance with the monitors' experience, a survey conducted in Belém/Pará, with a sample of 69 elementary school students, used recreational games with the objective of evaluating how such practice, during classes, could influence their learning. The results showed that the use of games facilitated the teaching-learning process of students and aroused their interest and motivation to learn more efficiently[20].

With regard to the use of clinical cases, the literature highlights the relevance of using this strategy to support nursing actions and stimulate the articulation among the subjects of the curriculum of the Nursing course to support health care practice[21].

The psychologist and pedagogue Gagné, who contributed to the conception of cognitive learning, described that learning requires opportunities for exposure to credible role models, such as, for example, the use of real clinical cases related to nursing practice and persuasive arguments to maintain the development of new solutions to problems[13]. It is understood, therefore, that the clinical case enables the student to develop clinical reasoning and critical thinking for decision making and the establishment of nursing care equivalent to the interventions experienced in real life situations.

When using the clinical cases during this monitoring, we noted that the clinical reasoning of the monitors was sharpened, and then their creativity and the desire to seek new knowledge was awakened. When preparing each case, it was necessary to scientifically improve the worked contents, which enabled us to broaden the monitors' view of the pedagogical process, experience the teaching work and perceive the importance of preparing educational activities.

Regarding the conceptual map, we noted that it is a tool that helped the monitors to relate and better understand the addressed contents. According to Ausubel, who developed the concept of meaningful learning from the cognitive processes, concepts are developed, prepared and differentiated as a result of successive interactions, as meaningful learning occurs[13].

Conceptual maps are instruments that enable us to clarify conceptions about concepts with the objective ofrepresentingmeaningful relationships among them. They must be hierarchical, in order to begin with the more general concepts at the top and arrange the more specific and less inclusive concepts at the bottom[22].

Similarly, when describing progressive differentiation in meaningful learning, Ausubel suggests that the more general and more inclusive ideas of the subjects should be presented at the beginning, and then be progressively differentiated, since grasping differentiated aspects of an inclusive whole beforehand is easier for humans than reaching the whole from its differentiated parts[13].

It appears that the directed studies, the games, the clinical cases and the conceptual maps used throughout the monitoring were interesting strategies for meaningful learning, since it provided the monitors with reflection, attribution of meanings in each activity held, in addition to interaction with the group of monitors and with other participants.

We should underline that the learning is meaningfulwhen, through different stimuli, new concepts are elaborated from previous knowledge. Thus, the student will develop the ability to anchor, organize, integrate and understand the content, constituting a meaningful learning useful for the transformation of professional practice. Moreover, we should highlight that, with regard to the teaching-learning process, meaningful learning is anchored to the cognitive theory [23].

According to the Meaningful Learning theory,

there are two types of learning that are not separate, but are continuous. Mechanical learning, where new information/concepts never seen before, has no anchor point in the individual's cognitive structure and does not make any association with concepts that already exist.Thus, they are distributed arbitrarily in the cognitive structure. Meaningful learning, where the new information interacts with the anchor points (concepts already available in the cognitive structure); and, from these points, the structure modifies and becomes the anchor point for the next associated information that will follow [14]. Thus, meaningful learning occurs when new information is anchored in relevant pre-existing concepts in the cognitive structure of the learner[13,24].

In view of this, it is essential to accomplish diagnostic evaluations about previous knowledge, available in the student's cognitive structure and, if deemed necessary, new information about the new content must be inserted. In addition to the use of new information to develop the skills necessary for the acquisition of meaningful learning, the individual's interest in learning must also be taken into account, as well as the didactic material prepared by the educator, which must be potentially relevant to the student'scognitive structure[15].

Accordingly, we note that the way the students organize the monitoring activities, as well as the dynamics used, provided opportunities for anchoring new content and contributed to their meaningful learning. The construction of knowledge took place through the sharing of knowledge, experiences, ideas, information, responsibilities and decisions between the monitors and other students, through the use of reformulated didactic resources, which instigated the investigation, the solution of problems and the cooperation among those involved.

Accordingly, a study conducted in a public school in Jequié/Bahia, with 32 high school students from aquilombola community, whose objective was to report the applicability of the cognitive theory approach in health education activities, showed that the cognitive approach provided the students with greater attention during the workshop, where there was greater clarification about doubts,which consolidated the participation of these students through the construction of dynamics among them[25].

Thus, experiencing this monitoring activity developed the ability to work in teams, awakened the interest in teaching, improved knowledge, promoted the communication of information in a clear way and provided autonomy for decision making, in addition to enabling the exchange of knowledge among student-monitor-teacher, something that is so important for the development of the human being in the cognitive, relational and affective aspects, which was facilitated by the use of the cognitivist teaching approach.

FINAL CONSIDERATIONS

We noted the importance of knowledge and theoretical background regarding existing teaching approaches, such as the cognitive approach used in this report, so that they can be applied in different academic activities, such as monitoring, according to the established assumptions of each employed approach, with a view to improving the teaching-learning process and, consequently, improving the quality of academic training.

Moreover, we understand that the use of this teaching-learning approach contributed to achieving the objectives sought in each activity proposed in the monitoring in question. Thus, we believe in the importance of disseminating this report to stimulate students, teachers, researchers and educators to learn about and use the cognitivist approach in different academic activities, as well as to instigate more scientific production on this theme.

MONITORIA DE SAÚDE DO ADULTO SOB A PERSPECTIVA DA TEORIA COGNITIVISTA: UM RELATO DE EXPERIÊNCIA

RESUMO

Objetivo: Relatar a experiência de uma monitoria do Ensino Superior sob a perspectiva da abordagem cognitivista de ensino. **Método:** Relato de experiência sobre atividade de monitoria, na disciplina de Saúde do Adulto, do curso de Enfermagem, em uma Instituição de Ensino Superior (IES) do Distrito Federal, realizado no segundo semestre de 2019. Foram utilizados diferentes instrumentos didáticos que abordavam as doenças que contemplam o plano de ensino da

disciplina Saúde do Adulto, a exemplo o jogo da forca, jogo da velha e ache o par, que foram adaptados para o contexto da monitoria, além de estudos dirigidos, casos clínicos e mapas conceituais. Utilizou-se a teoria cognitivista para fundamentação teórica. **Resultados:** A utilização dos instrumentos didáticos apresentou resultados positivos na prática da monitoria, visto que contribuíram para a criação de ambientes que facilitaram o processo de ensino-aprendizagem, a troca de experiência, a cooperação, a associação do conhecimento teórico e prático, a autonomia e a socialização entre as monitoras. **Considerações finais:** Acredita-se na importância da divulgação deste relato para instigar outros estudantes, docentes, pesquisadores e educadores a conhecerem e utilizarem a abordagem cognitivista de ensino.

Palavras-chave: Ensino. Aprendizagem. Educação em enfermagem.

MONITOREO DE LA SALUD DEL ADULTO BAJO LA PERSPECTIVA DE LA TEORÍA COGNITIVISTA: UN RELATO DE EXPERIENCIA

RESUMEN

Objetivo: relatar la experiencia de un monitoreo de la Enseñanza Superior bajo la perspectiva delenfoque cognitivista de enseñanza. **Método:** relato de experiencia sobre la actividad de monitoreo, en la asignatura de Salud del Adulto, del curso de Enfermería, en una Institución de Enseñanza Superior (IES) del Distrito Federal-Brasil, realizado en el segundo semestre de 2019. Fueron utilizados diferentes instrumentos didácticos que tratabanlas enfermedades que están insertadas en el plan de enseñanza de la asignatura de Salud del Adulto, a saber, el juego del ahorcado, tres en línea y encuentre las parejas, que fueron adaptados para el contexto del monitoreo, además de estudios dirigidos, casos clínicos y mapas conceptuales.Se utilizó la teoría cognitivista para la base teórica. **Resultados:** la utilización de los instrumentos didácticos presentó resultados positivos en la práctica del monitoreo, visto que contribuyeron para la creación de ambientes que facilitaronel proceso de enseñanza-aprendizaje, elintercambio de experiencia, la cooperación, la asociación del conocimiento teórico y práctico, la autonomía yla socialización entre los monitoreos. **Consideraciones finales:** se creeen la importancia de la propagación de este relato para fomentar a otros estudiantes, docentes, investigadores y educadores a conocer y utilizar el aporte cognitivista de enseñanza.

Palabras clave: Enseñanza. Aprendizaje. Educación en enfermería.

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