PROBLEM-SITUATION AS A TRIGGER OF THE TEACHING-LEARNING PROCESS IN ACTIVE TEACHING METHODOLOGIES

Situação-problema como disparador do processo de ensino-aprendizagem em Metodologias Ativas De Ensino

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ABSTRACT

Purpose: to describe the process of formulation of a Problem-Situation and of a learning module and reflect about the importance these in the formation of the speech-language pathologist. **Methods:** descriptive study of the elaboration process of a situation-problem and of a learning module of an undergraduate degree in Speech, Language and Hearing Sciences- a precursor experience in the area in which the entire curriculum structure is based on teaching methodologies Active. **Result:** the module "Child Language Study" occurs in the Cycle II of course and consists of nine Problem-Situations, discussed in two tutorial sessions with up to ten students and led by a tutor. The Problem-Situations, as well as the module, are developed by a committee of doctors professors and language experts, according to the Pedagogical Project of the Course. The third Situation Problem to be given to the students is titled - "Same characteristics but different diagnoses ... Why?"; the title has a role of stimulate the curiosity of students and present the main focus problem. All situations-problem are evaluated by professors and students for the purpose of promote constant improvements. **Conclusion:** the problematizing context built from the Problem-Situations allows the searching of responses daily, actively and autonomously, by the experience and discussion of the work in team, of the biopsychosocial aspects of the individual and ethical issues in professional practice. Thus enabling the formation of resolute professional, competent to improve their knowledge constantly and able to act in accordance with the Public Health practices of the country.

KEYWORDS: Problem-Based Learning; Health Education; Education, Higher; Speech, Language and Hearing Sciences

INTRODUCTION

The graduation courses in Speech, Language and Hearing Sciences were created, in Brazil, in mid-1960, but in December 9, 1981, that the profession was legally recognized, by the Law 6965/81[1].

Since that, the education of the speech therapist, as well as other health professionals, has been marked by welfare and rehabilitation practices, focused on the diagnosing diseases, in the individual care and guided in fulfilling spontaneous demands, inherent condition of private services that extended for public health services. However, today's society requires a competent professional to solve health problems of individuals and communities; a speech therapist that is nearest to social reality and to Public Health services. The insertion in these services, in order to understand the actions aiming the public,

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seeks to assert the comprehensive care and to develop promotional strategies, prevention and health recovery [2].

The number of speech therapists at various levels and public sector services of the Sistema Único de Saúde- SUS (Unified Health System) is still limited, and those that have this professional are inserted, primarily, in medium and high complexity services, such as clinics and hospitals, focusing, therefore, on diagnosis and rehabilitation. What also shows a gap of this professional in Primary Health Care (PHC) services and, although, recently, there has been a significant increase in the number of professionals in the Núcleos de Apoio à Saúde da Família- NASF. (Centers of Support for Family Health), this path has not yet been able to turn the reality of Speech, Language and Hearing Sciences in the context of Public Health, having a need to think and conduct practices focused on education in Health[3].

Accordingly, the attention turns to the Higher Education Institutions (HEI), aiming to train professionals with appropriate technical, ethics and politics education and an integrated view of knowledge, discussing the need for new forms of teaching and learning and, in this context, Active Teaching Methodologies are highlighted as a possibility to break with the traditional methods of teaching[4].

In a curriculum that uses the Active Methodologies (AM), the disciplines of traditional methodology are replaced by Teaching-Learning Modules (theoretical and practical). The practical Modules tend to employ the Questioning-Method (QM) - designed by Charles Maguerez - that uses real-world scenarios, lived in the community, for the learning of the student. The theoretical Modules, the focus of this work, use the Problem-Based Learning (PBL), which triggers learning with the Problem-Situations (PS), discussed in Tutorial Sessions (TS) [5,6].

In the context of the AM, specifically the PBL, the objective of this study is to describe the process of developing a Problem-Situation and a Learning Module, and to reflect the importance of these in the formation of the speech therapist.

■ METHODS

Descriptive and reflective study about the process of developing a PS and a learning theoretical Module of a graduation in a Speech, Language and Hearing Sciences course that began in March 2011. It is the first in Brazil to use, exclusively, in their curriculum, educational practices in Active Teaching Methodologies.

For the complement of the curriculum, the student must attend four Cycles, and each Cycle corresponds to a school year, which is divided into theoretical and practical Modules. Specifically, in the second and third cycles, each module aims to analyze the theoretical and practical assumptions of Speech, Language and Hearing Sciences in one of its areas of expertise.

The theoretical contents of each Module are presented in nine PS that are discussed in TS, formed by a group of eight to ten students and led by a tutor.

The PS are drawn up by a commission of expert professors in the area, according to the summary of each Module, established in the Pedagogical Project of the course. All the PS are evaluated individually by the students and the tutors at the end of each TS, being carried out online, through a link provided at the beginning of the academic year, being considered since the construction of knowledge to the possibilities of discussion, generated from the discussed problem.

The TS, of the same thematic Module, present contents that integrate and complement each other, gradually increasing the complexity of the discussions between the first and the last PS. The TS are responsible, therefore, to guide the students, being extremely important in the teaching-learning process in Active Methodologies.

The PS described here is part of the Module named "Study of Child Language", which the summary is: "Child development in cognitive, motor, language and emotional aspects, with emphasis on human communication. Objectives, functions and limits of the language evaluation. Discussion of the various evaluation procedures applied to children and adolescents." This module takes place in the second Cycle that has as main themes Childhood and Adolescence.

The description and analysis of this pioneer experience is based on the current literature, on the topic "Active Methodologies".

■ RESULTS

To contemplate the summary of the Pedagogical Project of the course, the Child Language Study Module consists of nine PS. The first one induces the student to discuss the linguistic concepts, its main thinkers and the importance of language for Speech, Language and Hearing Sciences studies. The second deals with normal development of speech and language and the major theories, as well as the understanding of the functions and aspects of language. In the third, the student studies the language changes and their implications in social and school development in children. In the fourth, the studies focus on speech disorders and the differentiation between these disorders and the language

ones. In the following, the studies are about the development of writing in humanity, the differences between oral and written language and, finally, the steps to their acquisition, as well as reading routes. In the sixth PS, the student had contact with possible writing changes, whether educational or cognitive. The last three PS work with disorders that have specific characteristics in communication changes, being addressed, respectively, stuttering, the pervasive developmental disorders and non-progressive chronic encephalopathy.

All PS are discussed in two TS, always conducted by a PhD , speech therapist and specialist in language professor. The organization of each TS runs through the same path. It consists in seven steps, beginning with the presentation of the PS by the tutor to the students and the group lecture; followed by the identification and elucidation of unknown terms; and the formulation, by the students, of explanatory hypotheses for the PS providing a first discussion, based on prior knowledge of students, about the probable foundations of these hypotheses. In the fifth step, the students set learning goals that were triggering anchors of the individual study.

Then, the TS is interrupted and the self-directed learning (SDL) begins. It is the time for the student to seek references and explanations for the solution of the PS. The search is independent and the tutor does not establish theoretical references that should be followed, which means that the student can search about the subjects in the various information sources, and can also listen to opinions of experts in the area. The next TS, as in the seventh step, the group discussed again the PS, facing new acquired knowledge, solving, together, the proposed problem.

As an example, the PS entitled - "Same features but different diagnoses ... Why?" is presented, the third to be delivered to students, during the Child Language Study Module. It is noteworthy that the title has an important role, since it aims to awake the curiosity of students and to present the main problem approach.

The PS was prepared objectively and directly, as shown: "Raquel and Luan, parents of Joaquim, four years old, were called in school, because of the difficulty that Joaquim had, among them, the lack of interaction with other children, since his speech was, in most of the times, unintelligible. Even the teacher could not understand him. Therefore, he was referred for Speech, Language and Hearing Sciences evaluation. During the evaluation process, the parents observed that the speech therapist investigated not only speech and language, but aspects of cognitive, sensory, perceptual, social and educational development, as well as requested a hearing evaluation before closing the diagnosis."

After the end of all TS, the students, as well as the tutor, carried out evaluations of the PS and, at the end of each Module, the answers were analyzed by the Module elaboration committee.

■ DISCUSSION

A learning Module on Active Teaching Methodologies is based on a range of situations that the students should know. The analysis of the situations leads professors, experts in the area, to determine which skills are required to acquire each, constituting the subjects studied. Each topic related to the cognitive sphere, is then transformed into a PS to be studied and discussed by students in the TS[7].

The construction of the PS demands of the professors an expanded view, integrated and integrating the essential themes to be studied, covering different aspects of the health-disease process most prevalent in the national epidemiological situation, with emphasis in their area of expertise and identifying the biopsychosocial dimensions. For this, they must follow certain principles, such as: to carry out a description of the phenomena discussed in the problem, in the most neutral way possible, to formulate the problem concretely, to minimize distractors in the text, to guide the learning to a limited number of items, and to contain items that use prior information of the students[8].

In addition, the problems must, necessarily, be opened. They must not present a single correct solution, but one or more possible solutions, so that, the student has the opportunity to engage in a speculation process, definition, data collection, analysis and redefinition of the problem. The less specific the problem is, the more likely the development of solution skills and autonomous studies[9].

In this work, the preparation of the Child Language Study Module is a responsibility of a committee composed by three expert professors in Language that held a doctorate in graduate programs of postgraduate studies in areas correlated with Speech, Language and Hearing Sciences, namely, Neuroscience, Psychobiology and Special Education, enabling the integration of the knowledge needed to build the Module, favoring interdisciplinary contents.

The PS should contain the essential themes, so that, the students can fulfill the curriculum and be able for professional practice[10], thus, the PS, described in this communication, considered important and commonly aspects found in professional practice of the speech therapist, namely: sex, age of the referral, the professional that referred to the speech therapy and the biopsychosocial

aspects involved. It was also considered the lack of knowledge of the performance of the speech therapist, as it is, still today, an aspect that deserves attention of the professional.

For this, the topics of study and learning, established by the commission for this PS, were: 1) to identify, characterize and differentiate the changes of language development, and 2) to analyze the implications of language disorders in social and educational development of children; and these could not be presented to students. It is noteworthy that these study objectives are achieved, since the text has triggers for this to occur, without deviating information in which the students can get lost.

The AM are based on ways of developing the process of learning, by using real or simulated experiences, in order to solve, successfully, challenges arising from the core activities of social practice, in different contexts[11]. In addition, the PS function is to generate doubts, imbalances or intellectual disturbances, so that, the student can outline the necessary path, in order to meet different solution possibilities[12]. The PS presents, therefore, a fundamental working tool within a Pedagogical Project that adopts the approach of PBL. That's because, for the TS to achieve the intended goals, it is essential that the PS contemplate the necessary curriculum for the professional qualification of the student[8].

In addition to the tutor's presence in the TS, the students should take turns acting as the coordinator and the secretary, during the Module, presenting as main functions, respectively: 1) to coordinate and lead the discussion, ensuring that all group members would participate in the Resolution of the problem and 2) to write down the points discussed, in order to prevent the group to deviate from the topic and that repetitions of topics already discussed occur [13]. The discussions took place respecting the seven steps of the TS, being essential the active participation of all students in the sense of changing the roles, in the way of presenting themselves and positioning, aiming, always, the construction of knowledge.

It is noteworthy that, in the fifth step, the objectives listed by the students should be the same, or similar, to what was sought by the elaboration committee of the PS, ensuring that the curriculum is fully contemplated. As noted in literature[8], when the goals do not match, the PS needs to be adjusted or discarded, because it did not show efficacy in the elucidation of the intended topics.

During the SDL, period for independent studies that occurs between the initial and the final discussions, the students have the autonomy to use books, articles, videos, consultations with specialists or other means, as long as they meet the learning objectives[14]. There is a control of topics to be studied, but the student is autonomous in searching answers, in the critical choice of the sources and in the synthesis of the information obtained, since the PBL is an educational methodology and not just informative, as commonly occurs in traditional teaching methods, encouraging students to actively seek their knowledge and take responsibility for their learning[11], justifying the behavior of the tutor in not establishing theoretical references to be followed by students.

Regarding the education and the level of knowledge of the tutor responsible for the TS, the option here was to define a professor of the elaboration committee, in other words, an expert in the area, as the tutor in the Module. However, despite being a relevant aspect, it is still controversial the literature on which the depth of specific knowledge that the tutor should have, to guide, effectively, the process of learning in the TS. It is noteworthy that the tutor's role is to mediate the group in the task of reaching the learning objectives and, according to some studies, for a better cognitive acquisition, the tutor has to be an expert on the topics covered in the PS that he will tutor, since the tutor can intervene in the construction of hypotheses or in the topics of learning that are being raised by students, without, however, revealing them the solution of the problem [15-17]. However, for others, it is not imperative that the professional needs to be an expert, however, his knowledge about the topic, desirably, must be sufficient to allow a redirection of the group in cases in which the discussions deviate from the shaft proposed by the problem [18,19].

Fact is that the professor's role in the perspective of AM, contrary to what one might think at first, earns a relevant status, while increasing their responsibilities when compared to conventional types of work. This is because the professor role goes beyond the transmission of knowledge, being central to the involvement of students with their learning, since the interaction between student and professor is described as a major source of motivation for the "learn to learn". The empathy with the professor facilitates the personal identification with what he presents, enabling the appreciation of the proposed activities and contents and the internalization of external requirements or demands [11,12].

The evaluation of learning is an essential step in a curriculum that uses AM, both for student education and for the continued improvement of the course, therefore, it should occur throughout the Module, horizontally, in which the professors evaluate their work and the learning of the students, and these evaluate the PS, their partners, themselves and the tutor [20,21].

Specifically, the evaluation of the PS is seen in the literature as an important part of the qualitative analysis of the curriculum and of all its stages; and it must often occur by students and professors. All the answers should be discussed by the Module elaboration committee, verifying the need to consider maintaining or deleting initial ideas, the inclusion, if necessary, of new issues of learning and the reformulation of those, enabling the preparation of new PS and the improvement of thematic Modules [13,14,22].

In the link used to evaluate the PS, as described in this work, the student must identify the following conditions: 1) how easy it is to identify the issues of the PS; 2) how easy it is to make hypotheses; 3) how easy it is to establish the study objectives; 4) how easy it is to solve the SP; 5) stimulation degree of group discussion and issues; and 6) the degree of approach to the biopsychosocial issues; where each item should be scored from zero to four, with zero / insufficient, one / weak, two / medium, three / good, four / great.

As can be seen, the whole process involved in the TS, from building the Module and the PS to the evaluations performed, causes the students a need to seek information, being particularly encouraged to work with them, preparing them and reworking them, depending on what they need to respond or equate.

Allowing it to gradually occur, the development of the scientific spirit, the critical and reflective thinking and ethical values, among other achievements of this kind, through education, contributing, thus, for the development of the autonomy in the formation of the human being and of future profissionals [11,23].

■ CONCLUSION

The use of Active Teaching Methodologies in the education of the speech therapist seeks, through a problem-solving context, in which the answers are built every day, actively and autonomously and, discussing biopsychosocial aspects of the individual and ethical issues of professional practice, educating resolute, competent to constantly improve their knowledge and act in accordance with the Public Health practices in the country professionals.

For this, the construction of the learning Modules and the formulation of the Problem-Situations must be consistent with the reality that the professional will find in their clinical practice, considering that, throughout the process, the student uses his life knowledges, seeks new information and integrate them, thus, assuming an increasingly critical stance in real situations.

RESUMO

Objetivo: descrever o processo de elaboração de uma Situação-Problema e de um Módulo de aprendizagem e refletir a importância destes na formação do Fonoaudiólogo. **Métodos:** estudo descritivo do processo de elaboração de uma Situação-Problema e de um Módulo de aprendizagem de um curso de graduação em Fonoaudiologia - uma experiência precursora na área em que toda a estrutura curricular tem como base Metodologias Ativas de ensino. **Resultado:** o Módulo Estudo da Linguagem Infantil ocorre no Ciclo II do Curso e é constituído por nove Situações-Problema sendo, cada uma, discutida em duas sessões tutoriais com até dez discentes e conduzida por um professor tutor. As Situações-Problema, assim como o Módulo, são elaboradas por uma comissão de docentes doutores e especialistas em Linguagem de acordo com o Projeto Pedagógico do Curso. Discute-se, neste artigo, a terceira Situação-Problema que tem como título - "Mesmas características, mas diagnósticos diferentes... Por quê?"; O título tem o papel de despertar a curiosidade do discente e apresentar o enfoque principal do problema. Todas as Situações-Problema são avaliadas por docentes e discentes com objetivo de promover aperfeiçoamentos constantes. **Conclusão:** o contexto problematizador construído a partir das Situações-Problema permite ao discente a busca de respostas diariamente, de forma ativa e autônoma, pela vivência e discussão do trabalho em equipe, dos aspectos biopsicossociais do indivíduo e das questões éticas na atuação profissional. Possibilitando assim a formação de profissionais resolutivos, competentes para aperfeiçoar seu conhecimento constantemente e de atuar em consonância com as práticas de Saúde Pública do País.

DESCRITORES: Aprendizagem Baseada em Problemas; Educação em Saúde; Educação Superior; Fonoaudiologia

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