ACTIVE PROBLEMATIZING METHOD AS A STRATEGY FOR TRAINING IN HEALTH

MÉTODO ATIVO PROBLEMATIZADOR COMO ESTRATÉGIA PARA FORMAÇÃO EM SAÚDE MÉTODO ACTIVO CUESTIONADOR COMO UNA ESTRATEGIA DE CAPACITACIÓN EN SALUD

Loisláyne Barros Leal¹, Katyane Leite Alves Pereira², Ana Luíza Barbosa Negreiros³, Alice Maria Correia Pequeno⁴, Gláucia Posso Lima⁵, Francisca Diana da Silva Negreiros⁶, Antonio Germane Alves Pinto⁷, Meirecele Calíope Leitinho⁸

ABSTRACT

Objective: to report an educative practice based on questioning from the Arc of Charles Maguerez. **Method:** a descriptive study type experience report with 11 participants, three students of the Masters Course in Health Professional Education in a public university and eight students of the seventh period of the Undergraduate Nursing Course of a public institution of higher education. Initially, it was explained to the students the problematizing strategy and the Arc of Charles Maguerez and, then, there were presented to the group pictures instigators of realities evidenced in the area of training of participants, with detection of problems. **Results:** the students recognized in the application of the arc a strategy of importance for the formative process. The employment of this active methodology of teaching has promoted the stimulus, the autonomy of students and accountability for the construction of collective knowledge. The use of the Arc proved effective to stimulate the active participation of learners in solving a problem facing an observed reality. **Conclusion:** the experience presented enabled educators greater knowledge and visibility on the use of this active methodology, promoting reflection and corroborating to evaluate formative praxis in teaching in health. **Descriptors:** Problem-Based Learning; Higher Education; Health Education; Nursing; Methodology; Education.

RESUMO

Objetivo: relatar uma prática educativa alicerçada na problematização a partir do Arco de Charles Maguerez. **Método:** estudo descritivo tipo relato de experiência com 11 participantes, três alunas do Curso de Mestrado Profissional Ensino na Saúde de uma universidade pública e oito alunos do sétimo período do curso de graduação em Enfermagem de uma instituição pública de ensino superior. Inicialmente, foi explicado aos discentes a estratégia problematizadora e o Arco de Charles Maguerez e, em seguida, foram apresentadas ao grupo fotos instigadoras de realidades evidenciadas na área de formação dos participantes, havendo detecção de problemas. **Resultados:** os discentes reconheceram na aplicação do arco uma estratégia de importância para o processo formativo. O emprego dessa metodologia ativa de ensino promoveu o estímulo, a autonomia dos alunos e a responsabilização pela construção do conhecimento coletivo. O uso do arco se mostrou eficaz para estimular a participação ativa dos discentes na resolução de uma problemática frente a uma realidade observada. **Conclusão:** a experiência apresentada possibilitou aos educadores maior conhecimento e visibilidade sobre o uso dessa metodologia ativa, promovendo a reflexão e corroborando para avaliar as práticas formativas no ensino em saúde. **Descritores:** Aprendizagem Baseada em Problemas; Educação Superior; Educação em Saúde; Enfermagem; Metodologia; Educação.

RESUMEN

Objetivo: informar de una práctica educativa basada en el cuestionamiento del Arco de Charles Maguerez. **Método:** se realizó un estudio descriptivo de tipo informe de experiencia con 11 participantes, tres estudiantes de la Maestría en Educación de profesionales de la salud en una universidad pública y ocho estudiantes del séptimo período del curso de enfermería de pregrado de una institución pública de educación superior. Inicialmente, se explicó a los estudiantes los cuestionamientos acerca de la estrategia y el Arco de Charles Maguerez y, a continuación, fueron presentadas al grupo de fotografías instigadores de la realidad evidenciada en la esfera de la formación de los participantes, con la detección de problemas. **Resultados:** los estudiantes reconocidos en la aplicación del Arco una estrategia de importancia para el proceso formativo. El empleo de esta metodología activa de enseñanza ha promovido el estímulo, la autonomía de los estudiantes y la rendición de cuentas para la construcción colectiva de conocimiento. El uso del Arco resultó en eficaces para estimular la participación activa de los estudiantes en la solución de un problema al que se enfrenta una realidad observada. **Conclusión:** la experiencia presentada permitió un mayor conocimiento y visibilidad de los educadores en el uso de esta metodología activa, promover la reflexión y corroborando para evaluar la praxis formativa en la enseñanza en salud. **Descriptores:** Aprendizaje Basado en Problemas; Educación Superior; Educación en Salud; Enfermería; Metodología; Educación.

^{1,2,3}Masters' Student, State University of Ceará, Fortaleza (CE), Brazil. E-mail: loislaynebarros@gmail.com ORCID iD: <https://orcid.org/0000-0002-1294-686X>; E-mail: katyane6@hotmail.com ORCID iD: <https://orcid.org/0000-0003-3290-2781>; E-mail: analuiza.negreiros@hotmail.com ORCID iD: <https://orcid.org/0000-0002-8313-0403>; ^{4,5,7,8}PhD, Master in Health Education, State University of Ceará, Fortaleza (CE), Brazil. E-mail: alicepequeno@gmail.com ORCID iD: <https://orcid.org/0000-0002-4248-1610>; glauucia.posso@uece.br ORCID iD: <https://orcid.org/0000-0002-5000-2050>; E-mail: germanepinto@hotmail.com ORCID iD: <https://orcid.org/0000-0002-4897-1178>; E-mail: meirecele@terra.com.br ORCID iD: <https://orcid.org/0000-0003-1576-5631>; ⁶PhD Student, Federal University of Ceará, Fortaleza (CE), Brazil. Email: negreiros.diana@gmail.com ORCID iD: <https://orcid.org/0000-0003-3150-2540>

INTRODUCTION

The training of health professionals constitutes itself as a great challenge, because it seeks to disassociate it from a purely technical training, and goes beyond the needs of the labor camp, demanding, increasingly, manufacturing operations, critical and reflective about the actions performed. For this reason, the use of methods of increasingly innovative teaching is being singled out as required for the development of competences, which requires the recasting of educational practices.

In the formation of these professionals, it becomes essential to overcoming the traditional educational model, centered on the Cartesian Paradigm/Flexnerian, in which there is a predominance of fragmentation, specialization of knowledge and centralization in the biomedical model.¹⁻²

Internationally, the need to respond to social demands has been reorienting changes in the formative processes of health professionals. In this perspective, the institutions aim to valuation of equity and quality of care through the development of skills and efficiency of work performed, aiming to train professionals for skills, to recover the essential dimension of care.²

The active methodologies appear as transformative approach, setting them to challenge in the reorganization of the political projects of educational courses in the area of health, taking into account that in Brazil the National Curricular Guidelines indicate greater commitment to concrete social reality, as essential object of formation in the undergraduation.¹

The employment of active methods in the mediation of formative processes favors the strengthening of autonomy of students, making it the subject of the action itself, arousing the curiosity and appreciation of prior knowledge. Active using the problematization methodology as a strategy for the development of the learning process, working with real or simulated experiences that enhance student reflection on alternative solutions to the problems identified, which constitutes a challenge for social practice in various contexts of activity.³

Students are stimulated and inserted in the process of theorization, bringing new elements to contextualizations those favor the process of engagement of the same allies to the perception of competence and belonging, this constitutes a potential for pedagogical area, to the extent that emerges from the autonomy of the learner.³

In this context, we emphasize the importance and need of active and innovative pedagogical practices that promote training by competence and shall permeate the development of skills of students, so that they are able to act resolutely and with critical-reflexive in the most diverse realities.

Before the exposed, we wondered: How the problematization methodology through the application of the Arc of Charles Maguerez can promote the autonomy of the learner and the construction of knowledge with critical-reflexive about a reality?

OBJECTIVE

- To report an educative practice based on questioning from the Arc of Charles Maguerez

METHOD

This is a descriptive study type experience report involving 11 participants, being three students of the Masters Course in Health Professional Education in a public university and eight students of the seventh period of the undergraduate nursing course of a public institution of higher education, Picos, Piauí, Brazil, conducted from may to July 2016. The eight students were chosen because they are the group of stage of one of the researchers of this study, the invitation was done during the lesson, and there was no refusal.

The activity was performed in two meetings, one in room adapted in the field of internship, contemplating the students and masters' students and other participant learners, five teachers of nursing course and the coordinator of that course, the notes were recorded in a book ata, and practice aimed to reflection on a reality proposal. The teachers of the course of Nursing selected institution were invited; however only five attended.

The steps of the Problematization Methodology potentially stimulate the student in this direction, favoring the praxis conscious, creative and critical.⁴ The Arc of Charles Maguerez was developed in five steps: observation of reality; key points; theorization; hypotheses of solution; and application to reality. These points encourage critical reflection on a reality to be discussed, consciously and intentionally transformer, proposing a form of active job.⁴ The Arc of Charles Maguerez is presented in Figure 1.

Figure 1. Arc of Charles Maguerez. Picos (PI), Brazil, 2017.

Source: Adapted⁴

The study arose as a proposal of teaching-learning process of the discipline active methodologies of Professional Masters' Course of a public university, thus enabling greater approximation and ownership of knowledge experienced in the classroom with the reality and instigates the critical reflection on teaching practices. In this way, the masters' students exercised the role of facilitators and led the group by applying the method of the Arc of Maguerez.

RESULTS AND DISCUSSION

Initially, it was explained to the students the problematizing strategy and the Arc of Charles Maguerez, as well as emphasized the importance of the participation of these forward to subsequent steps. Then, were presented to the group pictures instigators of realities evidenced in the area of formation, with the detection of real problems. The photos were chosen by the facility submitted to demonstrate the reality and difficulty of the scenario in other audiovisual resources.

The photos represented real problems, such as overcrowding in the campus, errors in nursing care, lack of material in laboratories, deficiency of copies of books in libraries, scarcity of fields of internship hospitals to teaching institutions.

For best dynamic of group work, was even elected among the participants a reporter and a coordinator of the process of discussion and construction of knowledge. To implement this active methodology of teaching, the step of observation of reality was essential.

A relevant point and that boosts the development of the stages of the Arc of Maguerez is the verification of a reality, giving careful observation and survey of a problem, which favors the grouping of key causes and subsequent chances of solution.⁵

The second step comprised the survey of key points, is currently performed triage of which is relevant to investigate the problem. In this moment of construction and

application of the method problematizing, was provided students with brushes, eraser, whiteboard, wood, paper sheets of paper craft and adhesive for bonding, for a better description, and exposure of the points listed. After this time, the facilitator of the group held representative explanation of work built by the group.

During the realization of the proposed activity, students were integrated and participatory. The method used enabled discussions and reflections about the formation of professional nurses, thematic reflected from the shooters images presented to the group. In consensus, students elected with main problem the reality presented, the little technical skill for the professional exercise.

In discursive articulation, contemplating the second step of implementation of the Arc, the participants elected five key points as possible causes listed to the problem in question: lack of time to study at home, by reconciling other labor activities; just study with the aim of ensuring the average of approval in the disciplines and not for an effective learning; shortages in the theoretical and practical classes, what generates low assimilation of the content taught; insecurity, causing not excussio procedures in the field of internship; and not receptivity of professionals in the fields of stage.

According to the step of theorization, students sought texts that would stimulate motivational reflections about the representations of work and conciliation with the school environment, as well as articles that contemplate, still, human relations and professional ethics.

In the theorization, the group proceeded to the analysis of what they knew about the matter and they needed to know, aiming at a better theoretical foundation, so that the fourth step of the process were formulated hypotheses of solution.⁶

As hypotheses of solutions, there were released by the group the need for better organization of the study time, creating groups of study, motivational workshops that promote interaction and exchange of experiences, implementation of lectures involving the theme of professional ethics and commitment to the profession, and the promotion of wheels of conversation between students and professional services.

The last step of the Arc of Charles Maguerez consists in the application to reality, in which occurs again at the group meeting with the purpose of socializing the knowledge acquired and the results obtained through interventions in reality.⁶

In another moment, the proposal contemplated by the group involved the completion of a wheel of conversation with students participating in the study, teachers and the coordination of the Nursing Course, it was made a presentation of the arc built by students and, after that, developed by all participants of the conversation wheel a plan of activities, in order to promote the integration of faculty and students for the strengthening of the technical skills necessary for the improvement of professional practice.

The action plan developed contemplated interventions related to the planning of future activities, such as: the promotion of wheels of conversation with the students of the course, aiming to discuss problems encountered and possible solutions, seminars, mini agentives, motivational lectures and case studies to better theoretical and practical application, as well as dissemination and encouraging the participation of students in study groups and research in this educational institution.

This teaching methodology transcends the passivity of the conceptual knowledge transmission characteristic of the traditional pedagogical practice, distancing themselves from the comfort zone faculty, skewed by paths based on questions arising from the lack of knowledge before a situation faced.⁷

The problematization favors the establishment of networks between the knowledge learned, corroborating for a directed learning and articulated, endowed with meaning and permeated by new concepts, by bringing the student to the study of a new situation.⁷

A study conducted with nursing graduates in Curitiba, Paraná State, Brazil, with the objective of reporting experience of teaching with methodological support from the Arc of Maguerez, proved to be the end significantly by promoting better integration between theory and practice and collective

construction of knowledge, enhancing the creativity, criticality and the autonomy of students.⁸

Other studies that used the Arc of Charles Maguerez as problematization methodology proved to be the same as a significant strategy for training professionals with the skills and competencies, with potential transformer on the reflection of a real situation.^{5,9-10}

The learning process to be effective it must be transformer, the student must be the author responsible for the own the teaching-learning process, and the teacher is a mediator in this process, stimulating the participation of students and the quest for knowledge, always considering the prior experience of these for production and appropriation of knowledge.

The problematization through the Arc of Maguerez was conducted from the redemption of the prior knowledge of students facing the reality presented, this meant that the students participating in the study to develop the autonomy and accountability outside the knowledge constructed collectively. In view of that, it is important to emphasize that the social needs, require new perspectives, attitudes and cultures, so that better results are achieved.¹¹

Participant learners evaluated the activity as of extreme importance to the formative processes, since it led to the insertion of the student how to be active and change agent, forward to the most diverse contexts of activity.

CONCLUSION

The problematization through the Arc of Charles Maguerez favored the construction of an articulated knowledge, promoting autonomy, reflection and the criticality of the student facing an observed reality. The insertion of active methodologies in teaching promotes the formation of professionals capable of acting with problem solving in different scenarios, strengthening, in this way, the practices in health.

Among the limitations of this study, it was observed the difficulties for the development of this practice due to the lack of consent of the students about the methodology applied; however this factor only reflected the need for more time for implementation of the activity.

The experience presented corroborates the improvement of current formative praxis, aiming at the quality of the formative processes of educators in teaching of health, with a view to the development of

professional skills, presenting possibilities even to teachers and students about greater knowledge and visibility of the importance of the use of the active methodology of teaching-learning process in the promotion of reflection.

REFERENCES

1. Vieira MNM, Panúncio-Pinto MP. Metodologia da Problematização (MP) como estratégia de integração ensino-serviço em cursos de graduação na área da saúde. *Medicina* [Internet]. 2015 [cited 2017 Oct 10];48(3):241-8. Available from: <http://www.revistas.usp.br/rmrp/article/view/104310/102957>
2. Cyrino EG, Toralles-Pereira ML. Trabalhando com estratégias de ensino-aprendizado por descoberta na área da saúde: a problematização e a aprendizagem baseada em problemas. *Cad Saúde Pública* [Internet]. 2004 [cited 2017 Oct 16];20(3):780-8. Available from: <http://www.scielo.br/pdf/csp/v20n3/15.pdf>
3. Berbel NAN. A metodologia da Problematização em três versões no contexto da didática e da formação de professores. *Rev Diálogo Educ* [Internet]. 2012 [cited 2017 Oct 15];12(35):103-20. Available from: <http://www2.pucpr.br/reol/pb/index.php/dialogo?dd1=5904&dd99=view&dd98=pb>
4. Berbel NAN, Gamboa SAS. A metodologia da problematização com o Arco de Maguerez: uma perspectiva teórica e epistemológica. *Filos e Educ* [Internet]. 2012 [cited 2017 Oct 15];3(2):264-87. Available from: <https://periodicos.sbu.unicamp.br/ojs/index.php/rfe/article/view/8635462>
5. Araújo AF, Oliveira MAO, Abreu JV, Souza EC, Pequeno AMC, Gomes AMA, et al. Active Methods of Teaching-Learning in the Health Area: the Problems in Nursing Education. *Int Arch Med* [Internet]. 2016;9(15):1-7. Doi: <http://dx.doi.org/10.3823/1886>
6. Gemignani YMY. Formação de professores e metodologias ativas de ensino-aprendizagem: ensinar para a compreensão. *Front Educ* [Internet]. 2012 [cited 2017 Oct 16];1(2):1-27. Available from: <http://www.frenteirasdaeducacao.org/index.php/frenteiras/article/view/14/22>
7. Maia JA. Metodologias Problematizadoras em Currículos de Graduação médica. *Rev Bras Educ Méd* [Internet]. 2014 [cited 2017 Oct 13];38(4):566-74. Available from: <http://www.scielo.br/pdf/rbem/v38n4/18.pdf>
8. Fujita JALM, Carmona EV, Shimo AKK. Uso da metodologia da problematização com o Arco de Maguerez no ensino sobre brinquedo terapêutico. *Rev Port de Educação* [Internet]. 2016 [cited 2017 Oct 16];29(1):229-58. Available from: <http://revistas.rcaap.pt/rpe/article/view/rpe.5966/7117>
9. Melo MC, Queluci GC, Gouvêa MV. Problematizing the multidisciplinary residency in oncology: a practical teaching protocol from the perspective of nurse residents. *Rev Esc Enferm USP* [Internet]. 2014 [cited 2017 Oct 16];48(4):706-14. Doi: <http://dx.doi.org/10.1590/S0080-623420140000400019>
10. Melo CM, Boeckmann LMM, Costa ARC, Guilhem D. Aprendizagem baseada na problematização: utilizando o arco de Maguerez na graduação de enfermagem. *Rev Gest Sist Saúde* [Internet]. 2016 [cited 2017 Oct 16];7(1):247-59. DOI: <http://dx.doi.org/10.18673/gs.v7i1.22078>
11. Bezerra IMP, Machado M de FAS, Souza OF, Antão JYFL, Dantas MNL, Reis AOA, et al. Professional activity in the context of health education: a systematic review. *Rev Bras Crescimento Desenvol Hum* [Internet]. 2014 [cited 2017 Oct 16];24(3):255-62. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0104-12822014000300004&lng=pt&nrm=iso

Submission: 2017/12/09

Accepted: 2018/02/26

Publishing: 2018/04/01

Corresponding Address

Loisláyne Barros Leal
Universidade Estadual do Ceará
Mestrado Profissional Ensino na Saúde
Av. Dr. Silas Munguba, 1700
Bairro Campus do Itaperi
CEP: 60714-903 -- Fortaleza (CE), Brazil