

Environmental factors as health conditions in the teaching and learning process in times of pandemic

Fatores ambientais como condicionantes de saúde no processo de ensino e aprendizagem em tempos de pandemia

George Alberto da Silva Dias 

Universidade do Estado do Pará (Belém). Pará, Brazil. georgealbertodias@yahoo.com.br

The International Classification of Functionality, Disability, and Health (ICF) is a classification system that relates functionality and disability with health conditions, bringing a new approach emphasizing not only the consequences of the disease but also health from the biological, individual, and social point of view in a multidirectional relationship¹.

The ICF shows that environmental factors directly impact the functional components of an individual and correspond to the environment around them, that is, they constitute the physical, social and atheist environment in which people live and lead their lives².

In this context, the environment can facilitate or even be a barrier in the performance of activities and social participation of a person³. In which the environmental changes caused by the new demands that society imposes for future health professionals directly influence their academic training process⁴.

In order to meet the new professional profile, higher education seeks a generalist, humanist, a critical and reflexive formation that knows how to understand the changes in the approach to the health-disease process^{5,6}.

Thus, it is necessary to incorporate new teaching strategies with a student-centered approach as the main agent of their learning^{5,7}. Thus, active methodologies aim to stimulate self-learning and curiosity to research, reflect and analyze possible situations for decision-making, and the teacher is only the facilitator of this process⁴.

The teacher needs to seek new learning strategies focused on the student that motivates them and favors autonomy. However, it is not enough to use several strategies, it is necessary that the teacher review their attitudes, possessing the ability to listen to students, value their opinion, be empathic, and answer the questions. These characteristics are undoubtedly those that favor motivation and consequent creation of a favorable learning environment^{4,8}.

However, to achieve this active learning, teachers face difficulties, whether ideological and/or structural. To facilitate this process, they need to devote themselves to the maximum to have effective participation in the training of the student⁷.

Besides, one of the major challenges currently faced is to put into practice these active teaching and learning methodologies through the pandemic of the new coronavirus that transformed the world in 2020, also influencing in 2021. And how can we do that in the face of a pandemic?

The unfavorable environment promoted social isolation, limiting the activity and participation of people. The classroom pedagogical activities were suspended and to continue the school semester, it was thought of remote teaching through digital platforms, with online classes through videoconferencing applications. In this sense, what was once only a possibility, nowadays remote teaching is a reality abruptly implanted¹⁰⁻¹².

However, are we prepared for more of this change in the teaching and learning process? The use of technologies is not new, and there are several educational media. However, they offer some challenges, whether in people's daily lives or even structural ones. The big problem is to know how to use them efficiently and allow them to contribute decisively to the improvement of educational practices, because it is not only a practice of copying and pasting face-to-face activities to the remote. It is necessary to know how to see the student in the most varied facets because, despite the popularization of technologies, social inequalities are still a major factor that hinders this learning process^{10,12}.

Remote teaching was proposed so that students could have access to the curricular contents that would be developed in a person, becoming the main alternative in the learning process. However, under atypical conditions, the planning of teaching strategies requires creativity to solve problems, the release of traditional ideas, and the incorporation of new strategies to meet this new demand¹¹.

Therefore, it is important to know how to combine active methodologies with remote education to make the learning process meaningful. Above all, it is necessary to understand that the environmental factor in which students are inserted is fundamental for the development of functionality. The teacher, especially in a pandemic, needs to know how to see the student in the biopsychosocial model recommended by the ICF.

It is not enough to say that remote teaching is being carried out without taking into account, for example, personal factors such as the socio-economic condition of the student; environmental factors such as internet access, housing, family support, the teacher himself, among others; the limitation of activity and the restriction of social participation, such as being in person in the academic environment, talking with friends and working as a team. All this can interfere in the mental and emotional functions of the student, who may develop a health condition, that can negatively interfere in their learning. Teachers must learn to know their students, and, thus, know how to transform those environmental factors barriers into facilitating factors, positively reflecting on the student's functionality, and, consequently, significant learning.

Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

References

1. Castaneda L, Bergmann A, Bahia L. The International Classification of Functioning, Disability and Health: a systematic review of observational studies. *Rev. bras. epidemiol.* 2014;17(2):437-51. <https://doi.org/10.1590/1809-4503201400020012ENG>

2. Kostanjsek N. Use of The International Classification of Functioning, Disability and Health (ICF) as a conceptual framework and common language for disability statistics and health information systems. BMC Public Health. 2011;11(Suppl 4):S3. <https://doi.org/10.1186/1471-2458-11-s4-s3>
3. Piexak DR, Cezar-Vaz MR, Bonow CA. International Classification of Functioning, Disability and Health: a Content Analysis. Rev Fund. Care. Online [Internet]. 2019;11(n. esp):363-9. Available from: <http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/6565/pdf>
4. Diesel A, Baldez ALS, Martins SN Active teaching methodologies principles: a theoretical approach. Revista Thema [Internet]. 2017;14(1):268-8. Available from: <http://periodicos.ifsul.edu.br/index.php/thema/article/view/404>
5. Macedo KDS, Acosta BS, Silva EB, Souza NS, Beck CLC, Silva KKD. Active learning methodologies: possible paths to innovation in health teaching. Esc Anna Nery. 2018;22(3):e20170435. <https://doi.org/10.1590/2177-9465-ean-2017-0435>
6. Aguiar RG, Barbosa GR, Oliveira AMB, Moccellini AS, Costa MRCD, Silveira NA. Implementation of a physiotherapy course based on active teaching-learning methodologies. Cad Edu Saude e Fis [Internet]. 2014;1(1):13-18. Available from: <http://revista.redeunida.org.br/ojs/index.php/cadernos-educacao-saude-fisioter/article/view/6>
7. Biffi M, Diercks MS, Barreiros BC, Fajardo AP. Active Learning Methodologies: Challenges for Professors of Two Medical Schools in Rio Grande do Sul, Brazil. Rev. Bras. Educ. Med. 2020;44(4):e145. <https://doi.org/10.1590/1981-5271v44.4-20190346>
8. AlRuthia Y, Alhawas S, Alodaibi F, Almutairi L, Algasem R, Alrabiah HK, et al. The use of active learning strategies in healthcare colleges in the Middle East. BMC Med Educ. 2019;19:143. <https://doi.org/10.1186/s12909-019-1580-4>
9. Negro-Dellacqua M, Carvalho Junior PM, Sá-Junior AR, Bortolotto T, Costa FV, Sousa IF. Potentials and challenges of application of active methodologies in Physiotherapy teaching: student vision. RSD. 2019;8(5):e32851022. <https://doi.org/10.33448/rsd-v8i5.1022>
10. Silva CCSC, Teixeira CMS. The use of technologies in education: the challenges facing the COVID-19 pandemic. Braz J of Develop. 2020;6(9):70070-9. <https://doi.org/10.34117/bjdv6n9-452>
11. Rondini CA, Pedro KM, Duarte CS. Covid-19 pandemic and emergency remote teaching: changes in pedagogical practice. EDU. 2020;10(1):41-57. <https://doi.org/10.17564/2316-3828.2020v10n1p41-57>
12. Rhim HC, Han H. Teaching online: foundational concepts of online learning and practical guidelines. Korean J Med Educ. 2020;32(3):175-83. <https://doi.org/10.3946/kjme.2020.171>