#### LETTER TO THE EDITOR



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# Assessment for learning in health sciences. An innovative pedagogical process

Evaluación para el aprendizaje en ciencias de la salud. Un proceso pedagógico innovador

Juan Carlos Beltrán-Véliz<sup>1</sup> Julio César Tereucán-Angulo<sup>2</sup> José Salazar-Ascencio<sup>3</sup> Ana María Alarcón-Muñoz<sup>4,5</sup>

- <sup>1</sup> Universidad de la Frontera Research Laboratory in Applied Social Sciences Temuco Chile.
- <sup>2</sup> Universidad de la Frontera Faculty of Education, Social Sciences and Humanities Department of Social Work Temuco Chile.
- <sup>3</sup> Universidad de la Frontera Faculty of Education, Social Sciences and Humanities Department of Education Temuco Chile.
- <sup>4</sup> Universidad de la Frontera Faculty of Medicine Department Public Health Temuco Chile.
- <sup>5</sup> Universidad de la Frontera Faculty of Medicine CIĜES Temuco Chile.

Corresponding author: Juan Carlos Beltrán-Véliz. Laboratorio de Investigación en Ciencias Sociales Aplicadas, Universidad de La Frontera. Temuco. Chile. Email: juan.beltran@ufrontera.cl.

## Dear Editor,

Evaluation is a critical component of teaching because it promotes effective learning, which is why it must be done correctly. In health sciences, evaluation is reductionist and technical in nature, as it focuses on summative assessments by checking the extent to which a student achieves the intended objectives and verifying said achievement, as well as on the results obtained at the end of an academic year, which translates into a grade.

Assessment in health sciences also excludes knowledge from cultural diversity; it is punitive and does not consider the characteristics, learning styles or context of students, leading to the mechanization of contents and fragmenting the teaching-learning process. In this regard, Nome-Farbinger *et al.*<sup>3</sup> state that, when teaching various programs in the area of health, evaluation occurs as a result of the teacher's necessity, rather than as a continuous, planned, and coherent process aimed at improving learning. This is an important problem in the teaching process since the development of evaluative practices that guide the teaching-learning processes of students in different contexts is a challenge for teachers.

In this context, assessment for learning becomes relevant as it is fully inserted into the educational process and emphasizes feedback to students on their performance and progress throughout the training process, which allows them to analyze their mistakes and take measures to correct them.<sup>4</sup>

Assessment for learning focuses on three key elements: i) where the student is going (sharing learning objectives and criteria for success); ii) where the student is now (obtaining evidence of learning); and iii) how the student can achieve the objective (providing oral and written feedback, and helping students take the next steps). In addition, this model prioritizes the promotion of student learning in its design and practice, allowing them to continue learning and feel confident in their ability to gain knowledge productively. According to Cambridge Assessment International Education, assessment for learning concepts are based on socio-constructivist theories.

Teachers in health areas should focus their assessment practices on the student, as they generate new knowledge from experience; this process is based on collaboration and reflection, so innovation must always be a characteristic of educators. This implies that it is necessary to implement new ideas to design means, techniques and evaluation tools that consider pedagogical experience to share knowledge through assessment for learning. The above can encourage the training of students by giving them a leading role that allows them to develop autonomy by evaluating themselves and regulating their learning process. In this sense, the socio-cultural and historical context must also be considered.

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Assessment for learning should be a permanent, dynamic, flexible, reflective process, inherent to all forms of learning. It should also be oriented to the continuity of the learning process and the retention of knowledge, rather than to a specific moment, to rely on feedback, and to view error as a natural form of learning,  $^{\$}$  so that students can actively participate in their learning activities and thus effectively acquire new knowledge.

It is critical that there is a dialogical relationship between theory and practice in the teaching-learning process, on the one hand, and reflection on the knowledge that is intended to be evaluated on the other, as this contributes to overcoming assessment practices that emphasize decontextualization, monoculturalism, and generalization of knowledge. Consequently, in order to assess disciplinary, procedural, attitudinal, affective and ethical knowledge, considering the social and cultural aspects of the individual in the teaching-learning process of health science students, three fundamental aspects are proposed: means, techniques, and assessment tools.

An example of means is the portfolio in which students' productions that demonstrate what they have learned throughout the learning process are collected. Assessment techniques may include teacher observations and interview records, which the evaluator uses to systematically collect information about the object being assessed. 10 Self-assessment, co-assessment, and collaborative assessment are other evaluation techniques used when students participate in the evaluation process. Finally, rubrics are considered as an assessment tool to evaluate student performance. This promotes progress in terms of knowing what, how, for what and when to evaluate, so as to improve the standard and hegemonic assessment model and thus contribute to a relevant and culturally diverse assessment focused on the teaching-learning process, and, therefore, in the different forms of learning.

Assessment for learning is an innovative and very useful pedagogical process that focuses on continuous, dynamic, mediating, feedback, reflective and critical didactic practice, and has a dialogical perspective between teacher and student to optimize the evaluative practice of teachers. Likewise, it favors the training process of healthcare students by involving them in the transformation of their own training process from a comprehensive perspective of learning. The above requires re-dimensioning assessment for learning to guide, facilitate, promote, and demonstrate learning. <sup>13</sup>

This type of assessment allows students to see health care in a comprehensive, humanizing way with a sense of social responsibility, thus improving their professional development in the different scenarios where they can perform as professionals. Moreover, assessment for learning in health-related fields encourages the establishment of research that can contribute to the generation of new knowledge and the development and implementation of evaluative practices aimed at enhancing the quality of various types of learning, all from an inclusive and comprehensive perspective. It also contributes to the development of educational policies aimed at improving academic programs in the area through an approach that takes into account the diversity of students' particular contexts.

**Keywords:** Assessment, Process; Learning; Health Knowledge, Attitudes, Practice (MeSH).

**Palabras clave:** Evaluaciones de procesos; Aprendizaje; Conocimientos, Actitudes y Práctica en Salud (DeCS).

## **Conflicts of interest**

None stated by the authors.

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To the Universidad de La Frontera de Temuco, Chile.

### References

- Broadfoot P, Daugherty R, Gardner J, Gipps C, Harlen W, James M, et al. Cardiff University Assessment for Learning: beyond the black box. Cambridge: University of Cambridge School of Education; 1999 [cited 2021 Jan 4]. Available from: https://bit.ly/3cXDIuG.
- Blázquez-Entonado F, Lucero-Fustes M. La evaluación en educación. In: Medina-Rivilla A, Salvador-Mata F. Didáctica General. 2<sup>nd</sup> ed. Madrid: Pearson Educación S.A.; 2009. p. 243-270.
- 3. Nome-Farbinger C, Nualart-Grollmus Z, Mansilla-Sepúlveda J, Beltrán-Véliz J. Representaciones que poseen los profesionales del área de la salud respecto de sus prácticas de enseñanza de las asignaturas disciplinarias en el aula. Rev. Fac. Med. 2012;61(1):17-23.
- 4. Vidal-Taboada JM, Palés-Argullós J, Saura J. Evaluación del aprendizaje de los estudiantes en los tres primeros cursos del Grado de Medicina de la Universitat de Barcelona. FEM. 2019;22(1):43-50. https://doi.org/g7mf.
- Cambridge Assessment International Education. Assessment for learning. Cambridge: University of Cambridge Local Examinations Syndicate; 2019 [cited 2021 Jan 4]. Available from: https://bit.ly/3cZS1yR.
- Moreno-Olivos T. Evaluación del aprendizaje y para el aprendizaje. Reinventar la evaluación en el aula. México D.F.: Universidad Autónoma Metropolitana; 2016.
- Correa-Bautista JE. Conocimiento pedagógico de contenido en docentes de fisiología. Rev. Fac. Med. 2017;65(4):589-94. https://doi.org/g7mh.
- Ahumada-Acevedo P. La evaluación en una concepción de aprendizaje significativo. Valparaíso: Ediciones Universitarias de Valparaíso; 2001.
- Hamodi C, López-Pastor VM, López-Pastor AT. Medios, técnicas e instrumentos de evaluación formativa y compartida del aprendizaje en educación superior. Perfiles Educativos. 2015;37(147):146-61. https://doi.org/g8ht
- Rodríguez-Gómez G, Ibarra-Sáiz MS. e-Evaluación orientada al e-Aprendizaje estratégico en Educación Superior. Madrid: Narcea; 2011.



- Beltrán-Véliz JC, Navarro-Aburto B, Peña-Troncoso S. Prácticas que obstaculizan los procesos de transposición didáctica en escuelas asentadas en contextos vulnerables: Desafíos para una transposición didáctica contextualizada. Revista Educación. 2018;42(2):335-55. https://doi.org/g7mj.
- 12. Borjas M. La evaluación del aprendizaje como compromiso: una visión desde la pedagogía crítica. Rastros Rostros. 2014;16(30):35-45. https://doi.org/g7mk.
- 13. Salas-Perea RS, Salas-Mainegra A. Evaluación para el aprendizaje en ciencias de la salud. Edumecentro. 2017;9(1):208-27.

