

## Motivation for learning, a fundamental aspect for the comprehensive training of health sciences students amid the COVID-19 pandemic

Motivación por el aprendizaje, un aspecto fundamental en la formación de estudiantes de ciencias de la salud durante la pandemia por COVID-19

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Dear Editor:

The pandemic caused by the new SARS-CoV-2 coronavirus and the disease it causes (COVID-19) has created an unprecedented global health crisis. The impact of COVID-19 has been so severe that it has had a negative effect on a variety of industries. For example, higher education institutions have been forced to temporarily suspend many of their activities, affecting nearly 165 million students in Latin America and the Caribbean alone.<sup>1</sup> This is due to the measures of mandatory social immobilization and lockdown put in place by the health authorities as a strategy to slow the spread of the virus.

In a preliminary study, Gianini<sup>2</sup> found that social isolation, Internet access, financial problems, and pandemic anxiety are the top concerns of higher education students regarding COVID-19. Also, Wang *et al.*,<sup>3</sup> in a study conducted in the general Chinese population on immediate psychological responses and factors related to such responses during the initial phase of the crisis by COVID-19, showed that, at the start of the outbreak, university students had higher levels of stress, anxiety and depression as a result of the confinement to which they were subjected.

Higher education institutions have complied with the indications of distancing and have interrupted academic activities in the context of presentiality. Thus, a new online educational scenario emerged, requiring the imminent search for changes and adaptations to ensure that teaching practices and evaluation processes remain consistent. Consequently, the challenge for university and teaching authorities has been to incorporate new teaching strategies, adapt teaching materials and activities, and adopt flexible learning models,<sup>4</sup> with a special focus on health sciences, in order to enable and ensure that students acquire knowledge.

Institutions have also had to assume responsibility for technology support by providing sufficient infrastructure for running virtual platforms and ensure connectivity with servers that match the virtual workload. These actions aim to make the virtual teaching-learning process more efficient and effective.

Motivation is an integral part of the teaching process since it encourages and activates students' actions so that they can be directed toward a particular objective.<sup>5</sup> In this regard, one of the most important aspects of students' learning process is their motivation to participate in the activities suggested by their teachers and schools.<sup>6</sup>

The above has a positive correlation with the academic performance of university students.<sup>7</sup> Therefore, motivation, which clearly favors learning, must be fully present in the design and organization of teaching<sup>8</sup>. Motivating teachers who promote the adoption of attractive pedagogical models favor the development of university students' autonomy, particularly in situations of uncertainty and chaos, such as that generated by COVID-19. These strategies boost students' self-esteem and, as a result, optimize their learning.<sup>9</sup>

Teachers, as key players in the teaching-learning process, must be aware of their students' motivation, interests, and needs.<sup>10</sup> To this end, they will need not only a

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broad and deep understanding of the contents, but also a working knowledge of didactics and educational contexts, as well as an understanding of the students' prior knowledge, characteristics, and learning rhythms and styles.<sup>11</sup> This would allow transforming an out-of-context, non-motivational learning environment into one that encourages intellectual development from a reflective and critical perspective, considering the affective, moral and ethical aspects that are important in the vocational training of health science students.

In addition, identifying pedagogical strategies related to the use and incorporation of information and communication technologies and focused on stimulating the motivation of university students constantly allows professors to acquire the skills, tools and abilities needed to produce new knowledge in health science training programs.

A training process that considers the motivation of the students must result in good pedagogical decisions to provide activities or challenges that stimulate the students' learning. It is also important to take into account the students' interests and motivations to encourage their participation, self-regulation and autonomy, which are all important aspects for creating a good learning environment.<sup>12</sup>

From the foregoing, new educational designs that contribute to and stimulate learning motivation can be explored. To this purpose, collaborative environments, dialog, and fluid and respectful communication are necessary to promote confidence to create a productive interaction relationship in which students take an autonomous and responsible role in the learning process.

Based on the difficulties discussed above, we suggest the use of deep learning approaches, which are associated with intrinsic motivation and a genuine or substantial understanding of what is learned, and superficial learning, which is associated with extrinsic motivation and reproduction of what is taught with few spaces for reflection. All these are useful tools for guiding teaching work, overseeing and improving teaching effectiveness,<sup>13</sup> determining which students are 'at risk' because they are using ineffective study strategies, observing results, evaluating learning quality, and advocating for a more comprehensive approach to university education.

We also stress the importance of promoting autonomous and self-directed learning, which requires the use of didactic and evaluative techniques that are aligned with learning methods and the context of online teaching.

### Conflicts of interest

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