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Clinical Education Through Formative Competency-Based Assessment. An Evaluative Proposal that Provides Innovative Approaches to New Learning Modalities.

Daniel Zarzuelo Prieto[1], Clayson Cosme Da Costa Pimenta[2], Alejandro Balán García[3]

[1]Universidad de Oviedo, Departamento de Ciencias de la Educación, Oviedo, Asturias, España.
ORCID: https://orcid.org/0009-0009-4202-6544

[2]Universidad de Oviedo, Departamento de Organización de Empresas, Oviedo, Asturias, España, Universidad Internacional Isabel I de Castilla. ORCID: https://orcid.org/0000-0003-3169-3519

[3]Universidad Politécnica de Madrid, Madrid, Madrid, España.
ORCID: https://orcid.org/0009-0000-2710-9469

ABSTRACT

Clinical education is an essential component in the training of health professionals, since it will serve for the development of clinical and professional competencies of future specialists. The object of study in which this publication is framed is to know the different models of clinical education and how they can be approached from a formative evaluation by competences. The methodology used for its realization has been through a literature review of the existing clinical and educational models to subsequently conclude with those benefits that can be provided by a correct formative competency assessment for its implementation in the classroom, as well as those that in turn can be provided to students for their professional development throughout their careers.

KEYWORDS: Clinical Education, Competency-Based Formative Assessment, Learning Models, Clinical Health.

ARTICLE DETAILS

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INTRODUCTION

Clinical education has been viewed as a foundational element for several decades within the healthcare setting. Clinical student practices positively impact the knowledge, skills and practice of supervising physicians, despite the increased workload and length of the working day (Waters et al., 2017). In turn, according to Car et al., (2019) thanks to technological advancement, the use of new Information and Communication Technologies (ICT), have provided that digital education is as effective as traditional learning (in terms of knowledge) and more effective than any other intervention to date.

However, following this author's premises, he cites that most studies show no significant correlated differences in the behavior of healthcare professionals and corresponding patient outcomes. An observational case study by Ironside et al, (2014). references that current clinical education, in nursing, often focuses on task completion, overlooking the more complex aspects of learning nursing practice.

It is for this reason that, through this article, it is intended to demonstrate those models of formative assessment by competencies, with which authors such as Gavotto et al. (2015), cite that formative assessment is essential for teachers (...) to improve the quality of education and help students to achieve learning objectives, which in turn will help to achieve quality education (United Nations, 2024).

THEORETICAL FRAMEWORK

Formative assessment has proven to be one of the most widely used models by teachers at all levels. Therefore, formative assessment is referred to as the process used by teachers and students to recognize and respond to the teaching-learning process (Bell et al., 2001).

Cañadas (2021) cites that formative evaluation during teacher training contributes to the development of teaching competencies when it is carried out with clear criteria, collection of evidence and adequate feedback on student

performance, which may help them to acquire an education that is more in line with labor needs in the future.

That is why doctoral students, once assimilated, understood and made aware of this type of methodologies, according to the study by Yanouri et al. (2023) reflect a development in competencies related to policy creation, systems change, management structure and leadership. Despite the disruptions caused by COVID-19, it was possible to improve the quality of education by developing a key competency assessment system, ensuring the professional preparation of teachers in the 21st century (Zolotovitskaya, 2022).

In this way and due to the rise and technological implementation in clinical health, the use of formative assessment, with proper feedback, can effectively develop student learning, including the competence of learning to learn, by making learning visible, improving self-efficacy and using mistakes as opportunities to learn (Voinea, 2018), since, with this, it is intended that students develop the ability to monitor the quality of their own work (...) and a set of tactics to modify their own work (Sadler, 2018),

True is of the existence of multiple teaching models found within the clinical health field, some of the most significant being such as the clinical education model, models of various clinical settings, and various alternatives or strategies to common clinical methods or teachings.

It is well known that most teaching models emphasize the importance of students' active participation in patient care and timely feedback, as these are essential for effective learning in clinical settings (Leinster, 2009).

This is because clinical teaching, directly involves patients, which is crucial for medical education because: it provides opportunities to develop communication skills, history taking, physical examination, clinical reasoning, diagnosis and management (Burgess et al., 2020 & Spencer, 2003) which prompts to highlight that good clinical practice is crucial to maintain good clinical teaching in contemporary healthcare settings (Prideaux et al., 2000).

This clinical education, according to Kassirer (2010) should occur through real cases and coaching, as these enhance student learning and knowledge retention, thus promoting effective diagnoses.

Today, medical education must be strategically aligned with clinical operations to ensure seamless integration and meet future medical workforce needs in high-performance healthcare delivery systems (Famiglio et al., 2013).

METHODOLOGY

Problems linked to teacher workload, student anxiety and concurrent assessment suggest an alternative approach that includes curricular changes and student-centered teaching strategies to enhance learning and eliminate “reality shock” (Packer, 1994).

Thanks to the new educational law recently entered into force in Spain “Ley Orgánica que Modifica la Ley Orgánica Educativa” (LOMLOE, 2020), it establishes the importance of education in values, responsible, sustainable consumption, and health promotion and education, based on the parameters established within the 2030 Agenda (United Nations, 2015).

Based on the parameters collected, in turn, in the new European (United Nations, 2015) and national (LOMLOE, 2020) guidelines, the aim is to conduct a systematic review ranging from clinical health to education, where the importance of both sides and their joint implementation is highlighted through innovative approaches that put into use methodologies in boom as formative assessment in the classroom.

A systematic review is a summary (...) of all the research (...) available in response to a research question (Clarke, 2011).

Following the review of the aforementioned literature, the aim is to present a didactic proposal that shows how to evaluate by competencies based on the new laws and educational guidelines based on competencies.

For this purpose, the appropriate competencies will be taken based on the Organic Law 2/2023, of March 22nd, of the University System (LOSU, 2023).

DIDACTIC PROPOSAL

According to the LOSU (2023), the implementation of this new educational law seeks to improve the educational quality of students, being more inclusive and promoting sustainability, which in turn promotes the continuous improvement of students and teachers.

This is why this is clearly linked to formative assessment, which incorporates interactive approaches, which can drive student engagement (active participation) and positive feedback, potentially improving their learning outcomes (Evans et al., 2014).

The didactic proposal that has been elaborated has a totally comprehensive and innovative character, focused on the student and his or her actual performance on a day-to-day basis.

First of all, it is convenient to define the model to be carried out in order to subsequently define its practical evaluation (most important), its theoretical evaluation, its formative evaluation, its learning portfolio or observational notebook and, finally, its definition of the final implementation in the classroom.

- Theoretical evaluation: Prior to the practical evaluation, the acquired competences must be demonstrated by means of a series of tests on the fundamental contents and oriented to the evaluation competences set by the teacher. All of them to break with the traditional scheme of implementing multiple choice or development theoretical exams (Farides et al., 2022), a real practical case will be proposed for its breakdown and implementation, this being considered useful in clinical education within the health professions (Crang-Svalenius, 2005), since it requires fewer teaching resources and focuses on problem-solving skills.

- Practical assessment: it is considered an alternative, reliable and valid practice to assess students' practical skills (Harden et al., 1980), where they have to be able to assimilate and understand specific and concrete feedback by the faculty as a formative improvement of their learning process (Rakoczy, 2018), since, this feedback helps students to identify and close gaps in their learning (Evans et al., 2014). This will be necessary for the student body to be able to, once they are observing real cases understand the performance and its practice to subsequently proceed to its realization. One of the models to be used for this could be through real evaluations with patients or through instruments that recreate a simulation of these events.

- Formative evaluation: It is intended that, once previously defined, with it, once the first two have been performed, the teacher provides feedback on the activity performed or carried out in such a concise and concrete way that closes the learning gaps that have been left in their process, since this improves the clinical skills of medical students (...) and their satisfaction with the learning process through simulated teaching (Yang et al., This is because the evaluation model is not unidirectional, but can be multidirectional, with the evaluator giving the corresponding feedback, an external person such as an expert (heteroevaluation), a peer (co-evaluation) or even the student him/herself (self-evaluation).

- **Practical skills portfolio or observation notebook**: The Practical Skills Portfolio (PSP) is a concise record of a hands-on activity that prompts students to engage in reflective practice on laboratory skills and provides better feedback (Wright et al., 2018). With it, they will be able to reflect and collect those significant experiences or experiences, as well as reflections of their practice, achievements or plans for improvement or personal progress.

- **Implementation**: For the implementation of the project, a series of elements must be previously defined, such as: structuring the communication and organization channels between the coordinators, definition of the competencies to be evaluated by the experts and the use of qualitative and standardized instruments or rubrics.

- **Final evaluation of the project**: This last one is optional, but it is always advisable to self-evaluate a project once it has been completed, observing its strengths and weaknesses to be corrected for future implementations.

DISCUSSION AND CONCLUSIONS

Taking into account the systematic review of the multiple methods and clinical teachings, as well as their educational scope, the following conclusions can be drawn:

- The importance of student participation in their learning process and feedback of their actions as key and effective elements in clinical settings.

- Dedicated Education Units (DEU) significantly improve educational quality and learning outcomes compared to traditional models of clinical education (Mulready-Shick, 2013), such as the clinical facilitator model, the preceptor model or even, Clinical Education Units (CEU) (Jayasekara et al., 2018).

- Formative assessment is a tool for the development of competencies in both students and teachers.

- Teachers have to receive continuous training to be able to apply these practices effectively, which in turn leads to the improvement of the quality of the educational process.

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