Review

Programmatic assessment in Medical Education – Review

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Abstract

A programmatic assessment is a systematic process by which we evaluate our processes, services, and outcomes through a systematic approach with the intention of enhancing our quality and performance. With the help of a structured approach, we will be able to gather, analyze, and interpret data in order to determine strengths and weaknesses within our company's operations. As part of the organization's assessment program, a variety of methodologies will be used, including surveys, performance metrics, and peer reviews, to provide an understanding of the effectiveness of the organization as a whole. In this review, the primary objectives are to identify the benefits, the approach to their implementation, as well as areas for improvement, set measurable goals, develop strategic changes, and identify the challenges associated with implementing programmatic assessments in medical education. Through the adoption of a continuous improvement culture, this assessment program will have the ability to empower our organization to adapt to evolving challenges as well as provide better services to our stakeholders.

Keywords: Assesment, medical education, performance, quality

Introduction:

The concept of programmatic assessment is a philosophy and method for measuring student performance in medical education. The method involves persistently collecting, analysing, and interpreting the usual details of a learner's professional development and competence. Additional assessment information may be added if desired, with the aim of helping the learner and their faculty mentor make a high-stakes decision at the end of a training phase. Essentially, it is a radical alternative to assessment in the medical education programme that aims to resolve endemic assessment problems that negatively affect curriculum design and student learning Programmatic assessment is best known for giving equal weight to assessment and curriculum and not defining students future based on a single assessment (1). Throughout the training phase, multiple assessments have been used to capture a student's competence. as a whole in order to capture their competence as a whole. As part of this assessment and multiple assessment methods have been

utilized (e.g. Multiple Choice Questions, Essay Questions, Short Notes, Objective Structured Clinical/Practical Examinations, Workplace-Based Assessments, etc.) because each of them has some issues with regard to their utility (validity, reliability, educational impact, acceptability and feasibility) in medical education. As a result, these assessment methods work together to accomplish complex objectives. Furthermore, the assessment optimizes the learning function of the assessment and certification of a student and ensures the validity and reliability of the entire process by optimizing the learning function of the assessment and certification (2).

Benefits of Programmatic Assessment:

Programmatic assessment has several advantages, including enabling students during the course of their studies to gain knowledge about their learning, become competent longitudinally, and are offered multiple learning opportunities (which faculty may also be able to assess simultaneously). Students are also taught to gauge their performance (self-assessment tool) by assessing their skills in all 3 domains (cognitive, psychomotor and affective). There is also meaningful and constructive feedback given to the students regarding their performance so that they are not only able to achieve predefined professional competencies through personal remediation, but also become self-directed learners as well as reflective practitioners through this process(3). Using it, faculty members are able to make an informed decision regarding the promotion or remediation of students after training (based on an assessment of aggregated results of both formal and informal assessments) as well as provide them with the tools they need to fulfill their responsibilities towards students and the public. There is a high degree of transparency and well-informed decision-

making by the faculty. In addition, it facilitates faculty skill development in providing feedback to students (both qualitative and quantitative), which is an important component of the learning process for students(4).

Process of programmatic assessment:

When assessing complex tasks that integrate several competencies, it is necessary to adopt a programmatic design approach. There was a need to develop many guidelines for programmatic assessment design because single instruments do not provide sufficient information for a robust evaluation of the performance of an organization as a whole (5). When there are several interrelated guidelines that need to be applied at the same time, it is difficult to maintain a clear overview of all assessment activities. In a previous study, it was the objective to provide practical support for the application of a programmatic approach to assessment design, which is not limited to any specific educational paradigm or approach. In order to accomplish this goal, the guidelines were implemented in a postgraduate medical education environment and a process analysis was performed (6). Consequently, four steps for programmatic assessment design were identified: evaluation, contextualization, prioritisation, and justification. It is first necessary to clearly define the assessment environment and formulate the purpose of the design process. It is important that key stakeholders with sufficient assessment expertise participate in the analysis of strengths and weaknesses as well as the identification of developmental needs in order to identify strengths and weaknesses. A central governance system is essential for balancing efforts and stakeholder interests with the primary purpose of the project, as well as to decide which design decisions and guidelines will be prioritized and which will be selected. The final step in ensuring sound underpinning and continuous

improvement of an assessment program is to justify assessment design decisions, ensure quality assurance, and ensure external accountability (7).

Implementation of programmatic assessment in medical education:

The programmatic assessment approach in medical education refers to the systematic and continuous collection of assessment data over the course of a course, in order to make informed decisions regarding a learner's competence and progress. The purpose of this tool is to help educators take a holistic view of the development of the student and then tailor their support and feedback to meet the needs of the student. In order to design an effective medical education, define clear program learning outcomes that specify what students are expected to learn and what skills, attitudes, and knowledge they should acquire. After that, there is a need to develop a plan for assessing the candidate that includes written exams, clinical skills assessments, workplace-based assessments, objective structured clinical examinations (OSCEs), etc. Ascertain which assessments measure which competencies for each program learning outcome. The program should be designed in such a way that continuous assessment data is collected. There are several ways in which students can be evaluated, including written assessments, direct observations of clinical skills, feedback from preceptors, and self-evaluations by the student. Formative assessments (to facilitate learning) as well as summative assessments (to assess student progress) should both be employed in order to capture a comprehensive picture of the student's progress (8).

By providing training to assessors, calibrating assessments, and using standardized scoring criteria, maintain the quality and reliability of assessment data. It is important to assess the performance of students and provide them with constructive feedback in a timely manner. The feedback should be focused, actionable, and tied to the program's learning outcomes in order to be useful. All assessment data and documentation should be kept, allowing an individual student's progress to be tracked over time. To gain an understanding of the overall performance of the program and the progress of each student, aggregate assessment data should be analyzed. By analyzing data, it can be possible to identify trends and areas where improvements can be made. Following that, utilize the assessment data to improve curricular design, teaching strategies, and student support. It is essential that the program is continually improved based on the results of the analysis. To facilitate their learning, teachers should encourage students to engage in self-assessment and reflection through the use of tools such as self-reflection and self-affirmation. With the aim of establish a culture of assessment wherein all stakeholders, such as faculty, students, and administrators, recognize the value of programmatic assessment as a way to improve the educational experience for all students. So as to keep up with the evolving needs of the program and emerging best practices in medical education, the assessment plan and methods are regularly reviewed and adapted(Loosveld et al., 2023).

Challenges in implementing Programmatic assessment:

A programmatic assessment is a crucial component of the efforts that medical institutionss undertake to ensure that their graduates are well prepared to provide high quality patient care after they have graduated from medical institutions. A holistic view of competence and a continuous improvement process are key aspects of medical education. It can be challenging and complex to implement programmatic assessment in medical education. In spite of the fact that it has a

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number of benefits, it also poses a number of challenges as well. The following are some of the most common challenges that are associated with the implementation of a programmatic assessment(Torre et al., 2022): 1) The resistance of faculty, students, and other stakeholders to new assessment methods can prove to be a significant challenge. There may be a reluctance to adopt new approaches and a preference for the status quo, 2) The implementation of programmatic assessment often requires a substantial amount of time, personnel, and technology, in addition to the normal resources. Budget constraints and a lack of dedicated personnel can make it challenging to manage the program, 3) In multiple settings or clinical settings, determining the standardization and reliability of assessments can be challenging. Methods and criteria used in assessment can vary, which can affect the process' validity and fairness 4) To provide effective feedback and adapt to new assessment methods, faculty may need training and support. Resource-intensive faculty development programs are required to accomplish this, 5) The management and analysis of large amounts of assessment data can be challenging.

In order to collect, store, and analyze data effectively, institutions need the necessary infrastructure and tools(Govaerts et al., 2022). 6) Assuring that assessment is aligned with the program learning outcomes and the curriculum can be a daunting process. The curriculum may need to be revised in order to ensure that it aligns properly with the institutions' goals,7) There is a danger that frequent assessments will lead to a feeling of fatigue among both students and faculty. It is possible to hinder the learning process of students if they are overloaded with assessments,8) Keeping the validity and reliability of assessment tools is one of the most challenging parts of the assessment process, especially in

clinical settings. Assessment tools must be consistently calibrated and standardized, 9) When it comes to managing student assessment data and feedback, maintaining ethical standards and protecting privacy can be a difficult balancing act, 10) The idea of encouraging students to engage in self-assessment and reflection can be met with resistance from some students. The ability to be self-aware and to regulate one's emotions may be a challenge for some students, 11) A change in the culture and organization of the medical institutions is often necessary before programmatic assessment can be implemented. Depending on the situation, this can be a lengthy and complicated process, 12) Communication with all stakeholders, including faculty, students, and administrators, is of utmost importance. Effective communication is essential. It is vital to make sure that everyone has a clear understanding of what programmatic assessment is and what is meant by it, as well as why it is important,13) Achieving compliance with regulatory bodies and accreditation standards can be challenging, as programmatic assessment may require a departure from traditional assessment practices in order to meet regulatory requirements, and 14) A program's effectiveness and making necessary adjustments to improve it over time can be challenging. A continuous effort must be made to gather feedback and make data-driven decisions based on that feedback.

Implementing programmatic assessment in medical education requires addressing these challenges systematically, involving all stakeholders, and providing ongoing support and resources for faculty and students. As institutions gain experience with programmatic assessment, they should be prepared to adapt and refine their approach.

Summary:

In summary, programmatic assessment is a multifaceted and dynamic approach to

evaluation and improvement of educational programs. Through our exploration, we have seen how it facilitates both formative development and summative evaluation, offering a more comprehensive understanding of the learning journey. In addition to providing ongoing insights into student progress and program effectiveness, programmatic assessment has the potential to enhance educational quality, albeit with challenges along the way. A cultural shift within educational institutions is needed to address faculty development, data management, resource allocation, and resource allocation issues.

Programmatic assessment remains a valuable tool as the landscape of education continues to evolve, providing students with the most effective learning outcomes. In this article, we hope to shed light on the significance, challenges, and potential rewards of programmatic assessment. It is the responsibility of educational institutions to navigate the complex challenges of 21st century education by utilizing programmatic assessment as a guiding light, as well as providing educators and students with a way to navigate the complexities of modern education, as well as empowering them to attain new heights of achievement as well.

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