From Assessment Cocktail to Assessment Symphony: The Development of Best Assessment Practices

Hanan M. Al-Kadri*

College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

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Abstract

Introduction of the best possible assessment practices is a requirement for any institution seeking to foster excellence in its students. Assessment practices have been assumed to drive students' learning. However the extent of which this driving role of assessment negatively or positively influences attainment of curriculum objectives and educational outcomes is not well known. In an effort to improve assessment practices, assessment has moved from an era of strict implementation of assessment *of* learning and a dominance of the psychometric theory into a focus on assessment *for* learning. In the latter view, a cocktail of assessments is proposed to enhance students' learning. In this paper, we are suggesting that well-planned assessment, summative and formative, may contribute to a positive effect of assessment on student learning and may result in desired educational effects. This practice of assessment should take into consideration the implemented curriculum, the institution culture, and the practiced health care setup. We call this well planned assessment an "assessment symphony". The successful implementation of such assessment symphony requires the willingness of an institution to critically look at its assessment and further efforts that are beyond the power of an individual medical school; such as modifying the provision of job opportunities and a change in the national educational culture.

Despite the proven positive effects of formative compared to summative assessment on students' learning, most examinations in medical schools are still summative. Even assessment that is meant to be formative, is often used for summative decision making. The question therefore is: Are we reversing back to the psychometric era?

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*Correspondence to: Department of Obstetrics and Gynaecology, College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, PO Box 57374, Riyadh 11574, Saudi Arabia. Tel.: +966 118011111x13611.

E-mail address: halkadri@gmail.com

1. Introduction

The assumption that assessment drives student learning is shared by many educators.[1] Educators claim that students are driven by their exam's style and purpose.[2,3] Students' effort is usually directed and tailored to fulfill exam requirements without focusing on its educational gain. In fact, the nature and contents of examinations do determine the learning activities of students to a large extent. In their learning activities,

students tend to focus on what will be asked during the examination at the expense of paying less attention to what might be an equally important subject-matter that they are not being tested on. For instance students may not put serious effort on their assessment if its results are not affecting their final grades and progress. On the other hand, the same students will work very hard and invest extensive study effort to achieve the best possible marks in their summative exams. Their acts will be even more prominent whenever their obtained mark carries an effect on their progress and achievements.[2,3]

Educators raised the importance of students' own effort on their learning approaches and achievements. Students' academic progress, motivation and application of learning objectives were perceived as the students'.[4–7] Based on earlier inventories, students' learning approaches were recognized to range between three main styles[8]: surface learning; involving "repetition of analyses already carried out"; deep learning, using "a greater degree of cognitive analysis" and "assessment driven category". The last approach was named as a strategic approach of learning.[9] Further work on students' learning approaches showed that students utilize unstable learning approaches swinging between superficial, deep and strategic approaches.[10] This variation was affected by different influences in particular those related to students' assessment and its resulting consequences.[11–13] Therefore, the third learning approach or the strategic approach that describes well-organized studying influenced by students' motivation for specific achievement was re-named as "effort and achievement motivation learning approach". While superficial and effort and achievement learning approaches are commonly practiced by students, a deep learning approach has been linked in the literature to better students' performance and better educational impact.[14]

Putting all these facts together, it appears that when we design an educational curriculum, particularly its assessment component, on top of guaranteeing the assessment of the intended curriculum objectives and its educational outcomes, our assessment should support students' learning and motivate them to practice a deep learning approach.[14]

2. From assessment of learning to assessment symphony

Reviewing assessment history, educators have focused for decades on various psychometric quality assurance tools aiming to improve assessment quality (e.g. validity, reliability).[15] Educators have assumed that simply improving the reliability and validity of assessment would improve students' learning and support curriculum implementation. This emphasis on psychometric quality of assessment has had a number of perhaps less than desirable consequences. First, it has led to the use of measurable outcomes of which assessment quality indicators can be calculated. This tendency was at the expense of more relevant formative measures where determining psychometric quality is more difficult. Second, end-of course assessment has been given more emphasis as compared to assessment aimed at improving learning within the course subject.[16,17] Third, educators have focused more on test quality than on the educational impact of the test.[15] And fourth, the strong focus on psychometric implementation hindered teachers to recognize and respond to students' learning needs and wishes.[18] Therefore, during the heavy use of psychometric methods or the psychometric era, assessment tools have become a method for passing or failing students rather than being an instrument to enhance their learning.

A subsequent distinction has been made between end-of-course, or summative assessment aimed at giving final marks to students and deciding on their progress represented by "assessment *of* learning", and formative assessment aimed at giving students information about their strengths and weaknesses, with the goal of helping them improve their performance represented by "assessment *for* learning ". During the psychometric era, the focus has always been on assessment *of* learning with rigid implementation of quality tools rather than on assessment *for* learning that focuses on students' gains and educational impacts.[19] Researchers have shown that in the presence of adequate education culture and appropriate implementation, formative assessment may enhance students' learning to a larger extent than giving them equivalent additional time for self-study[20] and have a powerful effect on their achievement.[21,22]

Assessment *for* learning moves the educational focus from single instrument into the use of cocktail of assessments.[23] Based on this principle, it is not necessary to replace the old assessment tools with new ones, rather you supplement the already utilized tools with others in order to achieve the test's educational goals.[24] Therefore, you may for example continue using multiple choice questions (MCQ) and objective structured clinical examination, but, you also add other tools that assess the students in real life such as the use of Mini clinical examination (Mini-CEX) and case based discussion (CBD). Overall, each of the