

Perception of Medical faculty towards use of scenario based questions as an assessment method in examination of medical students

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Abstract

Teaching is incomplete without assessment as assessment is the main stimulus to enhance learning. Without assessment, the students lack goal, incentives and desire to learn.

During MBBS and postgraduate course, the students are subjected to various methods of assessment like viva, long case, multiple choice questions, scenario based questions and many more. Each assessment mode has its own utilities and place.

In this study, the medical faculties in our institution were given a Google form questionnaire regarding the use of scenario based questions in their assessment of students during examination.

Keywords: Scenario Based Questions, Multiple Choice Questions (MCQs).

Introduction

Learning and assessment are inter-related. Assessment methods test various levels of Bloom’s taxonomy. The different methods are viva, long answer questions, short answer questions, multiple choice questions (MCQs), scenario based questions, and many more.

MCQs are being more frequently used by more and more teachers as assessment tool. However, the quality of MCQs, including the choice and correct answers, has been questioned many times[1].

The correct framing of MCQs is very important to make the question relevant as an assessment tool.

The use of MCQs is a double-edged sword as a good MCQ can be very useful in assessment but if they are not designed properly, and quality control is not there, then they can be cracked easily (2)

An “Indian Medical Graduate” has five roles: a clinician, a communicator, a lifelong learner, a leader, and a professional(3).The student hence needs to attain higher skills in Bloom’s taxonomy than basic level skills of “knows” and “knows how”.

Scenario based questions help students to learn how to deal with real life decisions regarding diagnosis, treatment and patient care that they will have to take in their careers as Doctors.

The introduction of scenario based multiple choice questions is important to assess higher cognitive skills of the student, rather than only testing the recall abilities of the student. Assessment should include multiple processes with minimal validity threats.(4)¹

Assessment requires much more objective type settings to reduce subjective bias. Not only the qualitative but quantitative evaluation also has to be incorporated, especially while assessing non-cognitive skills.(5)

The use of scenario based questions requires firstly knowledge regarding their formulation and correct usage of scenarios, so that they are effective in testing the students.

The aim of this study was to assess the willingness, knowledge and desire of Medical faculty to use scenario based questions.

Methods

The faculty at our institution was presented with a questionnaire in form of Google form regarding scenario based multiple choice questions as a means of student assessment.

The questionnaire asked single response out of multiple options, for each of the 10 questions asked, in order to assess willingness, awareness and knowledge about this mode of assessment amongst the faculty members,

instead of two options of “Yes” or “No”, which sometimes fails to record a correct response.

The Google form was sent to each of the faculty members via WhatsApp and responses noted.

Results

The following questionnaire was sent to the faculty members via WhatsApp

1. How familiar are you with scenario based questions as an assessment tool for students?

I use it often

I use it sometimes

I use it rarely

I have never used it

2. How do you rate scenario based questions as an assessment method?

Excellent good

Satisfactory poor

3. Do you know how to form a scenario based questions?

Yes no

Other:

4. How do you rate the difficulty level of constructing a scenario based question?

Very difficult difficult

Moderately easy easy

Other:

5. Would you recommend using scenario based questions over simple recall questions in student assessment?

Yes no

6. Do you think there should be more faculty workshops regarding different assessment methods?

Yes No

7. Do you think all questions need a clinical scenario?

Yes No

8. Which of these assessment tools is best to assess students in practical exams?

Long answer questions Short answer questions

Scenario based questions

Demonstrate Observe Assist perform (DOAP)

9. Do you consider scenario based questions to be good assessment method?

Yes no

10. Which of bloom taxonomy levels do scenario based questions assess?

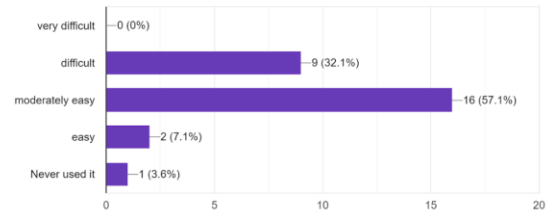
“Recall” “knows” “shows”

“Knows” + “knows how”

Based on the responses made following data was collected for each of the questions:

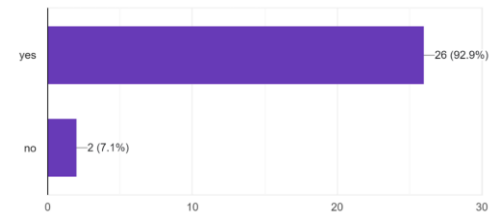
How do you rate the difficulty level of constructing a scenario based question?

28 responses



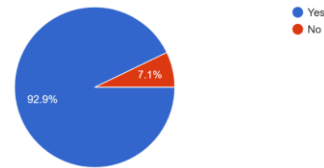
Would you recommend using scenario based questions over simple recall questions in student assessment?

28 responses



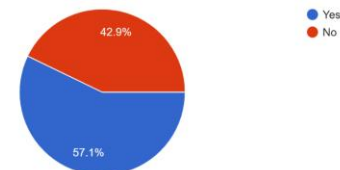
Do you think there should be more faculty workshops regarding different assessment methods?

28 responses



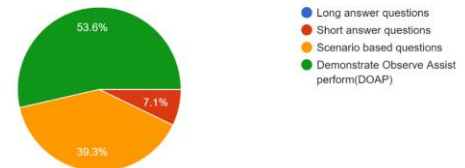
Do you think all questions need a clinical scenario?

28 responses



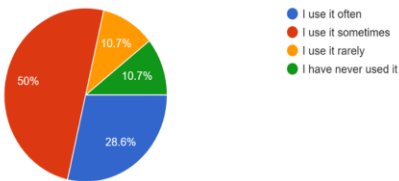
Which of these assessment tools is best to assess students in practical exams?

28 responses



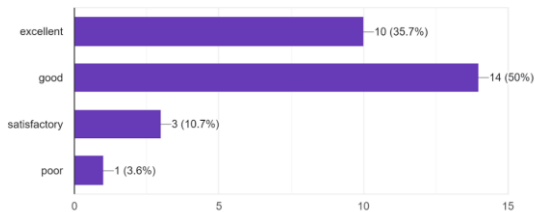
How familiar are you with scenario based questions as an assessment tool for students?

28 responses



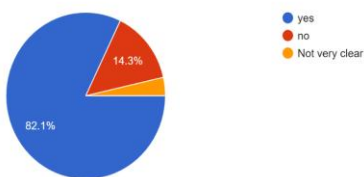
How do you rate scenario based questions as an assessment method?

28 responses



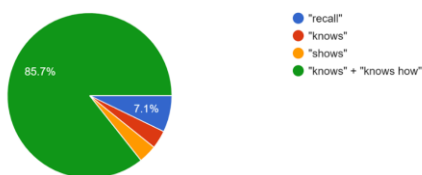
Do you know how to form a scenario based questions?

28 responses



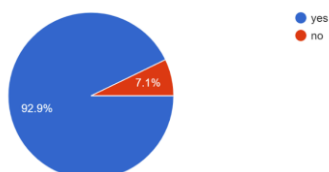
Which of bloom taxonomy levels do scenario based questions assess?

28 responses



Do you consider scenario based questions to be good assessment method?

28 responses



Conclusion

The teacher's perception towards scenario based questions and their utility in teaching and assessment is assessed in this study.

Only 50% faculty was familiar with scenario based questions. 57.1% thought that all questions need a clinical scenario and 92.9% think scenario based questions are a good assessment method.

An idea about the understanding of this method of assessment informs us of the willingness, awareness and knowledge the teachers have about this method and whether further information regarding the same is lacking or needs to be updated.

Unless the clinical scenario is essential to the question, it risks appearing artificial or contrived; candidates do not want to read unnecessary material.⁽⁶⁾

In the Competency based medical education system, it is necessary to adopt different teaching learning methods as well as have knowledge about various assessment methods.

Scenario based questions are a means of assessing knowledge and understanding of the students.

The teaching faculty should be trained, informed and willing to put these questions as an assessment tool.

References

1. Crooks TJ. The impact of classroom evaluation practices on students. *Rev Educ Res* 1998;58:438–81.
2. Triple Cs of scenario-based multiple-choice question: Concept, construction, and corroboration Badyal, Dinesh Kumar¹; Jain, Anjali²; Lata, Hem³; Sharma, Monika⁴ *National Journal of Pharmacology and Therapeutics* 1(1):p 8-12, Jan–Apr 2023. | DOI: 10.4103/NJPT.NJPT_16_23
3. Medical Council of India. Competency Based Undergraduate Curriculum for the Indian Medical Graduate, 1; 2018. Available from: <https://www.nmc.org.in/wpcontent/uploads/2020/01/UG-Curriculum-Vol-I.pdf>. [Last accessed on 2023 Apr 14].
4. Downing SM, Haladyna TM. Validity threats: Overcoming interference with proposed interpretations of assessment data. *Med Educ*. 2004; 38:327-33.
5. Competency-based medical education in India: A work in progress R. Rajashree¹, D. M. Chandrashekar Department of Physiology, Gadag Institute of Medical Sciences, Gadag, Karnataka, India, *Clin Med (Lond)*. 2016 Apr; 16(2): 142–145. doi: 10.7861/clinmedicine.16-2-142 PMID: PMC4952967, PMID: 27037383
6. Writing clinical scenarios for clinical science questions Phil EM Smith, consultant neurologist^A and John C Mucklow, associate medical director for written examinations (retired)^B