

A Review on Objective Structured Practical Examination (OSPE)

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Objective Structured Practical Examination (OSPE) is an assessment tool in which the competence of a student is evaluated for general experiments. The conventional clinical and practical examination is overwhelmed with several problems. These defects of clinical and practical examinations have been realized for long and have given rise to attempts at improving the current scenario. OSPE is that both the examination process and the examinee are evaluated by giving importance to the individual competencies. OSPE can also examine experimental skills, better than a conventional examination. OSPE provides integration of teaching and evaluation. It can be concluded that the use of OSPE is a very useful method in internal assessment of practical skills.

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Introduction

The term OSPE is derived from Objectively Structured Clinical Examination (OSCE) in 1975 which was later modified to practical examination by Harden and Gleeson.¹ In an International Conference held in Ottawa in 1985, OSPE and OSCE techniques were introduced as a teaching and evaluation tool and its advantages were compared with disadvantages.²

Objective Structured Practical Examination (OSPE) is an assessment tool in which the competence of a student is evaluated for general experiments; in terms of Identification of equipment/accessories of experiment, procedure of experiment, handling of instruments, making observations/results, interpretation of results, conclusion.³

The conventional clinical and practical examination is overwhelmed with several problems. Although marking should depend only on student variability, patient (or in the case of practical - experiment) variability and

examiner variability significantly affect scoring.

These defects of clinical and practical examinations have been realized for long and have given rise to attempts at improving the current scenario. All these attempts are relatively new and are still in the process of being tried out.

Procedure

The OSPE examination ideally consists of about 10 stations for the examination of a particular course. However, number of stations may be increased. Further, in a particular exam of a single course, all stations should be completed in the same period of time. The students are rotated through all stations and have to move to the next station at the bell. Thus, using 10 stations of 2-4 minutes duration

Each, 10 students can complete the examination within 40 minutes. Similarly, in an institution having large number of students the number of stations (2-4 minutes each) may be reduced to 10, 8, or 6. It will raise the number of students to be examined within 1 hour.

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Each station is designed to test a component of experimental competence. At some stations, called the "procedure stations" students are given tasks to perform on subjects or on instruments only, they are not supposed to write anything. At all such stations there are observers with agreed check lists to mark the student's performance (The examination committee of the department may formulate check list having suitable number of questions & marks for each of them, within the total marks allotted to a station). At other stations called "question stations", students write the answers of the objective type questions or interpret data or record their findings of the previous procedure stations⁴.

These answers are marked later by the teacher at the end of exam. It is important that the number of procedure and questions stations may not be same in their number for a single examination. Their ratio may be determined from the facilities, staff and space available in the examination lab.

Problem of conventional exams

Conventional practical examination has several problems,⁴⁻⁶ especially in terms of its outcome. Although grading/marking should depend only on student's competence yet variability in experiments selected and examiners both affects grading in conventional examination, significantly. Further, the subjectivity involved in this examination also affects the correlation negatively between marks awarded by different examiners and performance of the same candidate⁷.

Advantage of OSPE

The main advantage of OSPE is that both the examination process and the examinee are evaluated by giving importance to the individual competencies. OSPE can also examine experimental skills, better than a

conventional examination. There is objectivity in OSPE and the standard to check the competencies are made earlier and agreed check lists are used for marking and evaluation. Similarly, there is no room for subjective questions, only objective questions are asked in question stations.³

In addition to the above points, OSPE provides integration of teaching and evaluation. Student take more interest due to variety and keep themselves alert during the whole process of examination, which is not found in conventional one.⁸

If such examination is regularly used for formative assessment then it can enhance teacher-student interaction as well. This examination can be modified easily as per institutional circumstances and need.

Further, large number of students can be tested within a relatively short time.⁷ Hence, the process of OSPE is so educative that it is being recommended for formative assessment as well.

Both the process and the product are tested giving importance to individual competencies. The examination covers a broad range of practical skills much wider than a conventional examination.

In addition to the above points, OSPE ensures integration of teaching and evaluation. OSPE is adaptable to local needs. A large number of students can be tested within a relatively short time.⁷

Disadvantages of OSPE

The process is, however, not without limitations. There is risk of observer fatigue if the observer has to record the performance of several candidates on lengthy check lists. All stations must invariably demand only equal time. Ensuring this, therefore, requires careful

organization. Also, it is considered by many that breaking clinical skills into individual competencies is artificial and not meaningful.⁷

Conclusion

From the results of different studies it can be concluded that the use of OSPE is a very useful method in internal assessment of practical skills in undergraduate training.

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