

# **Fostering Students' Clinical Competence through Objective Structured Clinical Assessment (OSCA)**

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## **A b s t r a c t**

An Objective Structured Clinical Assessment (OSCA) method was adopted by a course team in an attempt to resolve some of the learning difficulties experienced by the baccalaureate nursing students in clinical practice. The assessment required the students to work through some simulations developed from real encounters. The performance of the students was evaluated against the checklists which were formulated by the lecturers and verified by three clinical experts. The students were informed of the findings of the assessment and their opinions on teaching and learning were solicited. Based on these results, the lecturers planned the curriculum for the following semester. After implementation, a summative evaluation was undertaken in the form of another OSCA. The progress achieved by the students, which was facilitated by the lecturers' planned actions, was explicitly shown in the second assessment. In light of the fruitful experience, the authors recommended the cycle to be continued as a teaching and learning strategy in the nursing programme.

## **Introduction**

The first group of baccalaureate nursing students graduated from the Hong Kong Polytechnic University (PolyU) in 1994. Feedback from the graduates revealed issues relating to learning outcomes in field placement and concerns about supervisors' different expectations in field evaluation. The graduates worried that the evaluation outcome might not necessarily reflect their level of competence. The discrepancy, as suggested by the graduates, could be the result of the combined effects of a complex clinical learning environment, variation within the students' expected competence level within their class and the lack of sufficient and regular feedback on student performance.

This problem is neither new nor unique to nursing courses. The learning and evaluation of the clinical performance of nursing students has been a challenge for educators for many years. The traditional method of clinical learning, and the subjectivity of the common measures in rating students' progressive performance have often been questioned (Neufeld and Norman, 1985). This paper describes how a course team employed an action learning strategy to address these issues.

## **Aims and Objectives**

To facilitate the students' learning process and authenticate the skill competence they achieved, the course team organised two clinical workshops in one year of the Bachelor of Science (Hons) in Nursing course. The workshops were structured in the form of an objective structured clinical assessment (OSCA). This assessment format has been effectively adopted as an evaluation tool for clinical competence, and has been extensively studied both locally and internationally (Brown et

al., 1987; Swanson, 1987; Pang, Chan, Chan and Pang, 1994). For the purpose of this action learning project, the course team adopted OSCA as a means of facilitating learning as well as a tool for assessing the students' learning outcomes. It was therefore planned to formally examine the effects of OSCA on the students' learning.

The objectives of the project were to:

- 1 introduce OSCA as an educational tool in facilitating and authenticating students' development of clinical competence;
- 2 provide an opportunity for the students to develop an awareness of their skill competence;
- 3 plan and implement actions which would further develop the students' skill competence; and
- 4 evaluate the process and effects of OSCA on the students' learning and development of clinical competence.

## **Objective Structured Clinical Assessment (OSCA)**

Many problems have been identified in the use of the traditional method for assessing clinical competence (Woods, 1982). The validity of what is directly observed, the subjectivity of the assessor's judgement and the reliability of a cross section approach to reflect the meant-to-be progressive development are some examples of this concern. As there are always more students than clinical supervisors, it is not unusual that a small portion of the clinical performance is evaluated. The learning opportunities and competence of the students may vary greatly because they are likely to be assigned to different clinical settings to practise. It is therefore acceptable for any given student not to have a 'complete' range of experience (Swanson, 1987). In addition, in order to meet the requirement of the educational institution, clinical assessment is often conducted while the students' learning is in progress. The profile of the students' clinical competence is thus incomplete.

The use of objective structured clinical assessment (OSCA) as a tool for formative and summative clinical evaluation in nursing has a relatively short history. The assessment method was developed in Dundee, where it was used to assess the clinical performance of medical students. Since then, OSCA has been adopted as an assessment tool for evaluating the clinical performance of both undergraduate and graduate nursing students (Brown, et al., 1987; Swanson, 1987; McKnight et al., 1987; Fahy and Lumby, 1988; Reed, 1992; Pang, Chan, Chan and Pang, 1993; Bramble, 1994). However, only a small volume of this effort has been reported in the nursing literature.

OSCA is typified by its objective rather than subjective nature in assessing students' clinical competence. It contains clinical simulations determined by the students' level of study. Assessors carefully plan the simulations to reflect the reality of clinical practice as much as possible (Harden and Gleeson, 1979). Predetermined criteria are formulated to relate directly to course outcomes, enhancing the examination validity and reducing the variability between the assessors. One major advantage of using this method is that all students are evaluated by the same assessor or group of assessors, for the same duration and under the same conditions. This undoubtedly reduces the subjectivity of the assessment. As OSCA is conducted in a simulated setting, there are more opportunities for assessors to give feedback to students. Bramble's (1994) work supports this claim. The students reported that OSCA participation was a valuable learning experience, and that the feedback provided was beneficial to their clinical and cognitive development.

## **The Process of Action Learning**

Two OSCA workshops were organised for students from one year of the course. The workshops were conducted at the end of each semester. The students' competence in clinical decision making

and care implementation was challenged by inviting them to work through a set of simulated clinical situations. The simulations were developed from the real clinical encounters. Professional actors and actresses were brought in to role play in the simulations. The students worked through each simulation as if they were in the real clinical settings. Lecturers observed and checked students' performance against pre-determined checklists.

These checklists for evaluating clinical competence were developed by the lecturers. The validity of the checklists was confirmed by two local and one overseas clinical experts, and the inter-rate reliability was tested with ten graduates of the course. A pilot study conducted on seven graduates led to some refinement of the organisation of the workshop. All students were given a complete set of the checklists together with detailed explanations of their contents and standards of measurement.

To optimise the quality of the first workshop, an overseas expert (a clinical professor) was invited to monitor its activities. She observed all events and interactions that occurred in the workshop. In addition, she interviewed 20% of the students ( $n = 10$ ) and the lecturers who were involved in the OSCA afterwards. They were asked to discuss their learning/teaching experiences, in both the workshop and clinical settings. Based on the data collected, the overseas expert reported her perception of the workshop — including its structure, process and immediate outcomes — to the lecturers and students.

A feedback session was held in the same afternoon for the overseas expert and lecturers to debrief the students. Initially, each student was asked to complete two sets of self-administered questionnaires; one contained seventeen questions related to the students' experience of the OSCA and another contained eighteen questions related to the field placement the students had just finished. The questionnaires were modified from one developed by Pang and her associates (1994). Then the students, the lecturers, the overseas expert and the actors/actresses each took turns sharing their opinions and ideas about the workshop with the others. This process revealed different perspectives of the 'nurse-patient' encounter. Both the merits and demerits were brought to the surface in an apparently non-threatening atmosphere.

Based on the findings of the first OSCA workshop, the lecturers re-engineered their teaching approach and modified the curriculum contents for the following semester. After implementation, another OSCA workshop was organised to appraise the students' progress. The results obtained from this workshop were used not only to guide curriculum operation in the following year, but also to reflect the effectiveness of the teaching strategies carried out.

## Findings

It was evident that OSCA was an effective means for providing the lecturers with much impetus and direction for improving their teaching. Based on the results of the first OSCA workshop, the lecturers critically reviewed the existing teaching and learning process. The following potential areas for enhancement were identified:

- 1 students' areas of weakness, especially in the psychomotor and cognitive domains;
- 2 gaps between theory and clinical practice;
- 3 communication between the clinicians and the lecturers; and
- 4 organisation and operation of the OSCA workshop.

To address these problems, the course team planned and implemented some teaching/learning strategies before the second OSCA workshop:

- 1 reinforce teaching in the identified areas of weakness, especially the cognitive aspect of clinical competence;

- 2 modify the approaches to clinical teaching, emphasising in particular the affective and psychomotor domains while the students were placed in clinical environment;
- 3 set up more complementary laboratory simulation sessions where the students can practise the psychomotor skills with or without supervision; and
- 4 disseminate the significant findings of the first OSCA to the clinicians and inform them of the suggested strategies employed to facilitate the teaching/learning process.

After the implementation of these strategies, it was apparent that students had made significant improvement in some simulations in the second OSCA; e.g., drug administration and monitoring of temperature, pulse and respiration all showed improvement. This could be a reflection of the effectiveness of the enhanced and directional modified teaching/learning strategies. From the first OSCA, the students' strengths and weaknesses were identified. The students were fully informed as they were involved in the feedback session. They were advised to include these in their learning objectives for the clinical placement in the following semester. In addition, the findings of this workshop were also disseminated to the clinicians working with the students. Thus, they could facilitate the students' learning in the identified areas. The improvement noted in the second OSCA could be an outcome of the strategies employed.

Although some progress was made in students' clinical competence, however, not all the comparable elements of the simulations showed better results in the second OSCA as compared to the first one. For instance, most students performed less satisfactorily on the element 'third check' when giving medication to a simulated patient. In order to explore this problem, a thorough discussion between the lecturers and clinical supervisors was held. It was noted that, in a large number of the wards, the nurses performed the third check at the bedside while counterchecking the patient's identity, rather than at the medicine trolley as stipulated on the checklist. This could explain why most students failed to meet the criterion. In addition, the students were probably confused as they were in a stressful situation in the OSCA workshop.

The results of the simulations on injection and health education brought to light another common problem which was overlooked in the organisation of the OSCA. It was evident that students were very cautious when they practised in these simulations. They took more time in checking items and planning the health teaching than the course team estimated. As a result, some failed to complete the designated tasks in the assigned time and attained a lower total score — particularly in the second OSCA — as the simulations were slightly more complicated than that in the first OSCA.

## Implications of the Study

The promising results and exciting experience reflected the effectiveness of the action learning strategies adopted by the course team. Although more time and effort were required in this approach, the outcome justified the investment. Teaching and learning became more student-centred and directional. In addition, the qualitative comments given by the students also suggested that the objectives of the OSCA as a learning tool had been achieved. With these enlightening results, the course team was committed to incorporate the OSCA as a teaching/learning method for all levels of the baccalaureate pre-registration nursing programme.

From the experience of this project, the course team realised the following areas should be considered in the future planning of the OSCA workshop. First, the time allowed for each simulation must be tested, especially when it involves clinical decision making skills which may not be fully developed in some levels of the course. Second, the professional actors/actresses must be thoroughly briefed to cover every element of their roles. They must be reminded of the importance of consistent performance. Third, the student feedback on the general arrangement of the OSCA and the individual simulation must be solicited and taken into account for future planning. Prior to the

actual OSCA workshop, some students may be invited to participate in a pilot study to try out the simulations, with special attention to the time required. Their feedback is likely to be of great value in making the OSCA more pertinent to the teaching/learning process.

## **Concluding Remarks**

The overall feedback on the OSCA project has been positive. Most students treasured this as a means of enhancing their clinical competence. They welcomed the workshop as a form of learning, rather than assessment. Their performance has convinced the course team of the effectiveness of using OSCA to correctly identify and promptly meet students' learning needs. The action learning process reflects the sentiments of Bevis (1989: 109):

when a child stands in awe and mystery of a falling rose petal, then it's time to teach the law of gravity.