Developing graduate attributes with Objective Structured Practical Examinations (OSPE’s)

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Objective Structured Practical Examination (OSPE) are assessments of theoretical, practical and problem-solving skills at multiple stations which are frequently used to evaluate clinical practical skills (Harden and Cairncross, 1980). Although other disciplines rarely use this successful assessment style, we have adapted this format to formally examine a wide range of communication, ethics, numeracy, graphic interpretation and science laboratory practical skills. This approach helps to prepare students for research projects and also enhance graduate attributes and employability skills.

Six stations, each assessing a mixture of different practical, theoretical, communications and problem-solving skills were developed. Students were introduced to the tasks and layout during an all day revision/rehearsal session one week before their scheduled OSPE. Extra tuition was provided to help address any identifiable weaknesses in performance. During the assessment, students moved round each station in turn and completed each task. Marking criteria and agreed checklists of competencies were published in advance and were clearly structured so students received the same test and interaction with different examiners (Wani, 2015). Using benchmark statements, student, staff and examiner feedback, we have steadily expanded the range of disciplines being examined by varying the tests used. Over one hundred students were assessed during a two day period, which allowed greater objectivity and consistency than traditional written work. OSPE stations are reusable for different classes and can also be tailored to suit different disciplines or assess diverse skills (Ananthakrishnan, 1993; Malhorta et al., 2013). For example, stations could be developed to evaluate wider employability skills such as public communication, interview skills, leadership, handling difficult situations, manual dexterity, language skills and interpretation: data, text, images, etc.

With a large Honours class, this method was efficient, allowing students to show skills without lengthy written work, and enabled rapid assessment with timely feedback. Students had to plan in advance to determine the most efficient approach to the essential activities within each station and therefore overall success required demonstration organisational and time management skills. Students reported the process “a bit stressful” as they had to prove they knew how to perform specific tasks/skills and could not hide within a group setting or a planned piece of written work. However, they also found this approach worthwhile preparation for upcoming practical work and employment opportunities. The variety of activities undertaken enhanced student engagement with the practical skills preparation and also the assessment. Students also reported that such a mixture of assessment methods better allowed them to display their full range of knowledge, skills and abilities. Although some students indicated greater understanding of graduate attribute strengths and weaknesses which also enabled them to further develop skills during their final year of studies, this was not observed in all students. Therefore, further work to enhance greater awareness of graduate employability skills within the whole cohort of students is necessary.

The advantages of this type of assessment include rapid and consistent assessment of large numbers of students (Harden and Cairncross, 1980). This also enables more efficient and timely return of feedback. It is relatively easy to scale up to assess larger numbers and we have been able to add additional student cohorts and disciplines every year over a 4 year
period. This approach can also enable efficiencies in time, cost, space and staffing. Stations
can also be designed to be adaptable to cater for students with physical or learning
difficulties. Graduate attributes that are not easily demonstrated using traditional assessment
methods can be evaluated using a methodology that is adaptable for different skills and
disciplines. The style of assessment (and positive feedback from students) has made it
easier to engage staff from different disciplines in the new process and therefore enhance
flexibility of staff coverage of large group teaching. Staff mentoring for those unfamiliar with
practical teaching and also involving technical staff in the design, development and delivery
has substantially enhanced staff engagement and collaboration overall.

However, although there are long term cost and staff time savings with this type of
assessment, it does require some time investment to develop and set up initially, and
consideration of back up plans are needed. For example, non-IT solutions at stations
utilising online activities if there is a network failure, duplicate stations for the next candidate
to use if there is a spillage during the rotation.

This presentation will introduce the concepts involved and discuss both advantages and
disadvantages of delivering OSPEs to rapidly and efficiently examine a variety of skills.
Using examples of stations that assess core skills and combine practical activities with softer
skills for the workplace such as non-science communication (Andrews and Higson, 2008),
we will discuss how these can be adapted to appropriately challenge students from different
academic disciplines. Future developments that are planned include development of videos
of the stations on the VLE to enhance practice and preparation, greater use of online
assessment and marking within stations, and approaches to encourage greater student
reflection on their own strengths and weaknesses to enhance understanding of graduate
attribute attainment and further development needs.

In our experience, this type of practical can assess student understanding of a range of
aspects including health and safety, ethical behaviour and time management contributing to
creating a sense of professionalism and citizenship in students, in addition to effective
evaluation of student graduate attributes and enhancement of graduate success.

References

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