Evaluation of a multi-methods approach to the collection and dissemination of feedback on OSCE performance in dental education.

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**Article:**

https://doi.org/10.1111/eje.12273

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FEEDBACK ON OSCE PERFORMANCE

TITLE
Evaluation of a multi-methods approach to the collection and dissemination of feedback on OSCE performance in dental education

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KEYWORDS
Feedback, OSCE, audio, written, learning impact, assessment, examination, dental education
ABSTRACT

Introduction
Feedback is an essential part of the learning process and students expect their feedback to be personalised, meaningful and timely. OSCE assessments allow examiners to observe students carefully over the course of a number of varied station types, across a number of clinical knowledge and skill domains. They therefore present an ideal opportunity to record detailed feedback which allows students to reflect on and improve their performance.

Methods
This paper outlines two methods by which OSCE feedback was collected and then disseminated to undergraduate dental students across two year groups in a UK dental school:
1) individual written feedback comments made by examiners during the exam
2) general audio feedback recorded by groups of examiners immediately following the exam.
Evaluation of the feedback was sought from students and staff examiners. A multi-methods approach utilising Likert questionnaire items (quantitative) and open-ended feedback questions (qualitative) was used. Data analysis explored student and staff perceptions of the audio and written feedback.

Results
A total of 131 students (response rate 68%) and 52 staff examiners (response rate 83%) completed questionnaires.
Quantitative data analysis showed that the written and audio formats were reported as a meaningful source of feedback for learning by both students (93% written, 89% audio) and staff (96% written, 92% audio).
Qualitative data revealed the complementary nature of both types of feedback.
Written feedback gives specific, individual information whilst audio shares general observations and allows students to learn from others.
The advantages, limitations and challenges of the feedback methods are discussed, leading to the development of an informed set of implementation guidelines.

Conclusion
Written and audio feedback methods are valued by students and staff. It is proposed that these may be very easily applied to OSCEs running in other dental schools.
FEEDBACK ON OSCE PERFORMANCE

INTRODUCTION

Feedback is an essential part of the learning process. Its aim is to provide learners with information that allows them to reflect on their performance and then to plan improvements in their future performance (1). Feedback should be specific to the task and allow understanding as to where the learner is and how to get to where they aim to be (2). However, teachers are presented with challenges in being able to provide detailed, timely and meaningful feedback to each student (3).

High quality feedback has been identified as one of the main characteristics of any effective learning experience (4). Nicol and Macfarlane-Dick (5) describe seven principles of good feedback practice: timely, appropriate to student level, non-critical, structured, specific, detailed, retains dignity of the student. Feedback should, in particular, be positive and constructive, taking into account the motivational effects that this approach can bring to the learner (6). Where feedback is used as part of a formal assessment process, it’s purpose should still be to encourage student learning rather than merely as a means to justify the given result (grade or numerical score). In essence, the purpose of feedback should be to promote reflection and to inform future learning so that it has a lasting effect on the educational experience of the student (7).

European guidelines for the design of dental curricula and assessment in dentistry recommend the inclusion of feedback opportunities on academic, clinical and professional performance (8). It is advised that assessments should promote reflection and continued learning. In the UK, the General Dental Council (GDC) and the National Student Survey (NSS) have led to the provision of feedback becoming a key pedagogical quality marker which can impact on external reputation, in particular on positioning within school league tables.
FEEDBACK ON OSCE PERFORMANCE

In the UK, the GDC’s ‘Standards for Education’ document (9) gives guidance in the area of feedback stating:

“The provider should seek to improve student performance by encouraging reflection and by providing feedback”.

Price et al (10) highlighted the main issues relating to feedback in Higher Education: resource constraints and student dissatisfaction. Students in general have reported that the feedback they receive does not meet their expectations. The NSS has consistently reported average scores for ‘Assessment and Feedback’ in UK dental schools, ranking lower than any other survey domain (11). Students are specifically asked to grade and comment on each of the following statements:

- Feedback on my work has been prompt
- I have received detailed comments on my work
- Feedback on my work has helped me clarify things I don’t understand

There is recognition that the improvement of feedback and the encouragement of student reflection is a priority for undergraduate dental programmes.

Dental students may be given feedback in a variety of clinical and non-clinical contexts and in quantitative and qualitative forms (numerical/ written scores and verbal comments). Opportunities for feedback on clinical performance are particularly valuable to enable students to identify specific areas of clinical development need. Constructive feedback is considered to be a crucial component of effective clinical teaching (12). Objective Structured Clinical Examinations (OSCEs) are now integral to the assessment portfolios of many undergraduate dental programmes (13), (14). These examinations involve students rotating around a series of pre-determined, specifically designed stations which assess clinical and communication competence. Examiners assess student performance objectively against pre-determined, structured criteria (15).
FEEDBACK ON OSCE PERFORMANCE

From their introduction in dentistry, OSCEs have been seen as a crucial opportunity to provide clinical feedback (13), (6). Feedback may be given on each station, in skill domains and in specific subject areas. Manogue and Brown (13) reported that when students were provided with an individual numeric breakdown of results their reported satisfaction with the information they had gained about their performance was high. Crooks (16) and Black and Wiliam (17) showed that offering written comments is more effective than offering grades. Larsen and Jeppe-Jensen (6) explain how the use of explicit marking criteria can be the used to help formulate constructive feedback. The observation of students carrying out tasks from start to finish afforded by the OSCE assessment process provides a unique opportunity to collect direct feedback comments from examiners. This direct, rather than passive approach, to the dissemination of feedback is more favoured by students (18). A study which tested the effectiveness of immediate feedback during OSCE found that feedback significantly improved student performance (19).

The aim of this paper is to describe a process where both individual written and generalised audio feedback comments are gathered and disseminated in a timely fashion to cohorts of undergraduate dental students undertaking OSCE assessments. The advantages, limitations and challenges of the feedback methods are discussed. Substantial input and commitment from examiners and administrative teams is required and the investment in time and resources needs to be justified. With this in mind, evaluation of the feedback processes employed was sought from staff and students and the results are presented.

The feedback context: OSCEs in this School
Dental students at this University experience OSCE assessments during the third and fourth years of their clinical education. These assessments are summative, non-
compensatable components of the ‘Clinical Practice’ modules and as such must be passed to allow progression to the next year of the programme. A minimum of 14 stations are run for each OSCE and are designed to test abilities over three main domains: clinical operative skills; communication skills and interpretive skills. Trained, simulated patients take part in the communication skills stations. Students are required to achieve a passing numerical score and to pass a certain number of stations (usually around 60%). A borderline regression method (20) of standard-setting is used to determine these passing standards. Stations are a minimum of five minutes of active time, with a minimum of one minute between stations to allow students to move to the next station and for examiners to complete their marking. Three circuits of the same stations are run simultaneously and repeatedly until all students have been through the OSCE on the same day. Three examiners will therefore examine the same station. Prior to the summative OSCEs, staff examiners and simulated patients must attend a briefing and ‘calibration’ session. This provides an opportunity to give guidance and direction on good practice in giving feedback.

Prior to their first experience of OSCE, year 3 students are briefed by a member of academic staff. This involves a lecture where an introductory OSCE video is viewed. This helps students know what to expect and gives them an idea of the types and numbers of stations and how they will be assessed by examiners. Students also have the opportunity to undertake a formative ‘practise’-type OSCE. Here, four stations similar in type and style to the summative OSCE are run and students may ask for guidance and one-to-one feedback as they are doing the stations. Students are therefore prepared for the OSCE experience.
Methods for the collection of OSCE feedback

OSCE feedback for the main summative OSCEs is collected in two main formats: individualised written feedback and generalised audio feedback.

Individualised written feedback

As each candidate progresses through their station, examiners complete their standard marking proforma. This is used to generate the summative scores for each station. In addition, examiners are asked to complete a handwritten feedback sheet for each student. Examiners are asked to keep these to brief, specific and constructive comments (example of handwritten comments in Fig. 1). Individual feedback sheets are collated by the assessment support team ready for collection by each student at a subsequent interactive feedback session.

Generalised audio feedback

Immediately following the completion of the OSCE, examiners are asked to gather in their station groups. Examiners and simulated patients are ‘interviewed’ by the OSCE co-ordinator as to the general performance of the student cohort in each station. Comments in relation to what was done well, common mistakes, omissions and difficulties are sought. Advice is also given on what could be done to improve performance in each specific station. No student names or identifiers are used in this process (example of audio comments Fig. 2). The ‘interviews’ are audio recorded using a simple digital audio recorder and microphone and take place in the clinical area where the OSCE has just taken place. A separate audio file is used per station to help simplify the process of editing. This process takes a few minutes per station and in total about 30 minutes. The audio files are saved by the OSCE co-ordinator in accordance with University data protection policy.
Dissemination of OSCE feedback and the encouragement of student reflection

In order for students to receive their feedback and to use this effectively in their reflection, an interactive lecture is run. For year 3 students, this is scheduled approximately one month following the OSCE to allow enough time to process the summative results and the individual and generalised feedback. The format of the session is as follows:

1) Students are asked to reflect on their own perceptions of their performance both in general terms and for each station. Students complete a ‘reflection document’ at the beginning of the session. This includes space for ‘what went well’ and ‘what could be done differently’. Reflective practice is embedded in the School’s curriculum from an early stage and therefore students are able to undertake this process purposefully.

2) Students are issued with individual envelopes containing each of their written examiner feedback sheets. The envelope also contains a breakdown of their summative performance per station and their final OSCE mark.

3) The lecturer presents a review of each of the station details (instructions) to the student group and plays back the generalised audio feedback comments for each station. Students listen to these as a group and are encouraged to make notes.

4) Students are asked to compare their own perceptions with the individual and general feedback comments made.

Evaluation of Feedback Process by Students and Staff

The OSCE feedback process was evaluated by students and staff involved in the year 3 and 4 OSCEs over the course of one academic year (2013/14) using group
specific questionnaires. Ethical approval was gained from our institution’s Research Ethics Committee (Reference no. 030114/JW/120). In the case of students, the questions focused primarily on how meaningful and relevant the feedback was to them and their performance and whether it helped to identify areas for improvement whereas the staff questionnaire related more to the practicalities of providing feedback in the examination setting. In both cases, participants were asked whether the feedback methods should be used for future OSCEs.

The questionnaire was designed to use mostly closed-type questions (see table 1 for questions) with one final open question to elicit any further comments. Students were issued with the questionnaire at the end of the interactive feedback session which was lengthened to allow sufficient time (approximately 10 minutes) for completion. Staff were issued with their questionnaire at the end of the OSCE examining day and following the delivery of the audio feedback.

Quantitative analysis
The quantitative data from the 8 Likert questions (four for staff and four for students) were analysed using SPSS version 22 (SPSS, Inc., Chicago, IL, USA.)

Qualitative analysis
The open-ended responses to the questionnaire, mainly consisting of short sentences, were analysed using thematic analysis which adopted a grounded theory analytic approach in order to pursue emerging lines of enquiry. The intention of this was to understand staff and student’s perception of multi-source feedback and how it impacted on their current and future learning.
FEEDBACK ON OSCE PERFORMANCE

RESULTS

Data were collected between February and May 2014, the questionnaire data was collated and the audio feedback was transcribed verbatim. The response rate for students was 68% (131 students) and for staff was 83% (52 members of staff). Demographic data, such as age and gender were not collected.

The quantitative analysis (table 1) for the 8 questionnaire items showed that the written and audio formats were reported as a meaningful source of feedback for learning by both students (93% written, 89% audio) and staff (96% written, 92% audio). Staff reported that the process of delivering feedback was straightforward for written (94%) and for audio (100%), however only 65% of staff reported that they had enough time to provide sufficient written feedback within the OSCE station. A series of t-tests were conducted to look at differences between the feedback types. There was no overall significant effect of preference for the two types of feedback, for both staff and students (p> 0.05). However, when asked if each feedback type should be used in future examinations there was a significant preference for written feedback over audio feedback by both staff, t (51) = 4.422, p = .021 and students, t (130) = 3.981, p = .033. Students also indicated that written feedback was significantly more relevant to them than audio feedback, t (130) = 6.891, p = .001. No significant differences were found between the year 3 and year 4 cohorts of students and therefore the data is combined.
Table 1. Quantitative results from closed response questionnaire

<table>
<thead>
<tr>
<th>Question (Students)</th>
<th>Positive Response (%)</th>
<th>Mean Response</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Written</td>
<td>Audio</td>
<td>Written</td>
<td>Audio</td>
</tr>
<tr>
<td>The feedback gave me opportunity to reflect meaningfully on my performance in each station</td>
<td>93.2</td>
<td>88.6</td>
<td>4.47</td>
<td>4.22</td>
</tr>
<tr>
<td>The feedback comments were relevant to my performance</td>
<td>96.9</td>
<td>83.9</td>
<td>4.51</td>
<td>4.06</td>
</tr>
<tr>
<td>The feedback comments helped to identify areas for improvement in my performance</td>
<td>94.6</td>
<td>87.1</td>
<td>4.48</td>
<td>4.23</td>
</tr>
<tr>
<td>I feel that feedback should be used for future OSCE examinations</td>
<td>99.2</td>
<td>91.6</td>
<td>4.80</td>
<td>4.44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question (Staff)</th>
<th>Positive Response (%)</th>
<th>Mean Response</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Written</td>
<td>Audio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The feedback type gave me opportunity to feedback meaningfully on overall student performance</td>
<td>96.2</td>
<td>92.1</td>
<td>4.55</td>
<td>4.38</td>
</tr>
<tr>
<td>The feedback process was straightforward</td>
<td>94.2</td>
<td>100</td>
<td>4.44</td>
<td>4.56</td>
</tr>
<tr>
<td>I had sufficient time to provide meaningful feedback</td>
<td>65.3</td>
<td>80</td>
<td>3.71</td>
<td>4.12</td>
</tr>
<tr>
<td>I feel that feedback (type) should be used for future OSCE examinations</td>
<td>98.1</td>
<td>86.5</td>
<td>4.63</td>
<td>4.48</td>
</tr>
</tbody>
</table>

Questions were responded to on a 5-point scale- 5- Strongly agree, 4- agree, 3- neutral, 2- disagree and 1- strongly disagree. Responses of strongly agree and agree were deemed to be positive responses.
Thematic analysis was then conducted to explore staff and students perspectives on the feedback and how it impacted learning. Five specific themes were identified (a) reflection on learning; (b) personalised feedback; (c) feedback type; (d) structure of feedback and (d) improvements to feedback.

**Reflection on learning**

Students identified how the feedback impacted their learning in two specific ways:

**Immediate benefits:**

“The written feedback was brilliant, it improved my confidence and it was so useful to hear what I did well, as during the OSCE I was so nervous and did not feel things went as well as the written feedback demonstrated.”

“Getting audio and written feedback helped me to know the areas that need improving. If we didn’t get this feedback I wouldn’t know what to improve even if we have a sample answer of performance of OSCE”

**Long term benefits:**

“From Year 3’s feedback I was able to make changes to how I approach OSCE’s in Year 4 which improved my overall performance and grades/mark.”

The long term benefits to feedback were also reflected in a pragmatic approach to future learning

“Excellent- best feedback at Dental School!! Very useful for both OSCEs and to improve performance and practice for national recruitment.”
“The comments, both audio and written, help me greatly to improve my clinical skills”

**Personalised feedback**

A majority of both staff and students reflected on the personalised nature of the feedback and discussed the benefits of it for both written and audio feedback:

“Audio was useful – when recognising my examiners voice, it felt a lot more personal despite it being generic, listening and was able to relate better to the comments”

“The individual written feedback was more useful as it identified personal areas of improvement”

“Good opportunity for feedback – high level of detail for an individual student to receive.”- Staff

However, a small proportion of students reported that when the personalisation element was absent the feedback wasn’t particularly beneficial to them

“Some of the comments are really brief and impersonal, so don't really help”

**Feedback type**

Several students commented that they found the written feedback was the most useful to them

“I feel the written feedback was more useful and beneficial for me”
FEEDBACK ON OSCE PERFORMANCE

“Written more helpful than audio”

However, an overriding theme from students was the benefit of having both types of feedback and how they complemented each other

“The audio feedback and the written feedback was very useful together. I don’t feel that either would be sufficient on their own. The audio feedback was very good for revision purposes”

“Both should continue to be used. As a generality it is nice to see points that you yourself may not have thought of or picked up on, and then the individual feedback is more for both positive reinforcement of what went well, but also what could be improved”

This was also a theme that was strongly reported by members of staff

“Written – provides for constructive individual feedback. Audio – provides for constructive feedback to year”

“Both brilliant!”

“The feedback methods complement each other – one for general patterns pertinent to a large number of students with immediacy. The other for targeted comments which will hopefully speak to an individual student and allow them to reflect”
FEEDBACK ON OSCE PERFORMANCE

“Great experience and I agree for audio and written feedback to be used further more in the future.”

Structure of feedback

Some students commented on the use of critique and emotive language used in the feedback

“Audio too general and generally critical - few positives given”

“Some language used in feedback unnecessarily emotive e.g. “Do not …EVER, EVER, EVER!” I feel this makes the student feel unnecessarily marginalised and examiners should be more objective”

The need for good quality, balanced feedback was expressed by both examiners and students

“Need positive feedback not just negative. Not enough time to fill in written feedback”

Some students also commented on the inconsistency between examiners’ feedback

“The written feedback needs to be more detailed from certain examiners. Having them write what we did well on allows us to confirm if our positive self-reflections are well founded.”

“Tutors need to collaborate on how much they are going to write – maybe a check-list for each station? Some just write good or poor – not useful“
FEEDBACK ON OSCE PERFORMANCE

**Improvements to feedback**

The review of feedback was generally extremely positive

“Really appreciate the efforts made to give such great feedback. Feel more confident in what the examiners want for 4\textsuperscript{th} year OSCEs and had reduced any anxiety I had! Thank you”

Students provided specific areas where the feedback could be improved

“I would like at least 1 comment of an area to improve on for each station. This would help improve future performance”

“Some of the written could have been more legible and some were too brief (1 sentence)”

“If it’s possible to include in the feedback in addition to what went wrong what is the correct way to do it.”

Time was a common theme for both staff and students

“I wished I had made notes before audio recording. I felt rushed trying to write written feedback”

“Could probably do with more time between stations to write better feedback”

“It may be more useful to give the examiners more time to give students feedback after each session! (Some tutors gave more feedback than others)”
Examiners also expressed that a more structured feedback form would be more useful and improve the quality of their feedback

“Timing of OSCE and 1 min for complex written feedback means it is limiting. Mix some tick box areas and free text perhaps?”

“Maybe a little more time for feedback and having general themes feedback box for the commonly occurring errors”

**DISCUSSION**

The aim of this study was to explore student and staff examiner perceptions of two OSCE feedback methods; written and audio. Quantitative analysis found that students had very positive responses to both feedback methods, with the written form of feedback generally being received more positively than the audio format. Feedback, reportedly, gave students the opportunity to reflect meaningfully on their performance, the comments were relevant and helped to identify areas for improvement. There was very strong indication that these methods should be used for future OSCEs. Staff examiners perceptions were also positive, reporting that the methods gave opportunity to feedback meaningfully on student performance and agreed with students that these should be used in future OSCEs. It is important in a time limited examination such as OSCE that examiners feel the feedback methods are easy to use with sufficient time given to provide meaningful feedback. Both written and audio methods were reported by staff examiners to be straightforward to use. The time available for examiners to give feedback did not have such a positive response (65% for written and 80% for audio) but seen in general terms are still encouraging.
FEEDBACK ON OSCE PERFORMANCE

Victoroff and Hogan (4) report on the resonance of qualitative type data in gaining a more meaningful insight into the views of students. The qualitative data reported here helps to give a deeper understanding of the perceptions and experiences of staff examiners and students. The five identified themes help to focus attention on the real value of feedback given specifically for OSCE and for feedback purpose and practices in general. Students reported how the feedback had impacted on their learning; both immediately and in the long term with students able to recognise where their clinical skills could be improved. The importance of personalised feedback was emphasised. One interesting point was that students felt that feedback was more personal when they recognised their examiner’s voice during the audio playback; they were better able to relate to the feedback comments. Where feedback comments were brief and impersonal they were less well received by students. Although the quantitative data showed that written feedback was reportedly better received than audio, the qualitative data demonstrates that both were considered, by staff examiners and students, as complementary. Written feedback gives specific, individual information whilst audio shares general observations and allows students to learn from others.

Whatever feedback methods and processes are used, Murdoch-Eaton and Sargeant (21) ask us to consider:

“is this the right type of feedback, given at the right time, appropriate for the intended outcome of that activity, and does it generate change in the learner?”

Feedback on clinical performance is particularly important and this is not always provided during actual clinical teaching sessions (22). OSCE therefore provides a structured opportunity for feedback comments to be gathered and then disseminated.
FEEDBACK ON OSCE PERFORMANCE

to students. The results of this study indicate that students felt that the feedback
given was personalised and helped them to identify areas of improvement.

This study has highlighted some of the challenges involved in the collection and
dissemination of good quality feedback and these are also identified in the literature
(7). The provision of sufficient time to write comments during the OSCE was a
particular concern expressed by examiners. Examiners need to make judgements
about what sort and how much feedback to give each student candidate. This issue
can be made easier through the use of more approachable, structured written
feedback forms which, for example, may contain a series of pre-determined
statements, tailored for each OSCE station. Alternatively, the structured form could
be more generic with space for at least one positive comment, one thing to work on
and general comments. The evaluation comments reported in this paper indicate a
need to improve the consistency of feedback between examiners and to ensure that
there is a balance of positive and negative comments. The provision of a more
structured written feedback proforma would help to address these concerns.

We have found that the audio feedback methods are relatively easy to apply without
any need for specialist audio recording equipment or training. Examples of well-
described case studies using audio feedback are reported in the higher education
literature (23; 24) and these were useful when initially setting up the processes. Our
own guidance for the use of both written and audio feedback methods specifically for
OSCE is given in Appendix 1.

The OSCE feedback methods are now an embedded feature of the experience
expected by both student candidates and staff examiners in this School. We have
found that preparing students to receive feedback and encouraging self-reflection is
FEEDBACK ON OSCE PERFORMANCE

particularly important so that they can use the insights gained to plan their future learning. As indicated in the evaluation comments reported, this can be particularly effective in relation to preparations for the UK Dental Foundation Year recruitment process (a requirement for work in UK’s National Health Service general practice dentistry). More fundamentally however, it is hoped that the experiences our undergraduate students have gained through reflection, with the aid of high quality feedback, will instill an approach to reflective practice and continued improvement as independent learners (7).

Future developments involve the emerging electronic OSCE marking systems which provide an exciting opportunity to improve both student candidate and staff examiner experiences particularly in relation to feedback. There is scope to provide much more detailed analysis and breakdown of feedback over subject and skill domains and there are the benefits of removing handwriting legibility issues that students frequently complain about. There is also the obvious reduction in administrative load and the considerable speeding up of the collation and dissemination processes involved when handling feedback for a large cohort of student candidates.

The main limitation to this study is in relation to the generalisability of student and staff evaluation based on data from one dental school. Contextual variations between schools inevitably leads to different feedback experiences and it is important to be aware of these when designing and implementing new feedback processes. All student OSCE candidates and staff examiners had the opportunity to take part in the study and the response rate is adequate to allow statistical support to the findings. Use of a questionnaire method allowed the gathering of relevant data, much in the same way as the NSS, as reported earlier in the introduction. The incorporation of open type questions elicited more detailed and unanticipated responses. It is this ‘qualitative’ type data that is most revealing and further research
FEEDBACK ON OSCE PERFORMANCE

using a focus group approach would be valuable in enhancing the richness of the data and provide greater understanding.

In order to prove, definitively, that these methods result in better learning and future clinical success, the OSCE results of cohorts of students who did and who did not receive feedback would need to be determined. Hodder et al. (19) conducted a similar type of study where a test group of students taking an OSCE were given immediate feedback following an initial attempt at a station. The control group were given no feedback and asked to simply repeat the station. They found that short periods of immediate feedback during the OSCE helped to improve performance.

There are limitations to the ethical conduct of these types of studies and withholding feedback from cohorts of students is problematic, especially when high stakes examinations and clinical practice competency assessments are being regularly run throughout the curriculum. Such is the recognised importance of feedback that to withhold it could significantly disadvantage student performance and development.

CONCLUSION

The provision of clinical feedback is essential in encouraging students to effectively reflect on their performance and to inform their future learning needs. OSCEs are now widely used in undergraduate dental programmes and afford an ideal opportunity to record feedback based on direct observation by a series of examiners over a number of varied station types. The investment of time and efforts made in providing feedback using written and audio methods needs to be justified by the benefits they give. This study suggests that the described methods are valued by both students and staff examiners.

The evaluation comments also inform the development and improvement of the methods and there is future opportunity to make use of electronic marking systems to streamline the administrative processes involved. It is hoped that the description and
FEEDBACK ON OSCE PERFORMANCE

guidance in relation to the specific use of these feedback methods may be easily
adapted and applied by those involved in managing OSCEs in their own schools.
REFERENCES


Figure 1

**Example of individual hand written feedback:**

<table>
<thead>
<tr>
<th>Explaining periodontal disease station</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Spoke a little quickly initially &amp; gave quite a lot of information all at once</td>
</tr>
<tr>
<td>- Mentioned bleeding/ calc/ pockets but all needed more explanation so that the patient would understand</td>
</tr>
<tr>
<td>- A diagram may have helped to explain pockets/ bone loss</td>
</tr>
<tr>
<td>- Friendly manner, just need to slow down</td>
</tr>
</tbody>
</table>

Figure 2:

**Example of general audio feedback (transcript of recording):**

<table>
<thead>
<tr>
<th>Explaining a simple treatment plan station</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Ok I think generally the station was quite well done, everyone introduced themselves very politely, everyone’s non-verbal communication was very good, facing the patient, making eye contact, talking to the patients like human beings. I think some people were more structured than others in their approach to how they talked and delivered the information to the patient, some were quite patient led, in other words they were waiting for the patients to ask questions and then they were revealing the information whereas others were a little bit more proactive in revealing the relevant information straight away and I think some people with the consent towards the end erm, the consent was sort of implied in a lot of cases rather than directly ascertained”.</td>
</tr>
</tbody>
</table>
Appendix 1  Guidance on collection of written and audio OSCE feedback

- At the planning stage sufficient time should be allocated within the examination (at least one minute between stations) and at the end of the OSCE session (2-3 minutes per station) to allow examiners to write and record their feedback.

- Examiners should be briefed as to what is expected in relation to the quality of feedback.

- Feedback sheets need to be printed separately from the mark sheets with student names or IDs and the administrative team should be able to process the sheets into ‘bundles’ for each student.

- Basic MP3 type audio recorders may be used. Editing of files is not necessary if separate files are used for each station.

- The quality of the audio recording is not paramount. Recordings can be made on the clinic or OSCE room once the exam has been completed. The background noise of clearing up the OSCE adds to the authenticity and contemporaneous feel of the feedback.

- OSCE audio feedback works best if examiners are ‘interviewed’ by a member of the OSCE organising team. Examiners can be prompted and reminded to give comments on what was generally done well and common issues or difficulties.

- Simulated patients can also be interviewed and recorded to give their perspective on the general performance of students.

Guidance on dissemination of feedback to students

- A feedback session (interactive lecture format) should be run as soon as possible (allowing time for the collation of results and feedback).

- Students are first encouraged to record self-reflections on their own OSCE performance.

- Sufficient time should be allocated to allow students to receive and review their written feedback ‘bundles’ and to listen to the audio comments.

- MP3 audio files can be inserted into a standard presentation software programme ready to be played back to the student group. A brief summary of each station should be given.

- Students should be encouraged to judge whether their own reflections match the examiners’ written and audio feedback comments.

- Students should be encouraged to put together a list of items/issues they may need to work on to help in their future clinical practice and future OSCEs.
ACKNOWLEDGEMENTS

Our thanks to Professor Michael Manogue for his guidance in the production of this manuscript.

THE AUTHORS HAVE NO CONFLICTS OF INTEREST TO DECLARE.