Final year dental students' and other stakeholders' perceptions of their experience at a residential outreach centre

David R Radford* BDS PhD FDS MRD

Paul Hellyer BDS MSc

1* Senior Lecturer Hon Consultant, Integrated Dental Education and Multi-Professional Care; King’s College London Dental Institute and the University Portsmouth Dental Academy.

2 Clinical Teacher, University of Portsmouth Dental Academy and King’s College London Dental Institute.

Correspondence to: Dr David R Radford*

University of Portsmouth, Faculty of Science, William Beatty Building, Hampshire Terrace, Portsmouth. PO1, 2QG.

david.radford@kcl.ac.uk
Abstract

Introduction The Portsmouth Dental Academy delivers an interprofessional education to dental students on outreach placement from King’s College London Dental Institute. Aim To establish what the dental students’ attitudes to the placement are and how these correlate to the perceptions of the staff who work with them. Method Using Delphi consensus procedures a simple closed two question questionnaire was developed. The questionnaire was completed by the students and then to triangulate the results was subsequently applied to staff who teach and assist them on clinic. Results To the question; Why do you think the experience that is commonly termed the ‘Portsmouth experience’ is so successful ‘in the eyes of the students’? the students ranked first the response: Students gain experience in Primary Dental Care Clinical Practice under the current NHS Contract – UDAs and KPIs. To the second question, What do you think the students most enjoyed about working in Portsmouth? the students ranked first: A sense of independence – being made to make their own decisions. Conclusion The students’ major perception of the ‘Portsmouth experience’ centres around the placement being a realistic preparation for their future practicing career. This is combined with a strong sense of belongingness when studying and working at the Academy.

In brief

- Explores students’ perceptions to outreach in their final year.
- Contrasts students’ perceptions to the University of Portsmouth Dental Academy with that of the clinical teachers and the dental nurses that they work with.
- Introduces the concept of ‘belongingness’ as an important component of dental education.
INTRODUCTION

Outreach dental education is internationally widespread, adopting models that mimic provision of dental health care locally,\(^1^,\(^2\) and was initiated in the UK in the 1970’s.\(^3\) The rationale was that as the majority of dental care is provided in the primary care sector of the National Health Service (NHS), students would benefit greatly from this educational experience (55.9% of the population had received NHS dental care in the 24 month period ending 31st December 2014).\(^4\)

The General Dental Council UK (GDC), in the second edition of their document on the training of dentists, ‘The First Five Years’,\(^5\) specifically recommended a period of undergraduate education in the primary care setting. Many of the learning outcomes in the more recent GDC guidance on the training of dentists, ‘Preparing for Practice’, concern, in particular, ‘Communication’ and ‘Management and leadership’ skills that are ideally delivered in a primary care outreach setting.\(^6\)

Many outreach centres where final year dental students are trained, aim to ease the transition of graduates into dental practice as foundation trainees. Both qualitative and quantitative studies have investigated the students preparedness for foundation training,\(^7\) having researched evidence both from the students as well as their future employers and trainers.\(^8,^9\)

Cardiff Dental School reported on their outreach community clinic at St David’s primary care unit, stating that their students enjoyed the availability of nursing and helpful and approachable teaching staff. The students also valued highly the ‘closeness of learning experience to subsequent practice’.\(^10\) Other centres have used a randomised controlled trial to investigate the level of confidence students gain on outreach placement. This showed that it was an effective adjunct to traditional dental school based learning in improving students’ confidence, which is an important element in their preparation for vocational training as foundation trainees.\(^11\)

The joint venture between the University of Portsmouth and King’s College London Dental Institute (KCLDI) opened the University of Portsmouth Dental Academy (UPDA) in 2010.\(^12\) The Portsmouth model that has been reported previously, in brief includes, clinical teaching of integrated team care with 48 dental hygiene/therapy students in their second and third years, 20 student dental nurses (University of Portsmouth) and 80, Year 5 dental students (KCLDI) on a one in four week attendance pattern (20 at any one time for 10 weeks over their final year).\(^13\) The treatment outcomes of this skill mix have been previously reported.\(^14\)

Previous service evaluations at the UPDA have established that the residential aspect of the placement, being away from London, living in Halls of residence with a group of their colleagues, was rated very highly by the students.\(^13,^15\) From the comprehensive questionnaire survey of
Lynch et al\textsuperscript{16} it is unknown whether this residential model is widespread, although anecdotally it is known that this model is used in the UK where the outreach centre is a significant distance from the mother school. It could be postulated that this residential aspect of the placement encourages a feeling of belongingness in the student body. Belongingness is considered a deeply personal and contextually mediated experience where an individual feels secure, accepted, included, valued and respected and that their professional and/or personal values are in harmony with those of the group.\textsuperscript{17}

The value of team education and use of a current NHS contract used at the UPDA have been reported\textsuperscript{15} as well as the overall educational experience of the dental students.\textsuperscript{13} In these two papers the students commented on the overall experience of their residential outreach commonly referred to it as the ‘Portsmouth experience’. However, on further questioning of both staff and students, it was apparent that there was no consensus as to what the ‘Portsmouth experience’ really meant, i.e. what was most valued by students from the outreach experience at the UPDA was ill defined. All members of staff and students contribute to the college of learning and the philosophy of the Academy, however, the major stakeholders are the student body (both the dental students on placement from KCLDI and the Hygiene Therapy students of the University of Portsmouth) and the two groups of staff that interact with them on the clinic, namely the clinical teachers and the nursing staff. The aim therefore of this element of a wider service evaluation was to establish what the dental students on their residential outreach placement from KCLDI and the staff that interact with them on a daily basis really value from working in this outreach location i.e. their perceptions of their experience. This information may then be of value to incorporate into new or pre-existing outreach facilities.

\textbf{METHODS}

The study was devised as one aspect of an ongoing service evaluation of the dental student’s attitudes to outreach education at UPDA. A Delphi formal consensus methodology,\textsuperscript{18} was adopted with three predetermined rounds of consultation (Figure 1) to develop a two question questionnaire with defined statement/options to rank for each question.

Round 1: The nine part-time members of staff (clinical teachers) were approached and requested to answer two questions to establish a series of statements (options) that might describe the concept of the ‘Portsmouth experience’.
The first question was, Why do you think the experience that is commonly termed the ‘Portsmouth experience’ is so successful ‘in the eyes of the students’? The second question asked the tutors to state, What they thought students most enjoyed about working in Portsmouth? The statements obtained in the first round were then collated by the facilitator (DRR) and common statements were identified and ranked using descriptive statistics.

Round 2 The collated statement/options were then fed back to the tutors anonymously, who after reflection, refined and clarified some of their original concepts. Using this data the pilot questionnaire was written.

The pilot questionnaire which included 12 statement/options for question one and 9 statement/options for question two were produced and shared with the tutors in round table discussions. After piloting with 8 dental students, a final questionnaire was devised which consisted of the two questions with the associated statement/options with a request that the participant rank six statement/options to each question, but not to rank any option as equal. This questionnaire was then used as part of the student service evaluation of their teaching at the end of year long rotation.

The students were consulted as to whether they wished to participate and the questionnaire was distributed and collected anonymously. A similar process was undertaken with the nine part-time clinical teachers and the 15 qualified staff nurses who work very closely with the students on the clinic. The six ranked 6 options to each question were then accorded a numerical value (1-6 with 6 being the highest ranked option) and these were then summated to provide the individual ranking from the three cohorts (Dental Students, Clinical Teachers and Nurses) that were analysed separately.

RESULTS

Of the 80 questionnaires distributed to the students, 66 were returned (82.5%), of the nine questionnaires given to the clinical teachers 8 were returned (89% return rate) and 12 questionnaires were returned from the 15 nurses who consented to participate (one nurse did not consent) an 80% return rate.

The responses to Question one (Table 1), students ranked in the first place **Statement K Students gain experience in Primary Dental Care Clinical Practice under current NHS Contract – UDAs and KPIs**
(ranked 4\textsuperscript{th} and 7\textsuperscript{th} by clinical teachers and nurses respectively). All cohorts ranked second the \textbf{Statement A Teachers care about students; they are student-focused from day one}. Students and clinical teachers both ranked third \textbf{Statement J Teachers work hard to ‘get students ready’ for DFT interviews as well as true practice based tutorials}. The clinical teachers placed first \textbf{Statement B Students are treated with respect by staff, treated as colleagues who are just more junior}, and the nurses ranked first \textbf{Statement F first: UPDA staff are friendly and kind, (Nurses, Reception Staff and Admin Staff)}.

Low ranking responses by all three cohorts included \textbf{Statement D Treatment not taken over by staff, Statement H Teachers work very hard to ensure the student experience across the 4 cohorts (weeks) is equitable, Statement I Teachers ensure clinic environment is nurturing and safe (for patients and students) and Statement L Nurses, receptionist, admin staff are really included as part of the team as equal members i.e. team meetings, community and micro-educational opportunities.}

The responses to Question two (Table 2) the students ranked first \textbf{Statement A A sense of independence – being made to make their own decisions.} (ranked 3\textsuperscript{rd} and 6\textsuperscript{th} by clinical teachers and nurses respectively). They ranked second \textbf{Statement B 4 days of doing dentistry – no lectures, just ‘being a dentist’} (ranked 5\textsuperscript{th} by both clinical teachers and nurses) and ranked third by the students \textbf{Statement G Genuine interest in them as individuals and being valued as such, not just a face in a crowd of many.} (ranked 1\textsuperscript{st} by clinical teachers and 4\textsuperscript{th} by nurses).

Low rankings were given by the students for the three statements: \textbf{Statement C Clear ground rules and sticking to them. However, compassion for the student if they make a genuine mistake, Statement E Living in a different environment – a brief ‘moving on and growing up’ and Statement F Being out of London and for some living away from home for first time.}

\section*{DISCUSSION}

The Delphi methodology of formal consensus-building has been described as an art as well as science so there are variations in the broad methodological approach.\textsuperscript{19} Primarily it is a method of formally gaining a consensus of expert opinion anonymously through a series of rounds that is said to produce a stable consensus able to resolve complex issues where ‘hard data’ is difficult to obtain and so it is necessary to weigh up the value of various contributing ideas.\textsuperscript{18} In dentistry it has been used to provide opinions about specific clinical educational and policy issues in restorative dentistry,
radiography and oral medicine and so is highly appropriate to explore the nebulous concept of the ‘Portsmouth experience’ as perceived by the dental students, clinical teachers and staff dental nurses. Some of the advantages of the process is the ability to provide anonymity to the respondents and with the controlled feedback can reduce the effects of dominant individuals in the group of experts. However, some shortcomings include the potential low response rate which increases with the number of rounds as individuals can potentially loose motivation. The process can be time consuming, however, by using descriptive statistics bias, from the facilitator can be reduced.

Although hygiene therapy students and student dental nurses form an integral part of the student body, because they are based full time at the University of Portsmouth and are not on an outreach placement, they were not included in the research. The results of this questionnaire study offer an interesting insight as to what dental student’s value from their outreach experience in Portsmouth, as well as how they differed as to the opinions of other key stakeholders. The students ranked statements to Question one concerning their future, first and third, highlighting the importance of working in a primary care environment and preparation for their Foundation Training (Statements K and J). The clinical teachers, however, ranked the relationships between students and staff as most important (Statement B), but agreed with students by placing the Foundation training preparation in third place (Statement J). Students, teachers and dental nurses all highlighted the importance of the relationships between staff and students by ranking Statement A in second place. The dental nurses, in contrast, focussed predominantly on relationships based on friendliness, care and mutual respect (Statements F, A and B). The three groups thus responded differently to Question one, with the possible explanation being that the students are looking forward to their career and certainly the next step as ‘safe beginners’ in dental foundation training. It is clear from these results that a key element to the ‘Portsmouth experience’ is the insight the students gain to working in primary care.

The responses to Question two reinforced this concept of preparation for practice. The students ranked Statements A and B first and second – highlighting the ideas of gaining a sense of independence and being focussed on patient care, with few academic distractions. This strengthens the notion that current Year 5 students are highly focused on what is going to happen when they qualify despite the other pressures they experience in their final year. This is gratifying as this is one of the main educational premises of outreach education and of the established intended learning outcomes for UPDA. Similar finding have been reported from the other outreach centres.

The students apparent focus on the future, contrasts with the staff’s priorities who focus on the present and how to deliver optimal care for patients and the most effective clinical education. Clinical teachers are the gate keeper and guardians to students learning, and teachers take this
responsibility extremely seriously. The students, however, appreciate that they are in a nurturing, caring environment and that the staff work hard to achieve this by being totally student focused in the care of patients. For instance, from the second question, students ranked highly, **Statement G** *Genuine interest in them as individuals and being valued as such, not just a face in a crowd of many.* These responses demonstrate the importance of belongingness which has been shown to be pivotal in outreach placements in nursing education. Belongingness has been defined as ‘the need to be and perception of being involved with others at differing interpersonal levels which contributes to one’s sense of connectedness (being part of, feeling accepted, and fitting in), and esteem (being cared about, valued and respected by others), while providing reciprocal acceptance, caring and valuing to others’. The belongingness at UPDA is engendered by staff learning the student’s names before the rotation starts, placing the students in ‘teams of professionals in training’ and trying to ensure that patient care is maintained in those teams as well as showing both formal and informal interest in what they are doing in the rest of their work time in London and socially. Also due to the relative small size of UPDA, the concept of belongingness may be a powerful element in their experience in Portsmouth. In a study investigating nursing education, the authors even postulated that for that group of health care professionals, belongingness is a pre-requisite for learning in a clinical environment.

Equally interesting are the statements not ranked so highly. Although these statements were perceived as integral to the ‘Portsmouth experience’ by the clinical teachers in the original Delphi rounds, they could be considered maintenance factors by the student body and are thus taken for granted, such as **Statement H** *Teachers work very hard to ensure the student experience across the 4 cohorts (weeks) is equitable* and **Statement I** *Teachers ensure clinic environment is nurturing and safe (for patients and students).* Although statements can be categorised as maintenance factors it certainly does not diminish the core importance of these critical elements or the time and effort to ensure that they are in place effectively. This concept reflects rather more on the two main sites of KCLDI in London, which the students have experienced throughout their clinical education and that these are embedded values across the whole Institution.

There was a definite bias in the ranking by the different stakeholders who placed statements more directly under their control higher. This was particularly seen in the nurses’ responses who ranked friendliness and kindness across all the staff, (Question one, **Statement F**) and the happiness and smiling faces (Question two, **Statement I**). They also ranked highly the importance of the equipment and facilities available at UPDA (Question two, **Statement D**). Further the nurses demonstrated their undoubted commitment to the process of educating these professionals in training and giving them an
optimal experience by highlighting the centrality of the student body to the UPDA (Question two, Statement C).

CONCLUSION

Within the limitations of this part of a larger service evaluation, the perception of the students of their outreach experience i.e. the ‘Portsmouth experience’ centre around what they perceive as a realistic preparation for their future practicing career and the strong sense of belongingness engendered at the Academy. This is facilitated by the multidisciplinary interprofessional team approach to the dental care of patients. All three groups placed ‘teachers care about the students’ very highly, with a genuine interest in them as individuals as well as working and learning in an environment where they feel highly valued.

Acknowledgements

The authors would like to acknowledge the support of Professor Mark Woolford, King’s College London and Professor Sara Holmes, University of Portsmouth.
References


Figure 1. The consultation process to develop the Questionnaire

**Round 1**
9 GDP Tutors asked to complete an initial survey.

Analysis of answers, common themes identified and developed. Descriptive statistics used as indicators of frequency of answers.

**Round 2**
Results fed back to the 9 GDP Tutors. Asked whether they wished to refine the collated answers, add to them or delete any responses.

Analysis of responses from 2nd round. Development of final 16 item questionnaire with statement/options for each question.

**Round 3**
Final version of questionnaire created and presented to the 9 GDP Tutors for final discussion.
### Table 1

**Question 1** Why do you think the experience that is commonly termed the ‘Portsmouth experience’ is so successful ‘in the eyes of the students’?

<table>
<thead>
<tr>
<th></th>
<th>Dental Students</th>
<th>Clinical Teachers</th>
<th>Staff Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Teachers care about students; they are student-focused from day one</td>
<td>2nd</td>
<td>2nd</td>
<td>2nd</td>
</tr>
<tr>
<td>B. Students are treated with respect by staff, treated as colleagues who are just more junior</td>
<td>4th</td>
<td>1st</td>
<td>3rd</td>
</tr>
<tr>
<td>C. Student colleagues are central to the success of the Academy</td>
<td>11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>11th</td>
<td>4th</td>
</tr>
<tr>
<td>D. Treatment not taken over by staff.</td>
<td>9th</td>
<td>10th</td>
<td>12th</td>
</tr>
<tr>
<td>E. Teachers are passionate, committed and motivated</td>
<td>6th</td>
<td>6th</td>
<td>6th</td>
</tr>
<tr>
<td>F. UPDA staff are friendly and kind, (Nurses, Reception Staff and Admin Staff)</td>
<td>5th</td>
<td>7th</td>
<td>1st</td>
</tr>
<tr>
<td>G. Teachers have a general practice background and a wide skill mix</td>
<td>7th</td>
<td>5th</td>
<td>8th</td>
</tr>
<tr>
<td>H. Teachers work very hard to ensure the student experience across the 4 cohorts (weeks) is equitable</td>
<td>11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>12th</td>
<td>9th</td>
</tr>
<tr>
<td>I. Teachers ensure clinic environment is nurturing and safe (for patients and students)</td>
<td>10th</td>
<td>8th</td>
<td>11th</td>
</tr>
<tr>
<td>J. Teachers work hard to ‘get students ready’ for DFT interviews as well as true practice based tutorials</td>
<td>3rd</td>
<td>3rd</td>
<td>5th</td>
</tr>
<tr>
<td>K. Students gain experience in Primary Dental Care Clinical Practice under current NHS Contract – UDAs and KPIs</td>
<td>1st</td>
<td>4th</td>
<td>7th</td>
</tr>
<tr>
<td>L. Nurses, receptionist, admin staff are really included as part of the team as equal members i.e. team meetings, community and micro-educational opportunities</td>
<td>8th</td>
<td>9th</td>
<td>10th</td>
</tr>
</tbody>
</table>
### Table 2

**Question 2 What do you think the students most enjoyed about working in Portsmouth?**

<table>
<thead>
<tr>
<th>Question</th>
<th>Dental students</th>
<th>Clinical teachers</th>
<th>Staff Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.</strong> A sense of independence – being made to make their own decisions</td>
<td>1st</td>
<td>3rd</td>
<td>6th</td>
</tr>
<tr>
<td><strong>B.</strong> 4 days of doing dentistry – no lectures, just ‘being a dentist’</td>
<td>2nd</td>
<td>5th</td>
<td>5th</td>
</tr>
<tr>
<td><strong>C.</strong> Clear ground rules and sticking to them. However, compassion for the student if they make a genuine mistake</td>
<td>9th</td>
<td>8th</td>
<td>9th</td>
</tr>
<tr>
<td><strong>D.</strong> First class facilities and equipment that works always (95% of the time)</td>
<td>4th</td>
<td>6th</td>
<td>3rd</td>
</tr>
<tr>
<td><strong>E.</strong> Living in a different environment – a brief ‘moving on and growing up’</td>
<td>7th</td>
<td>7th</td>
<td>7th</td>
</tr>
<tr>
<td><strong>F.</strong> Being out of London and for some living away from home for first time</td>
<td>8th</td>
<td>9th</td>
<td>8th</td>
</tr>
<tr>
<td><strong>G.</strong> Genuine interest in them as individuals and being valued as such, not just a face in a crowd of many</td>
<td>3rd</td>
<td>1st</td>
<td>4th</td>
</tr>
<tr>
<td><strong>H.</strong> Working and learning in an environment where they feel valued</td>
<td>6th</td>
<td>2nd</td>
<td>2nd</td>
</tr>
<tr>
<td><strong>I.</strong> The happiness at the Academy like the smiling faces of all staff (great humour and banter on clinic within professional confines)</td>
<td>5th</td>
<td>4th</td>
<td>1st</td>
</tr>
</tbody>
</table>
The ‘Portsmouth Experience’ A Teaching Audit

As students and staff we have all contributed to ‘The Portsmouth Experience’ and it is perceived by the student body and KCLDI as highly successful. The tutors have tried to capture the essence of the success in a series of statements; and we are now asking student body to fill in the questionnaire. Further this is being distributed to other critical members of the teaching team i.e. the clinical teachers and nurses. This will allow us to triangulate the audit data. We would be most grateful if you would agree to fill in this simple but though provoking questionnaire.

Please circle Dental student Dental nurse Dentist

1) Statements made as to why the experience is so successful ‘in the eyes of the students’

Please read through the statements below and take some time to reflect on them then turn over

A. Teachers care about students; they are student-focused from day one.
B. Students are treated with respect by staff, treated as colleagues who are just more junior
C. Student colleagues are central to the success of the Academy.
D. Treatment not taken over by staff.
E. Teachers are passionate, committed and motivated.
F. UPDA staff are friendly and kind, (Nurses, Reception Staff and Admin Staff).
G. Teachers have a general practice background and a wide skill mix.
H. Teachers work very hard to ensure the student experience across the 4 cohorts (weeks) is equitable.
I. Teachers ensure clinic environment is nurturing and safe (for patients and students).
J. Teachers work hard to ‘get students ready’ for DFT interviews as well as true practice based tutorials.
K. Students gain experience in Primary Dental Care Clinical Practice under current NHS Contract – UDAs and KPIs
L. Nurses, receptionist, admin staff are really included as part of the team as equal members i.e. team meetings, community and micro-educational opportunities.
**TASK 1**

**Please do not rank any statement as equal.** Please rank your top 6 statements

<table>
<thead>
<tr>
<th>Rank</th>
<th>Statement letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td></td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
</tr>
<tr>
<td>Sixth</td>
<td></td>
</tr>
</tbody>
</table>
2) This is a list of statements made by the tutors as to “what they think students most enjoy about Portsmouth”.

A. A sense of independence – being made to make their own decisions.
B. 4 days of doing dentistry – no lectures, just ‘being a dentist’.
C. Clear ground rules and sticking to them. However, compassion for the student if they make a genuine mistake.
D. First class facilities and equipment that works always (95% of time).
E. Living in a different environment – a brief ‘moving on and growing up’.
F. Being out of London and for some living away from home for first time.
G. Genuine interest in them as individuals and being valued as such, not just a face in a crowd of many.
H. Working and learning in an environment where they feel valued.
I. The happiness at the Academy like the smiling faces of all staff (great humour and banter on clinic within professional confines).

Please rank your top 6 and do not make any as equal

<table>
<thead>
<tr>
<th>Rank</th>
<th>Statement letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td></td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
</tr>
<tr>
<td>Sixth</td>
<td></td>
</tr>
</tbody>
</table>