Introduction and evaluation of a Peer Observation of Teaching Scheme to develop the teaching practice of chair-side clinical dentistry tutors

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Abstract

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Glasgow Dental School (GDS) offers a varied learning environment for well-motivated, high-achieving students. These students, along with institutional, professional and public stakeholders, demand high quality, efficient, effective and modern teaching practices.

A new undergraduate curriculum was introduced at GDS; a more authentic learning experience was to be delivered with a move away from traditional teaching based solely within the dental hospital. Outreach teaching facilities were introduced and a cohort of NHS clinical tutors joined academic staff. Both new and old staff were required to develop their teaching skills.

Some tutors expressed distress at the lack of availability of training to enhance teaching skills, and implementation of a Peer Observation of Teaching Scheme (POT) was considered as a way to address this issue.

POT focuses on providing opportunities for staff to improve their teaching skills. It can be conducted successfully with inexperienced teaching staff and limited resources. It can help identify and eliminate poor teaching practice while enabling participants to develop their skills, self-identity and group identity as teachers.

POT, in this study, is a reciprocal process whereby one peer observes another teaching and provides supportive and constructive feedback. Its underlying rationale is to encourage professional development in teaching and learning through critical reflection, by both the observer and the observed.

In this thesis, I outline the implementation of the POT scheme across clinical sites at GDS. The study involved multiple stakeholders and therefore required

approval, accommodation and support across six geographically diverse Scottish health board areas.

The process and outcomes from the evaluation of the POT scheme are presented. The current body of published research offers little in relation to POT for the development of teaching chair-side clinical dentistry, a distinct area where students carry out multiple invasive procedures on patients during each teaching session. Appraisal of the scheme and its impact was conducted using evaluation methodology underpinned by constructivist epistemology. Ethical approval was sought and granted.

Results describe motivations to teach and evaluation of the POT process in relation to its authenticity, acceptability and practicality. Analysis of who is truly considered a 'peer' as well as aspects of trust, honesty and respect are presented along with the perceived issues for colleagues sharing critical feedback. Impact of the POT scheme is explored in terms of teaching, reflection, increased self-awareness, and lessons learned about personal teaching practice. There is a strong focus on the role of POT for quality enhancement. Key issues highlighted by the findings include; the notable differences between participants from a range of academic backgrounds; study limitations; and feasible alternatives for the development of teaching staff.

The POT scheme was successfully implemented and analysed. It was an authentic method for encouraging reflection and development of teaching practice.

Recommendations for further progress are outlined. These include whether POT should be mandatory; how to facilitate wider group discussion; systems for implementation of shared good practice; and increasing access to teaching qualifications. Further research is required to directly measure the impact of POT on student learning and look at how the scheme has impacted on development of the wider community of practice.

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And, as in everything I do, I acknowledge the help and support of Chris, Isla and Brodie- nothing is possible without you guys!

Preface

I am in full time employment as a Senior Clinical University Teacher with a remit for teaching; I am also an Honorary Consultant in Paediatric Dentistry. As such I incur all the joys that come of having two masters, being a slave to both the University and the NHS.

As a trainee I had completed a Postgraduate Certificate in Academic Practice, this was of great interest to me and developed a few years later into enrolment in the Diploma course. Following completion of this, with a desire for more, the fact that I already held a Masters level degree made the natural next progression a PhD. Many good people advised me that this was a splendid idea!

I very much enjoy my job, but how I ever thought I had time to complete a PhD with no protected time is completely beyond comprehension! I put this whole episode down to the inexperience of youth and the honeymoon period that comes with early career progression.

When I started this project my children were very small, I had completed one marathon and we were definitely Europeans. With the passage of time my eldest child is now 3 inches taller than me, I have just completed marathon number 5, my thoughts of a holiday home in Spain may end up a little more difficult than I had bargained for and the Leader of the Free World has morphed from the sublime to the ridiculous.

On reflection, I now have new skills and knowledge and my appetite for Educational Research remains. I am really looking forward to involvement in a different project, maybe a question I can answer a bit more rapidly and one that doesn't loom like the Sword of Damocles for years! What advice would I give to others in this position? I still find this question difficult to answer, my sacrifices have all been made and time given away, hopefully the future will lead me to appreciate that it was all worth it!

Happy reading!

Author's Declaration

"I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution."

Printed Name: _Alison M Cairns_____

Signature:

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

My introduction to the concept of peer observation of teaching (POT) was while studying for a Postgraduate Diploma in Academic Practice. Study for the Diploma and indeed for this PhD has been difficult as I have also had to function as a full time Senior Clinical University Teacher and Honorary NHS Consultant. The subject of this study has, however, also led to an increase in my teaching and educational research skills and an enhancement of teaching quality within the area of clinical teaching I am responsible for.

In my role as Teaching Lead for Paediatric Dentistry and its associated Outreach Centres, I initially wanted to use POT to develop the teaching skills of the tutors delivering chair-side clinical teaching in years 3-5 of the Paediatric Dentistry component of the Clinical Dentistry course. This was partly in response to feedback I had received from tutors regarding a lack of training and development in chair-side teaching skills during what had been a period of great change with multiple new clinical tutors coming into post. The Dental School was delivering a new curriculum and for Paediatric Dentistry this now included the running of four outreach facilities in socially deprived areas of the city (these facilities are based in health centres situated in some of the poorest areas in Europe where levels of child poverty and dental disease are at their highest).

To initiate this project, I organised a Continuing Professional Development (CPD) event on the topic of Peer Observation of Teaching (POT) in conjunction with the University's Learning and Teaching Centre. This event was for all clinical tutors teaching chair-side Paediatric Dentistry. Staff were motivated following the educational event, and so initial questions focused on planning and logistics that would facilitate a POT scheme in our clinics. My thoughts were open and flexible as to what opinion participants would have of this experience and if POT would be fit for purpose in this unique clinical dentistry context. These thoughts for exploration quickly moved from scholarly activity into the possibility of educational research and hence this PhD study was born. Early focus lay with a pilot scheme for the paediatric dentistry tutors. Following analysis of findings from the pilot, the scheme expanded across all clinical restorative disciplines. Results from the pilot scheme are included in the full scheme analysis as round one for the paediatric dentistry tutors.

Implementation of the POT scheme alone would not include measurement of its effectiveness or of its impact on the professional development of teaching skills; and yet academically it was important to ascertain the impact of any new scheme. It was important to evidence any potential benefits of the POT scheme as it did have implications on time, resources and finance. Long-term, the scheme would require justification for continuation or abandonment, so for these reasons undertaking a robust evaluation would be of value. Baseline training, analysis from the pilot scheme/first round of paediatrics tutors and initiation of the full scheme had

the early effect of bringing together the community of tutors, but at this point no consideration had been given to the varying impact the scheme would have on tutors from differing backgrounds.

Despite the numerous POT schemes reported within higher education, there are few reports of its use in the teaching of chair-side clinical dentistry; this area remains distinct from medicine and nursing, with dental students carrying out multiple invasive procedures during a clinical session (Stewart et al 2010, Smith et al 2010). Predominantly, the tutors in our outreach clinics are NHS employees with limited access to support for scholarly activity or teaching development. Barriers to developmental activity for this group include clinical responsibilities, pressure for dental related CPD, financial constraints, time constraints and the remote nature of their practicing location, which is remote from the University or Dental School. These tutors have never been subject to academic probation and are not experienced teachers. Some of the experienced teachers in the dental school have also had limited access to support for teaching, finding themselves well established in post before the University introduced compulsory programmes in Learning and Teaching for new academic staff. Potentially, POT could be a feasible way to compensate for a lack of more formal teaching development programmes by providing feedback, support, scholarly discussion and encouragement of reflection. The POT process overall could also maximise quality enhancement of clinical teaching as well as contributing to standardization of teaching across an institution (Whitlock and Rumpus 2004).

Why instigate and evaluate a Peer Observation of Teaching (POT) Scheme? Previous authors have observed that enhancement activities are best implemented, not at the institutional or cross-departmental level, but within a peer context, one that acknowledges the disciplinary culture, in this case chair-side clinical dentistry, as the defining criteria for evaluating practice (Quinlan and Alerlind 2000). I hoped that in setting up the Dental School POT scheme, that as argued by Gosling (2005) a greater sense of teaching professionalism would emerge. A POT scheme would enable tutors to share their practice within the chair-side clinical teaching community.

1.2 The Landscape of Clinical Chair-Side Teaching at Glasgow University Dental School

1.2.1 Bachelor of Dental Surgery

The Bachelor of Dental Surgery Degree is a five-year undergraduate programme. Teaching is intensive, with all years having a packed daily timetable and compacted holidays in comparison to mainstream university courses. The General Dental Council (GDC) is the regulatory body for the profession driving the curriculum from a national perspective. “Preparing for Practice” is the current iteration of the GDC’s curriculum guidance (Preparing for Practice 2015. At the University of Glasgow Dental School parallel themes run vertically throughout the degree programme. The themes are Biological and Medical Sciences, Clinical Dentistry, and Patient Management and Health Promotion. This study has its base in the Clinical Dentistry Section of the curriculum. As well as instruction in clinical dentistry, teaching in this section includes communication skills and the

development of professionalism. In recent times Glasgow Dental School has had between 80 and 100 students per year, this figure has now been reduced by the Scottish Government and the class sizes are gradually reducing to around 70-80 students per year.

1.2.2 In-House Clinics

In-house clinics are those that take place within the Dental Hospital and School building. Tutors on these clinics have a diverse background but the general trend is towards academic staff with assistance from occasional visiting General Dental Practitioners (GDPs) and academic training grade staff. Academic training grade staff follow an academic clinical training pathway; they train and sit exams to become clinical specialists in their chosen field whilst also holding an academic remit for teaching and research in the same field. Governing the clinics are the policies and protocols of an NHS teaching hospital. Students do not have personally allocated nurses for their treatment sessions but rather share nursing support from a general and ever-changing pool of dental nurses and dental nurse trainees. Team working and rapport with the rest of the dental team can be challenging in this environment that is greatly removed from that of a general practice setting (high street dentist). The above challenges mean that teaching in this environment lacks real world authenticity for students who are mostly destined for a career as a GDP. This restrictive yet nurturing environment is however suited to students in their more formative

years getting to grips with clinical practice and for the introduction of complex treatment procedures.

1.2.3 Outreach Clinics

As previously mentioned, Glasgow University Dental School launched a new curriculum involving a vastly increased volume of outreach teaching. Outreach teaching takes place in facilities run by the NHS Public Dental Service (PDS). These locations are remote from the Dental Hospital and School building where the majority of the undergraduate curriculum is taught. Outreach teaching exposes students to an environment more akin to real life clinical practice in a primary care setting with routine patients in contrast to the more complex patients often seen in the dental school. Outreach clinics take place in areas of high socioeconomic deprivation or remote and rural areas. They serve high-risk populations or populations in locations poorly catered for by the General Dental Services. Moving dental student clinical teaching away from the Dental School location and into Outreach Centres, (most teaching takes place in dental surgeries situated within local health centres) also meant an associated shift in the clinical teaching workforce. Employing NHS primary care clinicians (NHS tutors), who have career pathways and practice skills that are more like regular practicing GDPs, was also seen as a measure to enhance authenticity and prepare students for life as a Vocational Trainee (VT). VT is a first year post-qualification position providing a protected and mentored placement within the General Dental Services.

1.2.3.1 Paediatric Outreach Clinics

Paediatric Dentistry Outreach Centres are located in the Castlemilk, Springburn, Pollok and Bridgeton areas of Glasgow. The dental surgeries are all located within functioning Health Centres that facilitate good communication with patients' General Medical Practitioners, Health Visitors, other allied healthcare professionals and social work services. Unlike the adult outreach centres, the students start work in Paediatric Outreach in BDS3 (year 3 of the Bachelor of Dental Surgery Programme) and continue all the way through to graduation at the end of BDS5. Students attend for one session (either morning or afternoon) every two weeks. In the BDS3 clinics the staff: student ratio is a very healthy 1:2 or 1:3. For BDS4 the ratio is 1:3 and for BDS5 1:4 (See table 1.1).

1.2.3.2 Adult Outreach Clinics

All centres are remote from the Dental Hospital and unlike the Paediatric Centres; they are further away from Glasgow City Centre. These centres are for the sole use of BDS5 who attend in weeklong blocks every second week throughout the year (see table 1.1 for demographic information on these clinics). Again, unlike the Paediatric clinics these centres are not all under the auspices of NHS Greater Glasgow and Clyde. The centres located within the Royal Alexandra Hospital (Paisley) and the Vale of Leven Hospital (Alexandria) both belong to NHS Greater Glasgow and Clyde but centres in Carronshore and Langlees are the responsibility of NHS Forth Valley. The Coatbridge Centre belongs to NHS Lanarkshire, while

Kilmarnock is the responsibility of NHS Ayrshire and Arran. Centres in Campbeltown (NHS Highland) and Dumfries (NHS Borders) are the remote and rural centres where students attend on residential placements, staying in accommodation funded by NHS Education for Scotland (NES). NES are a special health board within Scotland; they provide funding for outreach teaching as well as paying travel and accommodation costs incurred by the BDS5 students.

It should be clear now that from a logistical viewpoint the implementation of a POT scheme and undertaking this evaluation study had to be approved, accommodated and supported by six health board areas (via the Clinical Director for each health board) and by NES, the special health board.

Clinic Location	Student Year	Type	NHS Health Board	Staff: Student Ratio	Student: Nurse Ratio
Castlemilk	BDS3	Paediatric	GG&C	1:2	1:1
Springburn	BDS3	Paediatric	GG&C	1:3	1:1.5
Pollok	BDS3	Paediatric	GG&C	1:2	1:1
Bridgeton	BDS4	Paediatric	GG&C	1:3	1:1
Bridgeton	BDS5	Paediatric	GG&C	1:4	1:1
RAH	BDS5	Adult	GG&C	1:4	1:2
Vale of Leven	BDS5	Adult	GG&C	1:4	1:2
Langlees	BDS5	Adult	Forth Valley	1:4	1:2
Carronshore	BDS5	Adult	Forth Valley	1:4	1:2
Coatbridge	BDS5	Adult	Lanarkshire	1:4	1:2
Kilmarnock	BDS5	Adult	Ayrshire and Arran	1:4	1:2
Campbeltown	BDS5	Adult	Highland	1:4	1:2
Dumfries	BDS5	Adult (some children and special needs seen)	Borders	1:6	1:2
Glasgow Dental Hospital and School	BDS2-5	Adult and Paediatric	GG&C	Varies 1:5 and above	1:4 and above depending on clinic

Table 1.1- Demographic Information for Teaching Clinics

1.2.4 The Community of Practice- Teaching Staff

The participants in the POT scheme associated with this study are either employed by the University of Glasgow, or by the NHS boards to teach and supervise undergraduate dental students in a clinical chair-side setting. The health boards are funded by NES for this purpose. The tutors deliver chairside teaching in relation to adult or child restorative/general dentistry. Students are taught within the scope, and to the standards, of what is expected of a GDP at the point of graduation. On completion of the BDS course students are considered 'safe beginners' in the clinical dentistry environment.

Most of the NHS tutors are also involved in facilitating small group tutorials before or after the clinical session and many contribute to marking both formative and summative examinations for the students. The majority of NHS tutors have a background in either the General or Salaried Dental Services. Most applied for a position working with the students without prior experience of teaching but with impressive clinical backgrounds. Anecdotally, many of the tutors looked to diversify from their current role in order to bring more variety to their working lives, and for some their motivation to teach involved a desire to remain current in clinical evidence based practice. Some tutors were recruited to teach in a reciprocal arrangement where they gained support to study for a Master's Degree by Research. Other tutors who were already working in the Public Dental Service were simply informed that a teaching element was to be added to

their current duties. The teachers working in the adult outreach centres were initially inducted into a teaching role by attending a week long 'START learning and teaching in dentistry' course provided by NES, this is a 'train the trainers' course aimed at dental practitioners who are, or who anticipate being, involved in teaching. This course is designed for GDP's involved in the previously mentioned VT scheme. As VT trainers mentor newly qualified dentists through the first year of their post qualification career the START course is not an ideal fit for those teaching undergraduate students and indeed not all outreach clinical tutors had attended the course at the time of implementation of the POT scheme. The tutors working in the paediatric dental service were provided with a local induction (short seminar on small group teaching with no particular clinical chair-side context) and an opportunity to shadow academic colleagues before starting as tutors. A small number of these tutors were independently working on a self-funded or grant-funded postgraduate teaching programme as a way of developing their teaching skills.

In contrast, the participating tutors employed by the University were either career teachers or researchers; many had years of teaching experience. Most had or were working on the completion of a Postgraduate Certificate in Academic Practice (PGCAP), or were academics with years of teaching experience.

Operational organisation of the clinical outreach centres is complicated. As previously described, the thirteen clinic sites are spread over six different Scottish health board areas and there is involvement from NES who supply most of the funding (see table 1). In the Dental School, University Teachers and Lecturers are paid by the University; visiting GDPs are funded in various ways but largely through the NHS Additional Cost of Teaching (ACT) budget. ACT is an income stream determined by the Scottish Government and administered by NES. It is provided to all Scottish health boards with medical and dental schools and is intended to cover costs incurred by those health boards as a consequence of their responsibility to facilitate teaching, assuming that such costs are over and above those that would normally be incurred in the provision of a clinical service.

The University has a Service Level Agreement (SLA) with the individual NHS boards regarding the Adult Outreach Centres; this ensures that, for instance, should a tutor require leave for sickness the NHS has agreed to provide cover for that person ensuring minimal impact on teaching and patient care. Unfortunately, an SLA does not exist in Paediatric Outreach clinics where a system of ‘grace and favour’ exists. This is clearly a less satisfactory arrangement and can be detrimental to student teaching at times when there is increased pressure on the system.

In the outreach clinics, students are supported by their own nurse or from a nurse they share with one other student. Patient throughput is much higher

in the outreach clinics because of this and because equipment and materials tend to be closer to hand in the individual surgery rather than held in centralised areas within large open plan teaching clinics as they are in the Dental School. The improved staff to student ratio also lessens the bottlenecks created when students have to wait for a tutor to check their work before proceeding with the next item of care or patient discharge. The location of the clinic (Dental Hospital or outreach centre) also influences the type of cases seen. Most of the child patients seen by students within the Dental School building have anxiety issues or require complex forms of treatment; the patients come from a cohort referred by their GDP for specialist care. Those attending the outreach clinics tend to be more representative of the general population and hence provide a more authentic experience for the students who can concentrate on becoming competent in the delivery of basic clinical care without added complication. Student feedback for the outreach clinics is consistently high, they appreciate the ability to work more efficiently and recognise the authenticity of the experience. However, some students have recognised that tutors on these clinics vary considerably in regard to their teaching methods. The following quote from the National Student Survey (NSS) illustrates this point:

> "Outreach clinics were, by far, the best aspect of the course. I think that from this experience, I feel that I have become a confident and able clinical operator. I have to thank my outreach tutors very much for this- they are all extremely, extremely good… I would, however say that I would have preferred one outreach clinic rather than two, during the course of the year, as teaching methods can differ greatly. Thanks for everything!"
>
> (BDS5 student feedback NSS)

It should now be clear that the individuals tutoring the students in chair-side clinical dentistry across Glasgow Dental School are diverse in their background and teaching skills. The main concern initiating this POT Scheme was how to develop the teaching skills of our diverse cohort of teaching staff. This cohort has variable access to traditional means of professional development for teaching, such as enrolment on formal face-to-face taught courses or funding for online learning. They are undeniably unique and provide teaching in an environment unique to clinical dentistry.

The initial aims of POT Scheme introduction were the encouragement of sharing good practice amongst tutors; fostering conversations about teaching amongst tutors; increasing the confidence of NHS tutors; and raising the profile of scholarship and scholarly activity across the Dental School.

1.2.5 Introduction to an Average Clinic

It is helpful to explain what takes place in an ‘average clinic’ for Dental undergraduate students. Where feasible, students are expected to have studied the details for any procedures or treatments they will be providing for patients during the course of a clinic. They are expected to arrive early to study their patient’s notes, including any radiographs or special investigation results. For in-house clinics the students set-up their own clinical area, collecting all the equipment and materials they require for their patient. In outreach they are not generally expected to set-up the surgery but need to discuss with nursing staff what is required and ensure

that everything is in place. The student then approaches their tutor for discussion regarding the patient and the treatment proposed. The tutors satisfy themselves that the student is fully prepared. After introducing or reacquainting themselves with the patient the student asks the tutor to see the patient. The tutor will clarify there have been no changes to the patient's medical history or to the intended treatment plan and that the patient is happy to proceed. After each stage of the procedure, the tutor is recalled to check the work before the student is permitted to proceed to the next stage. Again, at the end of the visit, the tutor is recalled to allow sign off and discharge of the patient. Occasionally a tutor will take over the procedure to demonstrate, correct or complete procedures in a timely fashion. This can be a difficult time as the tutor needs to maintain the patient's trust but also consider the student's learning needs. The student is expected to keep contemporaneous records that are verified and countersigned by the tutor. Once the patient has left, the tutor provides feedback for the student, this principally takes the form of a conversation augmented by grading and written comments. During the time of this PhD study the underpinning mechanism for recording feedback and grades has evolved from the traditional paper based 1-9 scale used by the University to use of the LIFTUPP system where grading is on a scale of 1-6 and recorded on an electronic tablet device. LIFTUPP is assessment software developed by educators at the University of Liverpool. Student assessment information is uploaded to the system that triangulates all data to give a comprehensive profile of student performance, professional competence and regulatory body compliance.

1.3 Introduction of the Peer Observation of Teaching Scheme

1.3.1 The Logistical Background

Early scoping discussions were held with the Head of the Dental School and personnel from the Learning and Teaching Centre. To introduce the scheme a meeting was called with the Head of the Dental School and Clinical Directors from each of the six regional health boards concerned. Agreement was sought for staff availability (pre and post POT meetings), staff time (cover arrangements for the clinics that staff were leaving behind to observe others), and staff travel (in cases where POT was conducted in a different location from that in which the staff member usually worked). In return the staff would gain the previously predicted benefits associated with participating in a POT scheme and spearhead the opportunity to see how a scheme like this would translate within the world of clinical dentistry teaching.

I developed guidance on the POT process for participating tutors (appendix I) using current University of Glasgow POT guidance (appendix II). Guidance was not intended to be prescriptive but rather to provide a framework to structure thoughts about the observations participants were making when watching their colleague. A time-log (appendix III) was offered in the hope that this might aid in the recording of relevant

information during the observation, and for use in the post observation discussion.

By way of additional staff preparation, an educational event was provided for those taking part in the pilot POT scheme. This event was delivered with the help of staff at the University's Learning and Teaching Centre. The results of the pilot study were discussed at National and International conferences and published as a paper in 2014 (appendix IV, V,VI) but also shared and discussed at several education events within the Dental School in preparation for roll out of the full POT scheme.

Following the initial rounds of the scheme a CPD certificate was introduced in order that tutors could evidence their involvement during Professional Development Planning sessions or for the Academic Consultant Appraisal process (Appendix VII).

1.3.2 The Mission Statement

In this study POT is a reciprocal process whereby one peer observes the teaching of another with the intention of providing supportive, constructive feedback. The POT process does not require reciprocation between the same individuals; however, paired participants remained together in this case. The underpinning rationale of the scheme is to encourage professional development in teaching and learning through critical reflection, both while

observing and being observed (Gosling 2002). The focus of the scheme is to assist staff in improvement of their teaching skills. It is essential that this scheme be explicitly staff-led with little need for external support to ensure its ongoing survival as resources are at a premium and hard to find. It is important that the scheme has no predetermined political agenda and that it is accessible for use by inexperienced teaching staff. The scheme should help tutors achieve standards of competency, increase their confidence as teachers and enhance their teaching approach. The intention is that teachers will develop their thinking about teaching as well as their teaching practice because of discussions that take place during the process. Following involvement in POT, teachers should take steps to incorporate good practice observed into their own teaching and eliminate poor practice if identified; most discussions will enable staff to explore the rationale behind why they approach teaching the way they do. This will help staff to develop their teaching practice and their self-concept as a teacher (Kadi-Hanifi and Keenan 2016, Beijaard et al2000). This model of POT is non-judgmental and any perceived power imbalance between participants should not act as a barrier to the provision of constructive feedback, the mutual aim is to enhance learning and teaching. Enhancement and dissemination of good teaching practice will enable personal development through reflection that will in turn improve the quality of teaching experienced by the students. It seems likely that some tutors may be resistant to adopting a reflective approach and that they see teaching as application of 'common sense' drawn from experience (Handal and Lauvas 1987) but either the benefits of full

participation will become clear to them over time or the scheme will be deemed to be unworkable for clinical chair-side teaching of dentistry.

The aforementioned benefits should be available to both participants in a pairing with a focus on constructive development rather than negative criticism (Askew 2004). POT has been advocated as a means of professional development both for new and experienced academic staff (Atkinson and Bolt 2010). However, teachers often progress through a series of distinct developmental stages from greater concern for personal performance, to interest in what students are learning, towards more student centered approaches over time (Kugel 1993) and any evidence of that will be interesting to see amongst the study participants.

1.4 Summary

Prior to the introduction of a POT scheme there was no universally available method of gaining professional development in teaching practice for the tutors of clinical restorative dentistry at Glasgow University Dental School and its associated outreach centres. Compounding this problem was the fact that many of the tutors had little or no prior teaching experience prior to taking up their current posts and only a very small proportion of the clinical tutors had completed a teaching qualification. This situation sat within a landscape of scarce resources particularly in relation to time and finances. The development and introduction of a peer observation of teaching scheme was regarded as a potentially effective and resource-light

solution to improve the situation. In introducing and implementing this POT scheme, it was important to ensure that evaluation of the scheme's processes and outcomes was built into plans for the scheme from the outset.

CHAPTER TWO: LITERATURE REVIEW

This chapter looks at the current literature in relation to the professionalization of teaching in higher education and the role that POT may play within this. POT research has been conducted throughout different disciplines but in this review, there is a particular focus on papers published within the medical education literature. Literature was searched using online databases. Searches were conducted in 2012 and again in 2017 looking as far back as 1995. The structured search strategy that was used is detailed in table 2.1.

Activity	Sources	Details	Notes
Search 1 (Jan 2012 and Oct 2017 for 2012-2017 data)	Major Databases	Medline, Ovid, Professional Development Collection, Web of Knowledge, EBSCOhost, ERIC	Timeframe of searches was from 1995 to 2017. Broad search terms were 'peer observation of teaching', and 'peer review of teaching' in 'higher education'
Search 21 (Jan 2012 and updated 2015,2016 and Oct 2017)	As above	As above	As above with focus on adding 'dental', 'medical', 'nursing'
Inclusion 1	Closer look at relevance of literature	Review titles and abstracts	Excluded documents which were clearly out with the scope of interest for the study
Search 31 21 (Jan 2012 and updated 2015,2016 and Oct 2016)	Major Databases	Medline, Ovid, Professional Development Collection, Web of Knowledge, EBSCOhost, ERIC	Specific relevant terms searched for e.g. 'peer', 'trust', 'reflection', 'feedback' etc within POT
Search 4 (Jan 2016 and updated Jan 2018)	As above	As above	Quality assurance in higher education teaching, inc. postgraduate teaching qualifications, professionalization of teaching
Inclusion 2 (Jan 2017)	As above	As above	References of relevance found within all previously searched for relevant papers

Table 2.1- Literature Search Strategy

2.1 Professionalization of Teaching in Higher Education

2.1.1 Quality Enhancement and Rewarding Excellence

The UK has an excellent reputation for the quality of its higher education sector, with systems in place aimed at ensuring high quality teaching. The Quality Assurance Agency (QAA) was established in 1997, this is an independent body funded by subscription from Higher Education institutions and through contracts with the main Higher Education funding bodies. The work of the QAA is to assess the quality and standards of all Higher Education institutions in the UK. Staff appraisal schemes were formally introduced in higher education as far back as 1987 (Partington and Brown) but quality enhancement and assurance with regard to teaching has been increasing in priority over the last few decades. A government white paper in 2003 identified the need to improve and reward excellent teaching, to direct focus for this the Higher Education Authority (HEA) was founded in 2004 (Blackmore 2005). QAA Scotland works slightly differently by placing an emphasis not only on assuring quality but also on enhancing quality. This difference has led many to have concerns that recent English changes (discussed later) could affect the ability of the Scottish HE sector to continue to work in ways that are considered sector leading on an international level.

It is through professional development that teachers understand who they are as educators and what their role is within their teaching context. UK Universities and the HEA recognised this in 2011 when they produced the

UK Professional Standards Framework for Teaching and Supporting Learning in Higher Education (HEA, 2011). The aim of the framework was to support professional development of teachers in the advancement of teaching skills. The framework also aimed to enhance the profile and importance of quality, professional, teaching to multiple stakeholders. The 2011 framework has three dimensions: areas of activity, core knowledge and professional values. These dimensions relate to criteria for recognition as Associate Fellow, Fellow, Senior Fellow and Principal Fellow of the HEA.

Developments that are more recent include the Higher Education and Research Act 2017 and the Teaching Excellence Framework (TEF) (Higher Education Funding Council England 2017). The Higher Education and Research Act provides a new set of rules and regulations for universities to increase the transparency of teaching quality. The Higher Education Funding Council for England (HEFCE) will be replaced by the Office of Students (OFS); they will become the regulator ensuring that teaching and research quality in universities remains high and functions in the best interests of students. The OFS will take over and build on the work of the QAA in England but for now the QAA Scotland and the Scottish Funding Council will remain. As the TEF develops, Universities Scotland aims to work with the Scottish and UK Governments to highlight the distinctive strengths of the Scottish approach to quality. They plan to share their experience and expertise in quality enhancement in order to secure a ‘different

but equivalent' route to accreditation at all levels for Scottish institutions (Scotland Universities 2016).

The TEF was introduced in 2016 but has been incorporated into the new 2017 Act (Higher Education Act 2017). The TEF is a scheme for measuring teaching excellence across institutions, and will soon provide information to help prospective students choose where to study. In the case of English universities, the information will be used to inform tuition fee levels. The TEF is voluntary and each higher education provider decides whether to take part. The Department for Education in England developed the TEF and while education policy is a devolved matter, some Scottish Universities are now taking part. Higher education institutions receive gold, silver or bronze awards purportedly reflecting the excellence of their teaching, learning environment and student outcomes. Another purpose of the TEF is to raise esteem for teaching and provide recognition and reward for excellent teaching. However many Scottish universities have not participated and many English universities are unhappy about participating as there is concern that the measurements do not measure teaching excellence. Many of the indicators being used, such as National Student Survey results that relate to student satisfaction (not outcomes), and to the earning potential of students, are not considered by many to be robust measures of teaching excellence (Little and Locke 2011, Gibbs 2010, Bishop 2016).

In Scotland, higher education institutions take part in Enhancement-Led Institutional Review (ELIR), which forms part of an overarching Quality Enhancement Framework (QEF). ELIR includes an emphasis on

enhancement alongside assurance of the quality of teaching and learning, and includes a review visit to each institution every five-six years, where peers engage directly with the institution under review. The TEF proposes to build on this in Scotland, providing an additional judgement on performance, in the area of teaching and learning quality.

2.1.2 Raising the Status of Teaching in Higher Education

Teaching and a scholarly approach to teaching and learning is often regarded as the 'poor cousin' to disciplinary research within higher education institutions. It is perhaps unclear why this has happened, traditionally universities were seen as a place of foundational knowledge (both research and teaching) but over the years, the race to be world leaders in innovative research may have eroded the appeal to educate in what is already commonplace knowledge to undergraduate students. There may also be a misapprehension that research attracts more funding into institutions despite the fact that for most places of higher education, funding in relation to teaching actually generates the higher income. Although Universities are by Royal Charter 'not for profit' organisations they do aim to have a surplus of income over expenditure and as a result many now function as businesses (Miller et al 2014). Many academics are employed on the basis of their research and funding they can attract, many then find themselves also being asked to teach sometimes without interest, training or qualification. The inclusion of poorly motivated individuals within the teaching staff can lower overall morale and esteem for the value of being a teacher. Over recent years, universities have attempted to raise the profile

and status of teaching and its quality within higher education and balance the equilibrium by encouraging the development of teaching skills amongst academics. Honourable motivations for this include the desire to make teaching more student-centred, to adopt more rigorous and defensible course design and delivery, and to enhance the overall quality of student learning outcomes. Ultimately, however, another significant driver is university reputations and income. Improvements in teaching and the student experience impact upon outcomes in the UK National Student Survey, the USA National Survey of Student Engagement and other similar surveys. In turn, these survey outcomes influence university league tables and reputations, both of which are important factors in the ability to attract quality students in what has become a global market for educational institutions (Pleschova et al 2010). Unlike the students of previous generations, today's students are vocal in their demands for high quality educational experiences and they expect an active central role in any learning activity.

In the UK, the professional standards framework (Higher Education Authority 2011), which was designed by key higher education organisations and the wider higher education sector, was used by the Higher Education Academy to instigate changes in institutional strategy with increasing numbers of universities adopting Continuing Professional Development Frameworks in the last five years. These frameworks set out a range of ways in which institutions offer teaching development and recognition opportunities to new as well as more experienced staff. These developments

built upon the emphasis that has been placed on offering teaching development for new academic staff over the last twenty years (Elton 2009). Teachers on a typical Postgraduate Certificate in Learning and Teaching in Higher Education or Postgraduate Certificate in Academic Practice (two of the most common names for the teaching development programmes offered to new staff), are expected to demonstrate all the activities, knowledge and values outlined in the UKPSF (as most of these programmes are accredited by the Higher Education Academy against this framework) (Fernandez 2013).

Programmes, such as the PGCAP mentioned above, exist to provide academic development in teaching, but qualifications in this area are not uniformly essential and there is little impact on established staff who are exempt from the course. Yet, participation in academic development activities is essential to help create educational environments that enhance quality. Teachers who are not developed in this way tend to base their teaching on their own outdated student experiences (Handal and Lauvas 1987). Blumberg (2009), highlights a move towards student centred teaching in higher education and this has increased the demand on teachers to develop appropriate teaching skills. These skills include the ability to provide meaningful feedback, ensure teaching is relevant and inclusive of student diversity and consideration of ethical implications.

In this study, we see the dual pressure on Dental practitioners to develop professionalism as dentists as well as to develop professionalism as

teachers. Professionalisation is clearly not an end in itself but rather a continuous lifelong learning practice (Darling-Hammond and Bransford 2005) that ensures its own improving quality. There is a growing expectation that all staff involved in teaching and supporting learning should be engaged in continuing professional development and evaluation of their pedagogic practice. Indeed, there is increasing pressure on institutions to disclose their numbers of HEA accredited teachers and those with a teaching qualification.

2.2 The Impact of Teaching Development

2.2.1 Teaching Development Programmes

Rutz et al (2012) were able to demonstrate a direct relationship between amount of teacher development and improvements in teaching making development programmes important within higher education. Stes et al (2013a) also looked at the impact of these courses on student learning and showed that teacher's instructional development had limited effect on student learning.

As stated earlier there has been a move over recent years across the higher education sector to encourage or enforce new teacher development with programmes such as the Postgraduate Certificate in Academic Practice (PGCAP). This programme has been a requirement of academic probation (now the Early Careers Development Programme) for new staff at Glasgow

University for at least ten years but has not been required by existing staff or offered to teaching personnel employed by the NHS.

Discussion regarding the impact of these courses is important to this study as many of the teachers have not been subject to it. Stes et al (2010a & b) in their review of literature about the impact of PGCAP programmes found that the greatest impact of involvement in a PGCAP or equivalent was on teachers' attitudes towards their teaching. There was measurable impact on knowledge and skills in relation to teaching but little evidence to show development in teaching concepts. Stes et al (2010 a & b), criticize the studies they reviewed for a lack of inclusion of comparison groups which may raise questions about the type of evidence available. A range of studies do, however, demonstrate significant value from participating in teacher development programmes and some of the key studies are outlined below.

Hanbury et al (2008) used a pre-test/post-test comparison in their study looking at teaching attitudes over 30 universities in the UK, comparing those who participated in courses verses those who did not. They recorded a significant shift amongst participating teachers to employing student-centred rather than teacher-centred approaches to their teaching delivery. This finding is backed-up in a report by Postareff (2007) who also concluded that it took a year for this kind of transformation to take place within a teachers' practice, and that the transformation was facilitated by increased self-awareness. Of particular interest to the current study, Butcher and Stoncel (2012) explored the impact of a postgraduate certificate on

teachers appointed for their professional disciplinary expertise. The study looked at participants in different stages of the programme including post qualification and involved mixed research methods. Again, a shift was evident from teacher-centred to student-centred approaches and showed that teachers were willing to adopt new approaches to teaching, planning and assessment. They were also able to detect a shift in reported professional identity moving from discipline related only to also identifying themselves as teachers. Lueddeke (2003) found that individuals with a strong concept of their position within their discipline combined with a responsibility to teach have the strongest influence on increasing teaching scholarship; this is considered to be a key facet of teacher professionalism. In Lueddeke's study, teaching qualifications and years of teaching had a moderate impact on scholarly activity, with gender and position playing no significant role. Dixon and Scott (2003) present a study using self-reporting to describe how teachers judge their participation in development programmes as leading to an increase in their teaching and learning skills. The programme made them feel more adept at; creating an optimal learning environment; time management; student engagement and encouraging student interaction. Postareff (2007) found evidence of a self-reported increase in reflective skills for teachers participating in a development programme.

An interesting study from the US (Romano et al 2004) reported on the effects of a teaching development programme on mid-career academics. Value added by the programme was reported as; provision of focus; strengthening of existing knowledge; and an increase in teaching related

skills. The study emphasised that constructive feedback following peer review was of particular value in helping develop a teacher's ability to deal with both professional and personal challenges. McArthur et al (2004) had spent years promoting development programmes in Australia, but in 2004 they reported no differences in adopted teaching methods between teachers who had completed a postgraduate certificate and those who had not. However, they did detect an increase in the rate at which new staff members reached appropriate teaching momentum if they had been through a development programme.

With regard to outcomes for the students, there is little evidence to measure any effect of having teachers who have participated in postgraduate development courses. Several authors have suggested this is because we lack the common tools needed for measurement and that future research in this area is required (Kreber and Brook 2001, Tigwell 2012).

The HEA document on the impact of introductory teaching programmes (Parsons et al 2012), states that teachers with experience are more proficient and adept at transferring information and implementing ideas from development programmes than less experienced or novice teachers. They suggest new teachers may need to develop foundational pedagogic knowledge before they are able to transfer effectively the knowledge they learn on a programme.

Development programmes have demonstrated evidence of a positive impact on teaching attitudes but looking forward research has failed to show a link between certificated programmes and a rise in the sociocultural status of teaching within higher education (Steinert 2006). This continues to be an ongoing problem. Chalmers and Gardiner (2015) has suggested that the research paradigms around impact and effectiveness of teacher development programmes needs to shift more towards evaluation in order to properly inform and enhance programmes in the future. They also suggests that evaluation strategies be built in from the beginning to enable better measurement of impact.

2.2.2 Development of Clinical Teachers

Non-academic clinical educators are often outside the normal processes for teacher development within higher education. Clinical education plays a vital role in the formation of future healthcare providers but some studies have found instances of unplanned, haphazard and intimidating clinical teaching (Irby 1995, Spencer 2003). It is critical that clinical teachers provide quality, professional learning experiences in the clinical environment but many are untrained for this role (Swanwick and McKimm 2010). Clinical teachers have to juggle assessment of student performance, provision of quality feedback and ensure integrity of patient care; these elements are essential to maximising the student experience (Dowling 2001). The critical nature of clinical training has led to growing interest in

the provision of support and development for clinical teachers (Steinert 2011). Traditional didactic lecture based development programmes suffer from poor attendance (Steinert et al 2009), inadequate learning transfer (O'Sullivan and Irby 2011), and teacher resistance to change (Dornan et al 2005). Several initiatives within the clinical workplace have been developed in an attempt to address these challenges (Leslie et al 2013, Steinert 2012).

There is limited research on how clinicians transition into clinical teachers. Available information is situated on teacher self-development, reflection on personal insight and emulation of the behaviour of other teachers. Many also draw practice from their own experiences of being a student and this may be wildly outdated (Cook 2009, MacDougall and Drummond 2005 a & b, Irby 1994, Pinsky et al 1998, Pinsky and Irby 1997). Higgs and McAllister (2007) found that growth of identity as a teacher is self-authored and constructed from internal thoughts on being a clinician, colleague, and teacher. Educating others is, however, inherent to clinical practice with patients requiring constant information and instruction. Evidence also suggests that clinical teachers have a strong social influence on each other's development, especially in relation to the adoption of educational innovations (Jippes et al 2013). Jippes et al found that clinical teachers felt more comfortable to participate in, and use material from, informal workplace teaching development events rather than attending formal organised didactic events. Social structure and accepted norms certainly have a role to play in clinical teacher development (Cantillon et al 2016).

The social function of teaching provides a professional community that can increase knowledge and help tutors to identify themselves as teachers (Marcelo 2009). These ideas also translate into the benefits that can develop from the social organisation of student learning within these clinical settings (Egan and Jaye 2009).

The concept of identity has different meanings in the literature. A common strand is that identity is an ongoing developmental process rather than a fixed attribute. The process involves interpretation of oneself as a certain kind of person followed by recognition of this in a given context (Gee 2001). Reflection and self-evaluation are important for the development of professional identity (Cooper and Olson 1996, Kerby 1991). Beijaard et al (2000) describe identity formation as the outcome of social interaction and the internalisation of social roles. Postareff and Nevgi (2015) found that some teachers on a development programme were resistant to developing a teacher identity whilst others showed strong changes, this is similar to what was found by Akkerman and Bakker (2011).

As stated earlier, there is little in the literature that refers to the transition of those solely working as clinicians to the dual identity of also being NHS clinical teachers. Some of the challenges faced by this group are similar to those experienced by clinicians becoming university academics. Smith and Boyd (2012) looked at healthcare practitioners appointed to academic posts in universities. These teachers were experts in their respective clinical fields

who found the transition to becoming a teacher challenging. The strongest motivation for clinicians to become teachers was their sense that through teaching, they contributed to the development of student practitioners and hence the next generation. They did however have a tendency to hold onto their identity as a clinician rather than embracing their new identity as a teacher. In reality, both these roles need to be maintained so perhaps it is natural that many lean towards their stronger primary identity linking to their formative clinical background. Boyd (2010) found that adaptation into the new role of teacher was rapid with clinicians bringing high levels of content knowledge; however, most had limited underpinning teaching knowledge. It is clear that clinical teachers need to develop pedagogical content knowledge and require support for this (Shulman 1987). Pedagogical content knowledge involves transforming knowledge from practice into student teaching and learning, being able to explain difficult concepts in multiple ways as well as being able to diagnose and resolve errors in student understanding, this can clearly be challenging for the new teacher (Trowler and Knight 2000). Clinical educators have the advantage however of being able to afford the student a more authentic view of real life beyond the fabricated academic clinical context.

2.2.3 Tutors on the margin

Embedded within the previously mentioned UKPSF is the expectation that all staff involved in teaching and supporting learning in higher education should be engaged in continuing professional development and evaluation of their pedagogic practice (HEA 2011). Outreach teachers are a

particularly vulnerable group when it comes to a lack of teacher training and previous authors have indicated that they require increased integration into the main university academic department (Bell and Mladenovic 2015). Bell and Mladenovic advocate that the provision of developmental activity is essential for outreach tutors and the use of POT is a way to increase integration and for institutions to recognise their teaching goals. Situated learning in the workplace (such as POT) is important; it affords participants the opportunity to observe comparable teaching in a comparable environment. They also concluded that POT encouraged reflection amongst practitioners and for some this led to conceptual expansion and lasting changes in their teaching practice.

2.3 Scholarship and POT

POT is consistent with the University of Glasgow's aim to promote excellence in teaching. Research into POT schemes elsewhere have shown enhancement to the profile and value of teaching and scholarship within institutions (Gosling 2005). In addition to the potential benefits to the individual described below, POT as a collaborative project can be used to establish a nurturing culture for the improvement of teaching and scholarship within a department or wider institution. Collaborative peer observation of teaching creates and sustains conversations about teaching which are constructive and purposeful and opens debate and discussion about teaching problems (Gosling 2005). Some studies have shown that scholarly discussion between teachers are more significant when they take place between small networks of teachers in a supportive environment

rather than within larger networks (Roxå and Martensson 2009, Martensson et al 2012), and the POT process is able to facilitate this. (See section 2.2.9 for literature relating to conversations about teaching). Berk et al (2004) state that development of educators allows enhanced delivery of the curriculum and improvements in student learning. Previous authors advocate that details of the developmental conversations occurring via the POT process need to remain between teachers and not shared with line managers who may use the information to address underperformance or for promotion (Gosling 2005, Carter and Clark 2003). Involvement of managers such as advocated in Gosling's evaluation model of POT does not follow the ethos or remit of scholarly activity (see section 2.3.1 for Goslings models of POT).

Institutions are clearly interested in efficient mechanisms for the dissemination of good teaching practice and POT schemes do much to provide this (Luddeke 1998). Clegg et al (2002) argue that the use of a POT scheme requires evidence of involvement and improvement. This current PhD study aims to instigate and evaluate a POT scheme at the University of Glasgow Dental School in order to report on its acceptability, impact and fitness to develop teachers while avoiding wastage of time or resource; and also by doing this, the study aims to contribute to the scholarship of POT in clinical education.

2.3.1 Definitions and Functions of POT

Terminology in the literature can be confusing with POT used interchangeably with ‘peer review of teaching’, ‘peer evaluation’ and ‘peer-supported review’, (Kell and Annett 2009). Ambiguity over definitions can lead to failure of engagement in such processes (Murphy-Tighe and Bradshaw 2013). In contrast to his original papers (Gosling 2002) describing POT Gosling suggests that terms using ‘review’ and ‘evaluation’ are more associated with judgemental rather than developmental processes (Gosling and O’Connor 2009). With such confused terminology in the literature, there is a requirement to read papers in full to appreciate an author’s meaning.

Gosling’s models for POT are widely cited in the literature, he provides definitions for ‘peer’, ‘observation’ and ‘teaching’ along with three POT models. Gosling’s description of ‘peer’ encompasses varied relationships within an institutional setting. Although ‘peer’ in lay terms alludes to ‘sameness’, ‘equality’ and ‘similarity’, Gosling’s definitions reveal inequalities in power, status, background and authority. The three POT models consist of an evaluation model, a developmental model and a peer review model (Gosling 2002).

In his evaluation model, senior members of staff observe those who are junior for the purpose of appraisal and assessment, to confirm a probationary period or detect underperformance. This model is also useful

as a tool for institutional quality assurance or audit (Branard et al 2015). In the evaluation model the observing peer is actually an authoritative power who is making a summative judgement on teaching performance, there is limited scope for development of the teacher under observation. Staff may look upon this process with suspicion due to its lacks of supportive or developmental ethos. In some institutions, there is an expectation that all staff members in a teaching role will show evidence of engagement in this type of activity to demonstrate professional development and hence enhance the student learning experience (Scott et al 2017). This form of POT links well with the idea of quality assurance set out in the English TEF approach. The context of this type of POT process has been linked to inducement of anxiety around scrutiny and job security (Adshead et al 2006, Gosling and O'Connor 2009).

The 'peer' within Gosling's second developmental model is an educationalist or expert teacher and their observations are with the intention to improve competence and enhance teaching skills. As well as observing teaching performance, they may comment on class structure, resource materials and course design. As in the previous model the relationship between the observer and observee is unequal with a focus on what the individual can do to improve their current teaching skills. Formal reports and action plans are often an outcome as this process is commonly undertaken as part of a postgraduate qualification such as the PGCAP. The results of this type of POT can potentially lead to pass/fail judgements with regard to the course. Gosling describes how the expertise of the observer

influences the notes taken during the observation, what is commented on and what is missed or thought not to be important, this obviously has implications when using less expert observers.

Gosling's third model is that of 'peer review' where teachers observe each other. Peers in this instance are notionally equal with both participants receiving mutual benefits from the process. Participants engage in discussions about teaching along with providing mutual support for change and individual self-reflection on current teaching practice. This allows participants to experience and learn about a wider range of teaching methods and approaches, share experience and analyse current practice in a reciprocal, non-judgemental way. It should be noted, however, that whether judgemental or not all three models do require cognitive decisions to be made around the quality of teaching (Peel 2005). Gosling suggests that a peer review POT scheme:

> "…focuses on assisting staff to improve their teaching…can be explicitly staff-led with no predetermined agenda…may be used with inexperienced lecturers to assist them to achieve standards of competency"
>
> (Gosling 2005)

Gosling talks about using this peer review form of POT to provide a 'safe' space to talk about teaching and raise the profile of teaching within departments.

> "… (peer review POT) is part of a broader project to establish a culture that nurtures the improvement of teaching within a department. Collaborative peer review of teaching is about finding ways of creating and sustaining conversations about teaching which are constructive and purposeful and which open problems in teaching to public debate and discussion".
>
> (Gosling 2005)

This statement strongly depicts one of the key purposes of the POT scheme described in this PhD study, that of creating opportunities to open up teaching for discussion. Other authors describe this as developing a cooperative learning environment (Martin and Ramsden 1994), a colligate approach (Bell 2001) a consciously reflective learning organization (Askew 2004) or communities of practice (Wenger et al 2002). Gosling describes the risks of this model as complacency and conservatism amongst participants and lack of focus on the learners; other authors have also been concerned about the dissemination of poor teaching practice (Yiend et al 2012). Despite these risks this process is deemed useful for institutional quality enhancement.

It is possible to consider POT within the realm of Kolb's (1984) experiential learning cycle. The first part of the experiential learning cycle is 'concrete experience'; the new situation encountered in the case of this current POT scheme is that of observing or being observed by a colleague. The second stage is 'reflective observation', where thoughts about the experience are internalised and processed; the process then encourages the discussion of these thoughts with a colleague. The following stage is

‘abstract conceptualisation’ where the reflection gives rise to a new idea or modification to an existing concept, this can be done individually or again via discussion. The final stage involves ‘active experimentation’ where what has been learnt and reflected on is tried out and the results evaluated, this happens when each individual returns to their normal teaching pattern and employs some of what they have learnt and reflected on.

A variety of different POT approaches are widely used throughout the UK higher education system as a means of quality enhancement for teaching and learning (Wankat and Oreovicz 1993, Fullerton 1999). Emphasising Gosling’s second and third models of POT, Martin and Double (1998) suggest six overarching aims of POT.

1. To improve and develop an understanding of personal approaches to curriculum delivery;
2. To enhance and extend teaching techniques and styles of presentation through collaboration;
3. To engage in and refine interpersonal skills through the exchange of insights relating to the review of a specific teaching performance;
4. To expand personal skills of evaluation and self-appraisal;
5. To develop and refine curriculum planning skills in collaboration with a colleague;
6. To identify areas of subject understanding and teaching activity which have a particular merit or are in need of further development.

Consequently, POT can be considered to have three major functions. The first is as an accountability measure for the institution (Allen 2002), whether this be through a probation, promotion or quality enhancement measure. The second is the facilitation of reflection (Brown and Jones 1993) to improve teaching practice and the third is fostering discussion and dissemination of good teaching practice to improve learning for the students (Gosling 2000).

2.3.2 The Process of Peer Observation of Teaching

It was clear that Gosling's 'peer review' model of POT best matched the aims and processes of POT planned for this study at the University of Glasgow Dental School. The peer review model describes a supportive process where near teaching peers help each other develop their teaching practice. Lubin also described this model as a:

> "…reciprocal process whereby one peer observes another's teaching and provides supportive and constructive feedback. Its underlying rationale is to encourage professional development in teaching and learning through critical reflection, by both observer and observee".
>
> (Lubin 2002)

Influence for the focus of this current study has been adapted from the available published literature. Chism (2007) highlighted a need for confidentiality between peers and the creation of a non-judgemental environment was important in the work of Tremlett (1992) and Brown and Jones (1993). In these studies, paired colleagues reciprocally observed each other's teaching, none however were conducted in a clinical setting.

Observations were followed by an offer of constructive feedback and scholarly discussion around teaching practice with participants assuming the role of 'critical friend', again as described by Chism and used by Swinglehurst et al (2008). In this PhD study, tutors were paired with a different colleague through each cycle of the scheme with conversation extending further still informally through the community of practice; Roxå and Martensson (2009) advocate strong encouragement of such conversations. Personal reflection and self-assessment were encouraged at all stages of the process, an approach advocated by Bell (2005) and in conjunction with the framework set out by the University of Glasgow guidelines for conducting POT (Bovill 2011, Appendix II).

Working through this process holds benefits for both the observer and the observed and the focus is always on constructive development, rather than negative criticism (Carter and Clark 2003).

2.3.3 The Benefits of Peer Observation of Teaching

POT schemes have been shown to lead to a range of benefits including increased public discussion of teaching and sharing of good practice in teaching (Blackwell and McLean 1996, Whitlock and Rumpus 2004, Lomas and Nicholls 2005, Donnelly 2007) and professional as well as personal growth (Bennett and Barp 2008). Both Marton et al (1993) and Entwistle and Walker (2000) suggest this process this will develop their teaching and personal concept of themselves as teachers.

POT provides opportunities for positive feedback, tackling problems within teaching practice, and affords reassurance for building the confidence of teaching staff (Blackwell and McLean 1996). POT schemes provide enhanced awareness of the content and processes of others' teaching and uncover areas where further professional development support is needed (Cairns et al 2013, Appendix VI). POT assists in the development of interpersonal communication skills and personal skills of self-evaluation and self-appraisal for critical reflection on teaching practice (Bell 2001, Martin and Double 1998, Hammersley-Fletcher and Orsmond 2005) and allows personal development through a process of reflective practice. This all leads to improvement in the quality of teaching experienced by the students (ProDAIT 2011).

There are claims that POT increases the value placed on teaching (Gosling 2005) and enhances its quality across higher education institutions (Hammersley-Fletcher and Orsmond 2004). Several models using POT in more strategic ways have been described (Gosling 2005), but perhaps one of the most common forms that we see is the extensive use of POT within early career academic development programmes including Postgraduate Certificates in Learning and Teaching in Higher Education, as introduced in section 2.2.1 and further discussed below in 2.3.4.

POT has been shown to be worthwhile for development of teaching in a variety of disciplines (Bell 2001, Blackwell and McLean 1996, Schultz and Latif 2006, Newman et al 2009).

Another benefit of POT is its link ability to the appraisal process assisting in tailored development plans. Care is required to ensure that the manner in which this is conducted is acceptable to teachers lest it become a limitation (Hammersley-Fletcher and Orsmond 2004). Chamberlain et al (2011) were able to show that engagement in activities such as POT was increased when there was a formal linkage between this activity and the appraisal process. As well as increasing engagement, there is anecdotal evidence to suggest that this linkage empowers teachers to take ownership of their personal development with clear goal setting and an increased ability to identify support and resources needed (Scott 2017).

The impact of POT may be maximised in less experienced teachers who benefit from collaborative development alongside experienced colleagues working within communities of practice. The current PhD study mixes teachers of all experience levels within the community; it will be able to determine if the statement above is true of the situation under investigation.

2.3.4 The use of POT for Academic Development

Academic teachers who had completed probation by the year 2000 have not undertaken postgraduate teaching qualifications in the same numbers as their later colleagues. Currently, undertaking a teaching qualification or gaining accreditation from the Higher Education Academy is often a

mandatory component of the academic teachers' probationary period in the UK. Lueddeke (2003) suggests that the experienced group of pre-2000 unqualified teachers are less likely to engage in teaching-related continuing professional development (CPD). It is important that more senior staff get involved in further development of their teaching skills throughout their careers. Ferman (2002) identified POT as a potential activity that can contribute to gaining this development.

A number of studies have explored the impact of peer observation of teaching as part of teacher development courses, so they are of particular interest to this PhD study. Donnelly (2007) described a development programme in the Republic of Ireland involving peer observations. They found that the creation of a climate of trust and respect was able to increase scholarly discussion and encouraged participants to try new teaching innovations. Similarly, Marshall (2004) described the way POT was used in a teacher development programme to develop a community of practice among programme participants with exposure to constructive criticism and first-hand observation of ways to approach teaching differently.Chadwick (1995) found that academics that had completed a postgraduate certificate in teaching practice including POT were more open to sharing best practice.

2.3.5 Challenges and Limitations

POT as a means of professional development for tutors is not without its challenges and limitations. When peers are placed in a situation, involving

one to one critique of each other's teaching skills it can be difficult to discuss matters which are negative in nature. Bingham and Ottewill (2001) argue the path of least resistance is to give a congratulatory pat on the back. Pigott-Irvine (2003) advocates that POT processes must be based on trust and transparency between the observer and the observed otherwise problem solving and advancement of new ideas do not come to fruition. This may suggest a flaw in schemes where participants select their observer, as they have the ability to choose a friend or colleague who may supply only positive feedback (Bell 2001). Similarly, when participants have the freedom to select the session for observation, this may result in selection of teaching that is not typical of their usual teaching practice (Kell and Annett 2009). Others have pointed out that if observations are once yearly there is only limited scope for development (Knight and Trowler 2001). Many academics report experiencing a fear of being critical, yet this is essential if the scheme is to be successful (Cole 2003). In an attempt to negate some of these effects, appropriate training prior to the POT process is essential. Cox and Ingleby (1997) describe issues such as the Hawthorn effect (Roethlisberger and Dickson 1939), as having a role to play in skewing observed behavior. The Hawthorn effect (also referred to as the observer effect) is a type of reactivity in which individuals modify an aspect of their behaviour in response to their awareness of being observed. Many authors have also highlighted the personal anxiety that can arise on being observed (Bell 2001, Blackmore and McLean 2005, Kell and Annett 2009).

Lomas and Nicholls (2005) found that academic staff were resistant to engagement with new educational innovations and changes to their current practice, while Hammersley-Fletcher and Orsmond (2005) expressed the need to constantly refresh and update innovations such as POT in order to prevent repetitive stagnation. Where staff motivation is lacking or cynicism is creeping in, POT can become a tick-box exercise rather than an opportunity for development and enhancement (Allen 2002). Peel (2005) has pointed out that the act of observation alone does not enhance teaching practice, hence participants paying mere lip service to the process will gain little from it, participants must engage with and commit to the process if benefits are to be realised. Resistance and lack of motivation may be more prevalent in situations where POT is mandatory (Shortland 2004) and in such cases there is little chance of achieving the desired outcomes (Murphy Tighe, 2013). Keig and Waggoner (1994) suggested that developmental processes such as POT may challenge academic freedom and that reviewers will not be objective in their feedback. However, in this PhD study, I use a social constructivist framework so there is no expectation that observers will be objective. By their subjective nature, observers cannot provide objective feedback. They can however; gain experience and training to ensure they provide high quality constructive critical feedback (see Chapter 3 for more discussion of social constructivism).

A further barrier to POT is the need for resources to manage organization, training and participants' time (Murphy Tighe and Bradshaw 2013). In order to enhance the value of POT developmental activity some authors

have advocated that time be allocated within participants' job plans to enable participation in scholarly CPD (Purvis et al 2009).

There is little in the literature directly relating to how well schemes have been adopted and maintained. There are certain factors to consider when introducing an innovation as to its long-term acceptance and adoption into practice. Adoption of an innovation occurs at different rates between individuals, with some innovations being adopted long term and others abandoned. Innovations are required to have certain attributes in order to enhance their chances of survival (Greenhalgh 2004). These include having a clear, unambiguous advantage in effectiveness (Meyer et al 1997) and compatibility with perceived needs (Foy et al 2002). The innovation must be simple to use (Denis et al 2002) and initial use as an experimental trial is preferred (Plsek 2003). To maximise acceptance, benefits of the innovation should be visible (Denis 2002) and participants should be able to adapt, refine, and modify the innovation to suit their own needs (Meyer 1997). Innovations increase acceptance if they display direct relevance to the performance of the intended user's work (Yetton et al 1999). This information was used in the introduction and evaluation of the POT scheme in this PhD study.

2.3.6 Who is a Peer in POT?

In the literature, the definition of who is a 'peer' in the process of POT is inconsistent and various types of people fulfil this role. Bovill and Cairns (2014) investigated participants' experiences and views of three different models of peer observation within a Postgraduate Certificate in Academic Practice (Appendix XII). The first observation was from an academic developer who was an expert in learning and teaching, the second from a fellow classmate on the PGCAP programme, and the third, a senior colleague from the students own department. The Bovill and Cairns study found that the most valued interactions were with members of the Academic Development Unit but that these individuals were the least likely to be considered a true 'peer' due to their expert knowledge on teaching. In Weller's (2009) study there is a hybrid of Gosling's developmental and peer review models with two observations completed by an academic developer and a third from a disciplinary colleague. Some participants in this study felt it was important to have an observer from their discipline with 'insider' knowledge. Others acknowledged the neutrality offered by a sympathetic 'outsider' greater acquainted with teaching techniques but the threat they carried to the 'insiders' world view did affected their potential relationship as a 'peer' (Palmer 1998, Kinchin 2005). In Palmer's study, instead of valuing interdisciplinary input, as has been subsequently reported in the literature (Donnelly 2007), there was resistance to this different perspective from expert teachers outside their home discipline. Even though the POT process can involve observations between 'near peers' teaching on

the same course, other inequalities can have an effect on whether or not a participant considers a colleague to be a true peer.

2.3.7 Giving Feedback to a Colleague as Part of the POT Process

Yiend et al (2012) postulate that training and development on how to deliver critical feedback to a colleague is vital prior to involvement in POT if the outcomes are to be as developmental as intended. There may have been a past assumption that as staff critique students they are able to offer constructive critical feedback to colleagues but MacKinnon (2001) describes the potential for imbalance in observer/observee relationships and suggests a three-step approach to giving feedback. The first step involves spending time making a considered written review, the second step is the identification of strengths and weaknesses followed by step three where a summary is produced pulling out the key points for discussion. Where the POT feedback meetings between peers are able to enhance the reflective processes of both individuals, and when the feedback involves constructive criticism, this is most likely to result in professional development (Hogston 1995).

2.3.8 POT as a Facilitator of Reflective Practice

Reflective practice is advocated as a means of professional development both for new and experienced academic staff (Schön 1987, Brew 1995). Schön describes it as “a dialogue of thinking and doing through which I become more skilled”. Kolb (1983) describes it as the taking in and

processing of experience followed by the expression of what has been learned. Some evidence, however, would suggest that a reflective approach does not suit all teachers. Some teachers may see their teaching as largely "common sense" and drawn from experience (Handal and Lauvas 1987) with little need for reflective development. In contrast, Askew (2004) argues that collaborative reflection on teaching practice can prevent teachers from becoming isolated and teaching from becoming routine and mundane. Kugel (1993) observed that teachers' progress through a series of distinct developmental stages where they move from focusing on their own performance and on whether students understand what they are teaching, to an increasing focus on the importance of the student learning experience. Kugel argues that reflection on teaching and learning plays a major role in the development of teachers over time.

POT is a recognized method for facilitating teachers to reflect on teaching practice (Brown and Jones 1993, Fullerton 1999, Gosling 2000) and has been shown to enhance self-evaluation and self-appraisal skills (Martin and Double 1998, Bell and Mladenovic 2015). Importantly, self-evaluation, self-appraisal and reflection also contribute to enhanced professionalism for clinicians as well as for educators, and this has an increasing role to play in institutional quality enhancement.

Mezirow stated that:

"Reflection is an examination of the justification of one's beliefs primarily to guide action and reassess the efficacy of the strategies and procedures used in problem solving".

(Mezirow 1990)

Effective reflective practitioners are those who use their experiences as opportunities to consider their teaching practice and its development. POT can stimulate dialogue between peers about teaching and trigger the reflective process; this in turn can support self-reflection. Reflection here does not just involve evaluation of what goes on in the learning environment, but rather, the processes of teaching and thinking, asking the questions 'why' rather than 'how'(Hammersley-Fletcher and Orsmond 2005). Some authors have found that formulation of self- knowledge is important in a lecturer's professional development, with several studies demonstrating a strong relationship between peer observation and development as a teacher (Beaty 1998, Race 2001, Allen 2002, Bell 2002). Wubbles and Korthagen (1990) argues that the more reflective a teacher is, the more favorable their relationships are with colleagues and students and the more open they are to innovation. Reflective educators, credited as being better teachers, also display more obvious connections between theory and practice (Bolin 1988).

Some authors argue that there is additional value to having several reflective colleagues within a community of practice as the building of an overall ethos of reflection has the greatest effect. They report that a

reflective ethos in a department or institution also leads to more creative solutions to the cultural, social and political issues that arise in the learning environment (Thorpe 2000, Kuit and Gill 2001). Belvin et al, however, found that although development through reflective practice had an impact at the level of the individual teacher there was little change to the overarching culture

Harvey and Knight (1996) identified the difficulties in engaging teachers in meaningful reflection. Simply reflecting on learning and teaching can be difficult without experience or training to help change any preconceived ideas. Several authors outline the emotional and cognitive aspects of effective reflection that need to combine with knowledge, understanding and experience in order to be effective (Hinett 2003, Moon 1999). Brockbank and McGill (1998) have suggested that to be effective reflective practitioners, teachers need to develop the reflective skills of others as well as their own. This suggests that POT may be a particularly powerful tool in that it can act as a framework to develop not only a teacher's own skills of self-reflection, but also as a framework within which to help peers to develop their reflection skills. POT can propagate social norms between peers and hold a mirror to each individual's practice in the hope that they will conform to social norms or challenge them, where appropriate. Reflection has the possibility of bringing about a new 'way of being' (Dall'Alba and Barnacle 2007) as a teacher, which is integrative and transformative. Boud and Walker (1988) have suggest that the reflective

process needs to focus on the assumptions and expectations of learners as well as teachers'.

Overall, the hope is that the reflective possibilities of POT can help participants to become clinical teachers that operate knowingly and critically within the social values and structures of their professional peers.

2.3.9 POT as a Facilitator of Conversations about Teaching

Many authors have studied the relationship between social structures and becoming a teacher, this is not confined within higher education. Carter and Doyle (1996) describe a teacher's development as a dialogue between their own personal experiences, present conditions, beliefs, values and the social, cultural and historical influences that surround them at a given place and time. Eraut (2000) described becoming a teacher as largely informal and implicit, while Schuck et al (2008) argue that becoming a teacher is a process with importance in cognitive-emotional and personal-professional teaching relationships. If we apply this work to the situation of clinicians becoming teachers in the clinical workplace, it is reasonable to assume that social structures might play a significant part in the development of clinical educators. As mentioned earlier there is a general trend for teachers over time to develop and move away from 'teacher-focused' teaching that concerns itself with how to display disciplinary content effectively towards more 'student-focused' teaching where teachers focus on enhancing the students' experience of learning and their ability to master the discipline.

There is evidence that better teachers' pay close attention to their students' learning, and reflect on how their students are learning rather than putting the teaching activity first (Prosser and Trigwell 1999, Martin et al 2000, Ho et al 2001). New clinical teachers tend to focus heavily on the first egocentric understanding of teaching rather than the second understanding that requires a more empathic tuning in to students' needs.

An article by Roxå and Mårtensson (2009) looks at what influences a teacher to move from one understanding to another. They use a socio-cultural perspective to do this, with particular focus on the conversations teachers have with their teaching colleagues. Other authors have also explored the importance of dialogue for mutual benefit and conversation (Orland-Barak 2005). Human beings naturally make sense of their experiences through conversation. In the case of students, genuine conversation in a traditional lecture or classroom can be extremely restricted or non-existent but may be easier in the one-to-one clinical environment, likewise teachers together within a clinical environment may have increased opportunity for meaningful conversations. Making space for good conversation as part of the educational process provides the opportunity for reflection on meaning and experiences that improve the effectiveness of experiential learning. Roxå and Mårtensson were able to illustrate the influence some of these conversations had on the development of their colleagues and how those conversations instigated change in their peers' personal understanding of teaching and learning. Rowland had also previously recognised the importance of what he termed critical discourse

and the positive participation in discussion that can be facilitated via teaching observations (Rowland 2001). Providing support for each other and having opportunities to discuss shared experiences have been found to be mutually beneficial (La Boskey 2006) in improving teaching practice through a series of professional learning conversations (Schuck 2008) and by increasing staff morale (Costello et al 2001). Swinglehurst et al found that in collaborative conversations, teachers were more enthusiastic when sharing examples of what they had learnt from each other (Swinglehurst et al 2008). Rienties and Kinchin (2014) used social network analysis to look at connections made by teachers in a development programme. As expected a large part of the networking they did was with other people on their programme but more surprisingly they networked almost as much with colleagues out with the programme where they had informal discussions about teaching 128 times per year

2.4 Impact of Non-POT Interventions Designed to Develop Clinical Teacher Development

There is little evidence in the literature with regard to other methods of developing the teaching skills of clinical staff and no coherent theory as to how clinical teacher development should be provided. Most experiential learning and development appears to come from observation, trial and error, reflection and personal experience (Busari et al 2005, Damp et al 2016). Didactic courses and workshops are provided by NHS Education for Scotland via the START course previously mentioned or via engagement in

"Tomorrows Teachers" which is a one day teaching course run by Health Education England. Any impact of these courses is not well documented. I was unable to locate any specific teacher development programmes for NHS Clinical Dentistry Teaching staff at the Universities providing undergraduate dental degrees in the UK. A study by Damp et al (2016) provided participants with four voluntary one-hour workshops over a period of 5 months and evaluated their impact via satisfaction self-assessments and ratings. They were able to show an increase in self-assessed teaching skills with student evaluations showing increased ratings with regard to teaching. Although similar focused interventions have been shown to improve knowledge (Steinert et al 2006, McLeod et al 2008), only a few studies report lasting behaviour change (Lye et al 1998, Salerno et al 2002, Lye et al 2003, Brown and Wall 2003).

What little evidence does exist, points towards a combination of methods as being the best way to maximise teaching development. This involves formal teaching courses, receiving feedback and observing others. This combination is provided in most certificate teaching courses (MacDougall and Drummond 2005). As previously mentioned some of the current NHS staff involved in this PhD study had been able to complete a postgraduate teaching certificate via various means and some who were unable to access the PGCAP course enrolled on the online PGCLTHE programme.

2.5 Gaps in the Literature

There is scant information on the use of POT within medicine and nursing and very little indeed about the impact of POT within the unique teaching setting of chairside clinical dentistry. This is especially true for tutors who lack training in teaching and learning, delivering the curriculum from remote and isolated clinics. There is also limited literature on the effect that an individual's dental position ranking/hierarchy has on ability to provide an honest critique in relation to teaching practice, style and ability within POT schemes, or on what effect other personal factors have on the ability to participate appropriately. There is scant evidence regarding the effect that being in possession of a teaching qualification has on the quality of the observations and post observation discussion and what effect this has on outcomes for teachers with and without such a qualification. The literature also tells us little about what teachers actually learn from POT as a developmental process. It is difficult to measure the effect that these types of schemes have on student learning as there are so many other potential mitigating factors influencing learning outcomes, although there is evidence that the quality of the teacher does have an impact on learning outcomes (Gibbs 2010). Finally, there is also little literature regarding the use of POT online and fore-learning aspects of curriculum delivery.

The current study clearly focuses on clinical chair side teaching and attempts to redress the absence of some of these areas within POT research,

with the aim of benefitting teaching and teachers in the Dental School at the University of Glasgow. The study also has the potential to benefit teaching in the Dental School outside the clinical settings, such as in the use of digital education in early years of clinical simulation. As well as benefitting other areas of the College of Medical Veterinary and Life Sciences, the rest of the University of Glasgow and beyond to others interested in POT in clinical settings, and to those with a wide interest in how POT can contribute to enhancing teachers and teaching in higher education.

CHAPTER THREE: METHODOLOGY

3.1 The Conceptual Framework

This section presents the overarching theoretical framework adopted in this research that included the philosophical stance of constructivism, and use of evaluation methodology. The chapter begins by stating the main research question.

3.1.1 The Research Question

This research set out to answer the following research question:

What is the potential of a Peer Observation of Teaching Scheme to develop the teaching practice of a community of chair-side clinical dentistry tutors with diverse backgrounds?

In order to answer the question, the following sub questions also guided the research:

- What are the challenges and limitations in developing and implementing a Peer Observation of Teaching (POT) scheme for chair-side clinical tutors teaching at Glasgow Dental School and its associated Outreach Centres?
- What are the attitudes of the clinical tutors towards the POT scheme?
- What impact does the POT scheme have on the professional development of teaching skills among this group?

- How does the impact of the POT scheme vary between individuals of differing teaching background and what does this mean to the overall scheme?

3.1.2 Shaping the Research Question

At the inception of this study, formulation of a well-developed research question was essential in providing direction and focus to the research. Bezuidenhout and van Schalkwyk (2015) state, the first stage in developing a research question is identifying a phenomenon that warrants further investigation. The POT literature (see chapter two) within the field of higher education highlighted the potential benefits of use and the currently widespread practice of POT in postgraduate certificate programmes that focus on learning and teaching such as the Postgraduate Certificate in Academic Practice (PGCAP). However, POT's application and transferability to a clinical chair-side dental setting remained poorly explored revealing a gap in the research and literature. There is also only scant information about the impact a POT scheme could potentially have on a group of diverse teaching clinicians, including clinicians who have received no specific instruction or qualifications in relation to teaching and learning due to their NHS contracts. When this study was in its infancy, no POT scheme existed at Glasgow Dental School, therefore, this investigation set out to implement a programme of POT as well provide its evaluation. This, however, also afforded the possibility of analysing the set-up, running and improvement of a scheme.

Bordage and Dawson (2003) and Cook (2010) have advocated that a good research question consist of three components. Firstly, an independent variable such as an intervention or specific situation, in this case, the instigation of a POT scheme for tutors teaching chair-side clinical dentistry. Secondly, an outcome measure or dependent variable, in this case, the potential of the scheme to develop teaching skills and the final component being the study population, in this case the chair-side clinical tutors. With use of the sub-questions above, I expanded the overarching question and added a fourth component. The fourth component here is a moderator variable, which is the comparison between different groups within the tutor population (those with a postgraduate teaching qualification, those in senior academic positions without a teaching qualification and those who fall into neither of these categories).

3.1.3 Underpinning Concepts

Figure 3.1 represents the conceptual framework I used to help visualise the underpinning elements that have contributed to the research question and the design of the different research elements within my study.

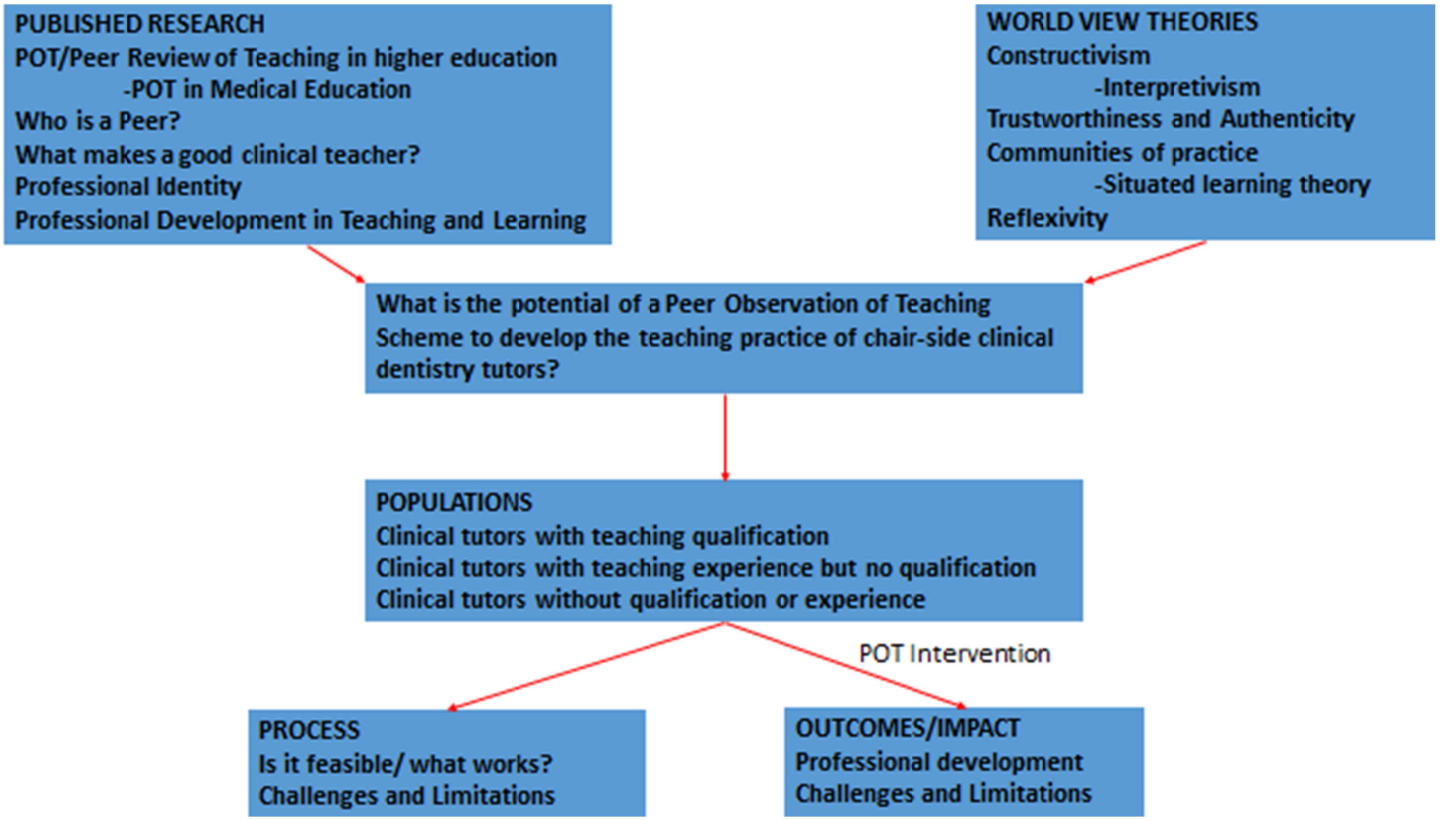

Figure 3.1- Conceptual Framework

Qualitative research concerns itself with reality in the social world. We cannot measure reality but alternately interpret, understand and experience it. To this end, there are multiple subjective interpretations of what might be going on in any experience, and this applies to the current study. A combination of different theories are used to provide a 'conceptual lens' through which we can make sense of the complex and multifaceted social interactions and internalised perceptions experienced by participants in the scheme. As a researcher worldviews or paradigms influence choices and actions taken. Creswell (2009) described a worldview as 'a general orientation about the world and the nature of research that a researcher holds'. My worldview paradigm in this study refers to the underpinning beliefs I hold about knowledge relating to the study and how I make sense of this knowledge. This is a constructivist worldview.

3.1.4 Constructivism

The constructivist outlook in this study encompasses a focus on both the development of each individual tutor as well as the development of the collective community of tutors (see communities of practice later). When conducting constructivist worldview research there are three elements to consider. The first is relativistism, this is the understanding that 'there is no objective truth to be known' (Hugly and Sayward 1987), in essence this thesis does not provide a definitive answer but rather presents an exploration and interpretation of findings. The second is transactionalism where truth is a transaction of the participants' interactions and thoughts

detailing what their personal ‘reality’ is. The final is subjectivist, because the participants are all individual and hence unpredictable; my work was to construct an impression of the world as the participants see it rather than to reveal the truth (Ratner 2008).

Constructivism relates to making sense of the world both collectively and socially (Mann and MacLeod 2015). This focus on interpreting meaning is integral to the current study for developing different accounts about teaching and learning in the POT context. From a constructivist perspective, I aim to understand how the participants in the scheme have made sense of their experiences. From an ontological perspective, constructivism leads me to believe that there are multiple realities in any situation. In this case, meaning and understanding of experiences during the POT process will be different for each individual and are dependent on each individual’s previous experience, knowledge, attitudes, beliefs, and the influence others have had on them during their interactions. Those involved will have experienced even the same POT encounters differently as each opportunity to observe/be observed followed by discussion enables participants to experience both complementary and contrasting perspectives of the same teaching encounter. The constructivist approach aligns well with the use of qualitative methods of data collection, exploring questions such as how the participants have interpreted/made meaning of their experience and why they consider particular elements important.

A constructivist theory of learning suggests that development through the POT process occurs when participants actively construct the meaning of new knowledge in light of their previous experiences, established knowledge, attitudes and beliefs. Individuals construct or represent their knowledge in different ways. Constructivist theories broadly fall into two categories: personal/cognitive and social. Piaget (1929) describes the establishment of mental structures or connections made during cognitive development in childhood. These mental connections become stronger and increasingly more complex as we learn, think and problem solve. Mental connections expand as we test our current knowledge and incorporate new knowledge. The extrapolation here is that knowledge regarding teaching practice expands via engagement with the POT process as new knowledge and experiences accumulate. Constructivism implies that to build new knowledge, individuals are required to constantly adjust their understanding of the world. We can assist this adjustment through the development of reflection and self-assessment skills. Reflection and self-assessment are widely considered as valuable approaches for enhancing learning and development, and they feature heavily within this study.

Social constructivism deals with the social aspects of learning and the importance of social, cultural and environmental influences. In this study, learning and development of teaching practice occurs through dynamic interaction between individuals in the clinical environment where chairside teaching of undergraduates is undertaken. Lave and Wenger (1991) expanded the idea of social constructivism into communities of practice.

Here learning and development is tightly bound to the context of the situation as it is in this study. The idea of learning in a social context expands the notion of learning from an individualistic endeavour to a social process that takes place through participation in the authentic, real-life activities of the community, in this case the community of chairside clinical tutors. The tutors in this study collectively learn to improve their teaching practice and try out new approaches. The POT process can help them to strengthen an already established community of practice and perhaps steer the established focus of this community away from clinical dentistry toward teaching at times when it is appropriate to do so.

From an epistemological perspective, constructivism means it is impossible to separate me, the researcher, from the participants in this study. I bring personal beliefs, experiences and values that influence the focus of the study as well as the interpretation of the study findings. This is discussed further in the 'reflexivity' section (3.5).

3.1.5 Constructivist Approaches to Quality- Trustworthiness and Authenticity

Bryman (2008) along with King and Horrocks (2010) have discussed quality assurance in constructivist research, agreeing trustworthiness and authenticity as common criteria. Trustworthiness has four elements: credibility, transferability, dependability and confirmability. From the outset, the current study planned to enhance credibility by "member

checking". The results section of this thesis underwent validation by returning it to a random selection of the participants (n=6). These participants confirmed that a recognisable proportion of what I had written reflected their understanding of the interview discussions and that what I had recorded represented a fair reflection of the comments they made. This harks back to my earlier statement on subjectivity and the need to construct an impression of the world as the participants see it, as opposed to 'revealing the truth' (Ratner 2008).

The study design has an element of integrated triangulation because paired participants give accounts of the same phenomenon (the same meetings and observations experienced between the pairings), this adds to the credibility of the study. Although the situational context of any study is unique, there is some scope for study findings to be transferable and useful to chair-side clinical learning environments in other dental schools, or in other clinical/ medical settings. Upon publication, rich detail regarding the study will be required in order that readers can assess the extent to which the conclusions drawn are transferable to their own setting. Dependability in constructivist research is analogous to reliability in positivist research. In a constructivist real world setting we cannot rely on reproducing situations as they are fluid, changeable and open to differences in interpretation between individuals. Judgements on dependability focus on how reproducible and transparent the research process has been, and whether a third party could repeat it. The current study provides details of the recruitment procedures, questions asked (appendix VIII) of the participants and analytical methods so that others could potentially replicate a similar (if not identical) study.

Confirmability is the extent to which I as the researcher have made clear my personal relationship to the research and the findings along with the contribution any of my personal views have made to the research. In this study, I have attempted to make my role and relationship to the study transparent. Although subjectivity is a key element in constructivism, details of data collection and analyses are included so that a reader is able to see how the conclusions were reached. Authenticity criteria assess the fairness of research within the constructivist worldview (Lincoln and Guba 1985, Guba and Lincoln 1994, Lincoln and Guba 2013). These criteria focus on the ability of the study to increase awareness (ontological authenticity), educate (educative authenticity), inspire change (catalytic authenticity) and empower stakeholders (tactical authenticity). This study has increased its authenticity through its intention to create opportunities for tutors to enhance their teaching skills, knowledge of teaching and potential for discussions regarding scholarly practice within the Dental School through a POT scheme. The study also aims to enable positive change in teaching-related development opportunities in the future, informed by the evaluation outcomes of the POT scheme, both at the University of Glasgow and more widely.

3.1.6 Interpretivism as a Facet of Constructivism

Interpretivism, as a worldview, argues that reality is subjective, and therefore there can be no ultimate truth, as alluded to above (McMillan 2015, Tavakol and Zeinaloo 2004, Monti and Tingen 1992, Bunniss and

Kelly 2010). Interpretive researchers assume that we can only access reality through social constructs such as language, consciousness, and shared meanings (Myers 2008). Each participant involved in the research has a unique experience and a unique subjective interpretation of that experience. Interpretivism is associated with social constructivism and rejects the objectivist view that meaning resides within the world independent of individual perspectives. With this approach, it was important for me to appreciate the differences between tutors. The interpretivist approach bases itself on naturalistic methods of data collection such as interviews. In such studies, meaning usually emerges towards the end of the research process out of findings. The tutors cannot be separated from their knowledge hence there is a link between the study participants and myself. The most important characteristic of interpretivism is that it is socially constructed and there are multiple different realities. The goal of this type of research is to provide understanding and explore meaning in the participants experience by focusing on findings that are specific, unique or unusual.

The most significant criticism about interpretivism, which often originates from a positivist stance, is the scope for researcher bias. Constructivists highlight that any type of researcher will influence their research, so rather than focusing on bias it may be more important to ensure a trustworthy account of the researcher's rationale. Another disadvantage illuminated by a positivist stance is that it is difficult to generalize findings since they are heavily dependent on personal viewpoint and values. Constructivists might

respond to this by emphasizing the importance of personal perspective in creating outcomes that are authentic and meaningful and that generalisations can be appropriate as long as caution is exercised in claiming how widely applicable any findings may be.

3.1.7 Communities of Practice

Communities of practice are groups of people interacting on a long-term basis to share concerns and increase their collective knowledge and expertise on common practices (Wenger et al 2002). Wenger described a community of practice as having three components: domain, community and practice. In the current study the domain relates to the common clinical and staff room environment the tutors have for sharing knowledge, the community provides the social structure for interactions, for many prior to the POT scheme this was developed at study days, symposia and when coming together to examine undergraduates. In this case, several communities may be seen to come together under POT, teaching staff as a whole along with purely academic staff or purely NHS tutors. The practice relates to the specific knowledge shared, developed and maintained by the community, which in this case, is in regard to chair-side clinical teaching. Li et al (2009) identified four essential functions of communities of practice. The four functions are social interaction, knowledge sharing, knowledge creation and identity building. These four functions have the potential to improve practices within the domain of health professions' education among communities of educators. I believe that provision of a

POT scheme for the clinical tutors in the dental school will act to strengthen and grow the already present community of practice. Involvement has the potential to facilitate a shift within the community to discuss teaching matters as well as issues of clinical practice.

Health care professionals often find themselves inadequately prepared for roles in teaching (Heale et al 2009, Hunt and Kennedy-Jones 2010). Compounding this situation is the need to undertake high-quality teaching and quality assurance, often explicitly required by institutional and professional bodies within a system of growing economic constraints (Ranmuthugala et al 2011, HEFCE 2017). Communities of practice encourage formal and informal learning in the workplace (Steinert 2014) and well-structured communities of practice can facilitate transformational change in the higher education sector (McDonald and Star 2010).

The concept of Communities of practice is closely linked to situated learning theory. Situated learning is an instructional approach developed by Lave and Wenger (1991). It follows the theory that there will be increased skill and knowledge acquisition if there is active participation in a learning experience (Clancey 1995). Situated learning builds on earlier theories of experiential learning and authentic learning. Chair-side clinical dentistry tuition is a situated learning experience for the students but the ability to teach in this environment also provides a situated learning opportunity for tutors wishing to develop their teaching skills. Traditional ideas of higher education learning are seen as occurring from abstract, out of context experiences such as lectures, seminars and textbooks. Situated learning, on

the other hand, suggests that learning takes place through individual relationships and their connection to prior knowledge within authentic and informal situations. Via this model, teaching skills can develop from those of beginner towards expert as they become more active and immersed in the activities of the POT scheme and its social context. POT is a vehicle to help the community of practice to mature, as the community learns through collaboration and sharing of good practice.

Situated learning theory views knowledge as being situated in authentic contexts (Wenger et al 2002), this is replicated in the observations of real practice undertaken within the POT scheme, where learning is influenced by activity, context and culture within the clinics. The theory considers the learners, in this case clinical tutors, as active participants, who learn from within a community of members (Brown et al 1989), in this case the POT scheme participants. Within this theory, the learner can move from "legitimate peripheral participation" (Lave and Wenger 1991, Wenger 1998), which includes observation and performing basic tasks, to become more skilled, in this case as they become more involved in the community and their teaching skills advance (Mann 2011). As the individual learners or tutors transform, the community changes and develops (Durning and Artino 2011, Kaufman and Mann 2014).

3.2 Methodology

The following section gives an account of evaluation research methodology used in this study.

3.2.1 Evaluation Research

The aim of evaluation research is to enhance knowledge, aid decision making and facilitate practical applications for the findings. Childers concludes, "The differences between evaluative research and other research center on the orientation of the research and not on the methods employed" (Childers and Van House 1993).

In the current POT study, the position and views of the tutors are explained through evaluation research. The research is used to enhance tutor visibility within the Dental School, explore their developmental needs and provide tutors and the school with overarching feedback on the POT scheme. The research also evaluates the impact of the POT scheme and gives evidence to support future decision making with regard to the enhancement of professional teaching practice. Research findings will enhance the position and value of these staff members with regard to quality enhancement and maximizing positive student experiences.

Wallace and Van Fleet (2001) comment that evaluation should be carefully planned, not occur by accident; have a purpose that is usually goal oriented; focus on determining the quality of a product or service; go beyond measurement; not be any larger than necessary; and reflect the situation in which it will occur. Similarly, evaluation should contribute to an organization's planning efforts; be built into existing programmes and provide useful, systematically collected data. It is important that evaluation research has a purpose and should not be an end in itself, there should be some potential for action as a result of the evaluation outcomes, otherwise it could be argued that there is no need for the evaluation. Evaluation should take into account relationships between users and organisations and could function as a communication tool between these groups. Evaluation should be ongoing and provide a continual loop of monitoring, change and improvement. Ongoing evaluation should also be dynamic with the incorporation of new knowledge and changes in the environment.

This evaluation approach is appropriate as the POT scheme has great practical significance to the development of clinical tutors teaching at the University of Glasgow Dental School. The intention of the design of this evaluation research is that the University of Glasgow and similar institutions with clinical teaching requirements will find the findings, outcomes and recommendations useful and informative, and they will lead to action. The POT literature suggests that POT can work in many settings, and this evaluation seeks to find out more about POT in this particular

study context of chairside dentistry and to improve and develop POT for Dental tutors.

As the person who set up the POT scheme in the Dental School at Glasgow, and having considered the importance of researching the scheme from its inception I was uniquely placed to evaluate the POT scheme from the start. Evaluation of the scheme was necessary to gain insight into how the scheme was operating, to understand participants' perspectives on their teaching practice and to find out what worked and what did not work. Clearly, the project aims were focused on improving teaching practice, modifying and adapting what was already occurring to enhance the success of teaching in this context, and evaluation research was considered an appropriate way of researching the scheme. Evaluation methodology was considered ideal to assess the effects of the scheme, to determine whether it works as an intervention, to gauge the benefits for participants within the community of practice and to illustrate how effective the scheme is for development of teaching practice. The ultimate aim of the POT scheme is to improve student experience; this is, however, difficult to measure as the students are not the direct recipients and participants in the scheme.

There are four recognised evaluation strategies (Trochim 2006). The first strategy is that of ‘scientific-experimental models’, here the focus is on objectives based research, it concerns itself with impartiality and objectivity and as such does not really fit with the overarching methodology of

constructivism adopted for this study. The second strategy is the 'management-oriented systems model'; these models are used in business and government where evaluation tends to sit within a larger framework. The third section of strategies is the 'qualitative/anthropological models'. These models aim to retain the phenomenological quality of the evaluation context and value subjective human interpretation within the evaluation process. This strategy fits well with the current study. The fourth group of strategies are the 'participant-oriented models', where importance is placed upon the evaluation participants , in this case the users of the POT scheme and the stakeholders in managerial positions, so again this model fits well. The current study uses a blend of the third and fourth strategies described.

Evaluation research can be further subdivided into formative and summative (Trochim 2006). Formative evaluations strengthen or improve what is being evaluated; this is reflected within the current study, as it is via the findings that I aim to provide improvements to the current scheme. The current study can, however, also be seen as summative evaluation of the first main stage of implementation of the POT scheme as it examines the outcomes, effects and impact of the newly established POT scheme.

The steps in performing evaluation research (Northwest, Centre for Public Health Practice 2017) are to engage the stakeholders, describe the scheme, focus the evaluation design, gather credible evidence, justify conclusions, ensure use and share lessons learned.

As the current study looks at the set-up and administering of a POT scheme as well as researching its impact, I have also provided some process evaluation. Analysis will show variations in the way the scheme is conducted away from the suggested process given in the guidance. This analysis may highlight strengths and weaknesses in the current scheme regarding its functionality. Process evaluation is probably the most frequent form of evaluation (Weiss 1998) and looks at what a programme actually does (Rossi et al 2004).

Qualitative evaluation is appropriate when the phenomena under investigation cannot be quantified and more attention needs to be given to subjective issues such as human experience and behaviour (Powell and Connaway 2004). Qualitative methods allow research to be dynamic and adaptive with an understanding of specific context and history. It also allows an element of flexibility to account for unpredicted occurrences. Qualitative methods are also very labour and time intensive with regard to data collection and analysis. Human experience and behaviour figure largely in this current study and this explains the qualitative nature of the evaluation study.

3.2.2 Judging the Effectiveness of the POT Scheme

Output or performance measures serve to indicate the accomplishments of programme activity and thus warrant consideration as a type of evaluation

research. Such measures in this study focus on the effectiveness of the POT scheme to provide professional development in relation to teaching knowledge, skills and techniques along with raising the profile of scholarly activity for this group of chair-side clinical tutors. Concepts such as teaching excellence are very challenging to measure (as seen in recent critiques of the UK Government's introduction of TEF), and indeed the use of a social constructivist framework in this study leads us to talk more about making judgements and interpretations of the outcomes of the POT scheme rather than measuring outputs. Tutor satisfaction with involvement in the POT scheme might be considered a performance measure. However, this is judged in this study through tutors self-reporting of the impact on their knowledge and practice.

The main measurement in this current study is of the impact of the POT scheme in its ability to benefit the professional development of the tutor group. Impact is judged directly in a qualitative manner, through its effect on participants and by analyzing perceived and actual changes to knowledge and teaching practice following involvement in POT and enhancement of the current community of practice.

Impact in this study has several different elements. The cognitive impact deals with new knowledge and changed ideas about teaching. Affective impact accounts for the sense of achievement following participation in

POT, the increase in tutor self-confidence this eventually brings, and the sense of accomplishment a tutor feels when they change teaching techniques and reap the rewards of their labour. This is against a backdrop of challenges in organising the sessions, logistical issues and the costs incurred in some situations where travel was involved.

3.2.3 Planning the Evaluation Study

Evaluation should be part of an organisation's overall planning process for the achievement of specified goals and objectives. In this case, the objective is to enhance professional development in teaching amongst chair-side clinical tutors throughout the Dental School. I received anecdotal information suggesting that opportunities for professional development in teaching were lacking for some tutor groups. Introduction of a POT scheme was intended to offer an authentic means of providing professional development but evaluation of the scheme was required to determine its effectiveness. The first step in planning the evaluation was the set up and introduction of the scheme itself. The next step in the process was to formulate the focused research questions for the evaluation.

Wallace and Van Fleet (2001) suggest the following set of questions to aid researchers in the planning of an evaluation study, these were all considered at the outset of the present study. The first question is "what is the problem"; in this case, there was a general feeling that some clinical tutors

teaching on the BDS course were unsupported in the scholarship of teaching and learning. The second question is, “why am I doing this”, I had the opportunity to look at this as a field of study that would hopefully have the consequence of raising teaching standards within my work setting at the Glasgow Dental School. The third question, “what exactly do I want to know”, I wanted to know if the introduction of a POT scheme was feasible and acceptable to the participants. I also wanted to know what impact the scheme would have on the tutors and their teaching. The fourth and fifth questions, “does the answer already exist”, and “how do I find out”, was investigated in the literature and although information was forthcoming it did not satisfactorily answer the question in relation to chair-side teaching of clinical dentistry. The sixth question is, “who is involved”, in this case the clinical tutors, their managers and the students they teach. The next question considers, “what is the cost of doing this”, at an early stage of the approval process I held a discussion regarding financial implications with the relevant managerial staff. The penultimate question is ,”what will I do with the data”, and clearly it is being presented to the clinical teaching community as a paper but was also intended to inform institutional efforts to enhance support for teaching, and ultimately the quality of teaching, as well as being disseminated to participants with the hope of potential further developments to the scheme. The last question to ask prior to an evaluative study is, “where do I go from here”, and in this case, this will be the key findings and conclusions arising from this PhD thesis.

3.2.4 Conducting Evaluation Research

Trustworthiness and honesty are the essential elements to which data collection in a qualitative study must adhere. The trustworthiness of data collection (material collected on interview) in this study was affected by factors such as:

1. Inconsistent data collection techniques (a semi-structured question guide helped to reduce but not eliminate variation).
2. Role of the interviewer, (a statement was made at the beginning of each session to allay any preconceived ideas the participants thought the interviewer may have and during the interview I was careful not to express my own opinions).
3. The data collection setting (there were a few issues surrounding data collection, which are discussed elsewhere but the intent was to provide a consistent and conducive environment for each interview).
4. Behaviour of human subjects (clearly a major part of this study is looking at the thoughts and behaviours of the tutors).

It was complex to introduce different methods of data collection in this study although interviewing did include two accounts of the same experience. Tutors were allocated into pairs who observed each other teaching and provided a critique, so although they were interviewed for this study separately they gave accounts of the same interactions albeit from a different perspective.

"The aim of analysis is to convert a mass of raw data into a coherent account… process them and make sense of their configuration. The intent is to produce a reading that accurately represents the raw data and blends them into a meaningful account of events".

(Weiss 1998)

Questions asked of the data must be closely related to what is being evaluated and can involve strategies such as describing, clustering, comparing, finding commonalities, ruling out rival explanations, and telling the story. In a qualitative study, the data analysis is typically concurrent with the data gathering (Patton 1987).

3.3 Methods of Data Collection

This section first describes the preparation and instigation of the POT scheme followed by the methods of data collection used in its evaluation.

3.3.1 Setting and Sample

Figure 3.2 provides a broad chronology for the study detailing the order in which information interventions, stakeholder conferences, ethical considerations and data collection were carried out.

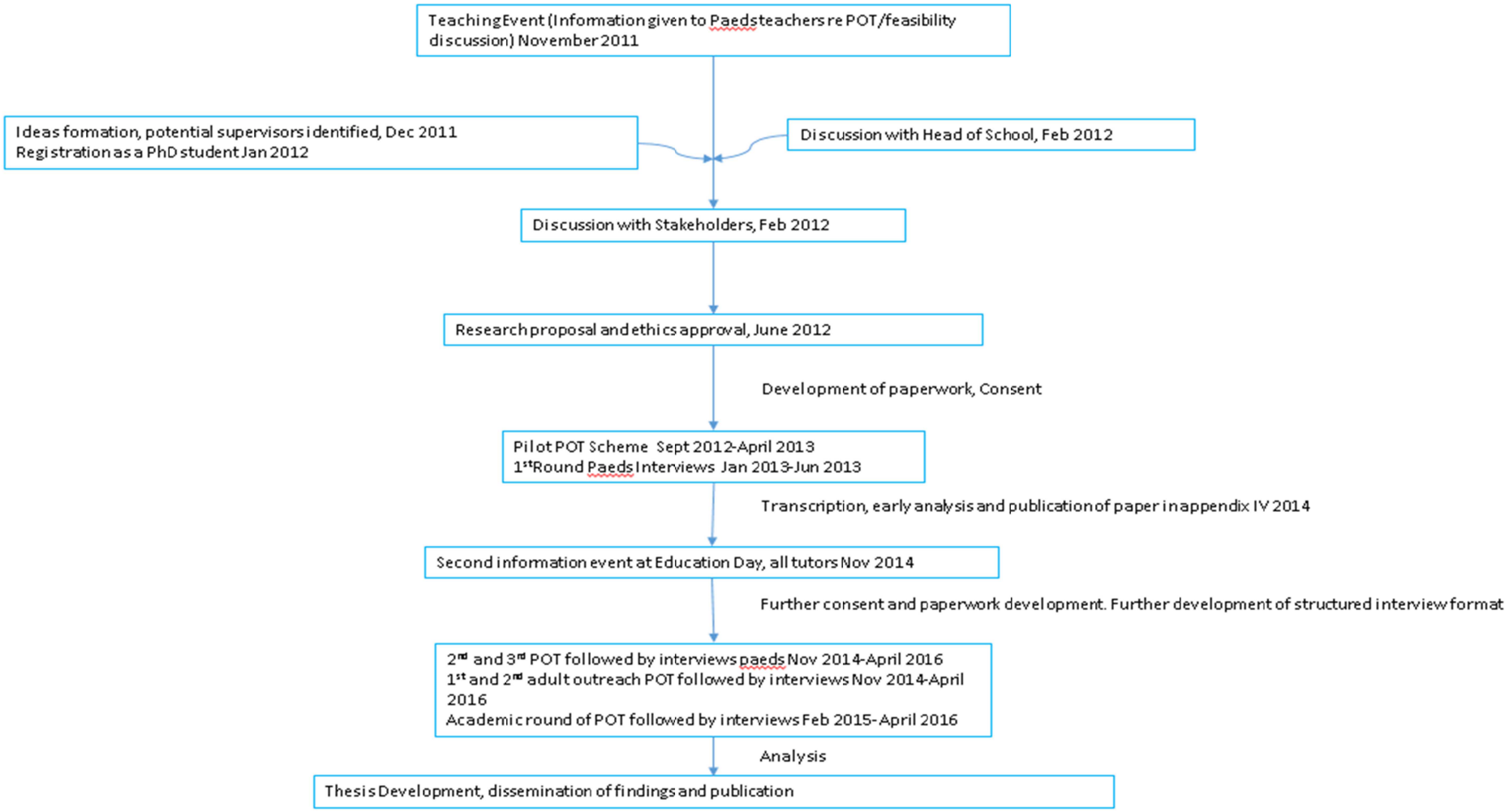

Figure 3.2- Study Chronology

3.3.1.1 Engaging Stakeholders- Permissions

In the first instance, I had a private discussion with the Head of School to gauge support for the POT scheme and its evaluation. This meeting also included discussion about the level of commitment this research would require from me while still providing my full time duties as a Senior Clinical University Teacher and Honorary Consultant in Paediatric Dentistry. No financial assistance or protected time was offered but there was agreement that I could carry out the project.

As described in chapter 1, relevant permissions from managerial stakeholders were required to set up a new POT scheme involving University of Glasgow and NHS staff. These managers included the Clinical Directors of the five health board areas where undergraduate teaching took place. Initial discussions were face-to-face with key senior managers, focusing on introduction of the scheme and its evaluation. The Head of the Dental School was also present at this meeting. I sent a formal letter, following the meeting, to each of the Clinical Directors asking for evidence of their support in writing as either a letter or email. All relevant NHS managers granted permission in writing. On a case-by-case basis, travel expenses incurred by participants during the POT scheme were considered by their local manager.

The College of Social Science Ethics Committee at the University of Glasgow, provided ethical approval for the evaluation research planned for the POT scheme as presented to them via the study proposal (appendix IX).

3.3.1.2 Engaging Stakeholders- Recruitment

The participants were the next major group of stakeholders. The initial pilot rounds of participants recruited were paediatric dentistry tutors. This group had attended a study day event focused on POT which I had organised in conjunction with the University's Learning and Teaching Centre. After the results of the pilot were analysed and published (appendix IV) findings were used to inform modifications to the semi-structured interviews with additional questions designed to explore emergent themes. Prior to further recruitment and expansion of the scheme, I introduced the concept of POT to the wider group of tutors during an annual “Education Study Day” held at the Dental School. This wider group included the outreach teachers and academic staff from the adult restorative department (N=43). I followed this up with an email to all participants (paediatric and adult restorative) where I gauged their interest in being involved with the POT scheme and its subsequent evaluation. When interest was demonstrated (N=38) a follow-up email was sent containing; the consent form (appendix X), plain language statement (appendix XI), Guidance for Participants document (appendix I), and Time log explanation and example (appendix III). Participant information explained their role in the research along with any associated risks and benefits of involvement. I offered tutors the opportunity to join

the scheme without being involved in its evaluation if they wished (all were happy to be involved in evaluation). I informed those who did participate that they could leave the evaluation process at any time. I did not pursue participants who failed to reply. Participants gave consent for digital recording of their interview(s) and permission for the publication of results from the study with an assurance that any references to participants' responses would be unidentifiable. I asked participants to download and print a consent form from the information email; these were signed and returned in hard copy format to me.

The consent process involved explaining the ‘purpose and details’ of the research process so that participants could ‘decide in a conscious deliberate way’ if they wished to take part (Ritchie and Lewis 2003). I assured potential subjects that their participation and responses were confidential. I reiterated the consent process, with each participant, on the day of his or her interview(s). Transcripts and recorded information were stored on a secured drive following the University of Glasgow Data Protection Policy.

Recruitment for the initial round of observations involved tutors teaching chair-side Paediatric Dentistry. This first round of observations formed a pilot scheme (Cairns et al 2013, appendix IV) and its results are included in the main body of work presented. Information from the pilot study was influential in development of the evaluation design moving forward. It raised previously unconsidered issues regarding standardization of teaching, inaccuracies in teaching content and development of clinical skills via

observation of others. The pilot concluded that POT was a beneficial process, reassuring tutors regarding their teaching style and supplying ideas to adapt their teaching. It also found POT to be an effective method for engaging chair-side clinical tutors in reflection for the purposes of professional development. Adaptations to the interview question guide were made following this initial stage of the research, to include deeper discussion about who is a 'peer', trust, and the usefulness and ability to have informal conversations about teaching.

In expanding the scheme from this initial pilot study group of paediatric tutors, there was an opportunity for me to be involved in a POT pairing. Although I had taken part in several observations prior to the current scheme as part of the University of Glasgow's Postgraduate Certificate in Academic Practice (PGCAP) it was important for me to be a part of the scheme if it were to involve all clinical tutors in the Dental School. My participation also opened up an insider view of the POT scheme. Although I participated in a pair for one cycle of interviews, I did not include myself in the total participant number and my thoughts on the process were not added to the raw data.

3.3.1.3 Describing the POT Scheme- Pairing of Participants

During the first round of interviews with paediatric dentistry tutors I was in a position to oversee the pairing of the participants and to personally

provide cover for clinics to allow participants to leave their scheduled clinic and attend a clinic to observe their peer delivering teaching. I was happy to provide this service in order to launch the scheme and overcome some of the practical challenges of setting up a clinical POT scheme, in the knowledge that this arrangement would be untenable in the long term. Allocation of a considerable amount of my research time was required for this purpose. For these initial pairings, peer allocations were decided by the logistics that offered the greatest convenience. Some of the later pairings were also allocated in accordance with convenience (although this did not require 'cover' from me), whilst others chose to self-select partners. Having sections of centrally paired participants alongside pairs who had self-selected their POT peers afforded the possibility to explore the advantages and disadvantages of each mode of setting up pairings.

3.3.1.4 Describing the POT Scheme- Development of Guidance Documentation

The Glasgow Dental School POT scheme was informed by the peer review model outlined by Gosling (2002). Here teachers observe each other in a reciprocal process. Judgement criteria were not externally set but rather based around a set of mutually agreed areas for exploration (Ewens and Orr 2002). Written guidance documentation was provided (appendix I) to ensure that all tutors were aware of how the scheme was to be conducted and had details of their own specific roles. Once paired, the participants arranged a pre-observation meeting with their peer. I suggested that meetings take place face-to face but failing that participants could

communicate online or via telephone. The purpose of the discussion was to set mutual ground rules for the observations. Some discussions included sensitive issues such as trust and confidentiality and all dealt with logistical arrangements. I suggested that some tutors may already have concerns over certain aspects of their teaching or have previously identified areas they would like to develop, and that they may wish to draw their observer's attention to these aspects for consideration during the observation. During the observations, the observing partner was to maintain a 'fly-on-the-wall' status but was welcome to take notes and use the time log provided if they wanted to. Guidance notes provided the observer with a list of possible elements of teaching practice to consider during the observation. Further instructions included seeking informal consent from patients, and informing students why there was an observer in the room. Those under observation were to conduct their clinical teaching session in the usual manner. There was then a reciprocal observation arranged in another clinic session with roles reversed. A 'post-observation meeting' occurred as soon as practical following both observations. I suggested that this meeting should not take place immediately after the last observation as participants needed time to collect their thoughts, reflect and construct feedback for their peer; this was unfortunately impractical in some circumstances and some pairs met immediately following the second observation. The final part of the process, after the post-observation feedback had taken place, involved further self-reflection and instigation of any changes and developments planned for future practice.

It was important to emphasise that the guidance notes given were not prescriptive and were not a list of what constitutes a good teacher. Rather, the guidance outlined useful elements of a teaching approach such as the setting of learning objectives, testing student understanding, tutor-student interaction, management of the student-patient relationship, questioning and use of resources, feedback, facilitation of student reflection and setting future goals.

3.3.2 Data Collection Methods- Interviews

The current study needed flexibility for in-depth exploratory questioning which allowed deviation from an agreed script enabling participants to express their different perspectives of the POT scheme and to enable the interviewer to respond to new ideas and experiences as they emerged. Likewise, it required scope to explore salient tangents emerging during the conversations (Gill et al 2008) whilst maintaining elements of focus and reproducibility. As a pre-determined research question required an answer, semi-structured interviewing appeared to provide the flexible middle ground appropriate for this study. Semi-structured interviews allow new questions to develop from the dialogue, but skilled interviewers must be aware of not allowing overall focus to slip (Crabtree and Miller 1999). The iterative nature of the qualitative research process in which preliminary data analysis coincides with data collection often results in altering questions as the researcher learns more about the subject. Questions are excluded if they are not effective at eliciting the necessary information and new ones added.

Digression from the planned questions can be productive as they follow the participants' interest and knowledge (Johnson 2002). Semi-structured interviews are often the sole data source for a qualitative research project as was the case in this study.

An in-depth interview is a 'personal and intimate encounter' with an individual, using questioning to obtain 'detailed' experiences (DiCicco-Bloom and Crabtree 2006). In-depth interviews are required for thorough exploration of participant perspectives and hence suited the context of this study, interpretation and analysis of conversations was my remit as principal researcher (Warren and Karner 2005). In this study, I undertook in-depth, semi-structured interviews on a one-to-one, face-to-face basis.

3.3.2.1 Gathering Credible Evidence- Development of Interview Questions

Interview question guides were constructed and influenced by; the literature; my personal worldview; and my conceptual framework. The questions were adapted and refined as the evaluation proceeded, informed by the participant responses to the pilot study and subsequently to responses given by interviewees as the research progressed. Question guides are important as they ensure coverage of important areas and provide an aide memoire for the interviewer. The semi-structured question guides, based on the research questions, employed plain language and open-ended questions (Gill et al 2008). The questions first explored how the participant perceived

the POT process, then moved on to ask about participants' feelings in relation to what they had experienced, and what impact the scheme had on their professional development as a chair-side clinical tutor. Probing questions and prompts allowed more in-depth exploration of issues. This 'funnelling' approach to the nature and order of questions allowed progressive narrowing of focus and aided clarification of important points (Tracy 2013). It was important to have reflexivity in the design of the project, allowing time to analyse the unfolding information and modify questioning in order to explore emerging themes.

3.3.2.2 Gathering Credible Evidence- Interviews

I conducted the interviews over the 2 years from March 2012 until May 2014. This allowed participants to be interviewed up to 3 times (once per academic year) see figure 3.2. Thought was given to finding appropriate locations for the interviews but as I travelled to all the external locations this was largely dictated by the participants and available space at their place of work. I made several trips to Kilmarnock, Coatbridge, Paisley, Dumfries and various locations within Glasgow. Fortunately, during a work related trip, the participant based in Campbeltown was available for interview in Glasgow. Ideally, meeting locations were private, quiet, easily accessible and convenient to participants. Unfortunately, two of the interviews recorded were in an office outside an operating theatre with multiple interruptions.

At the start of each interview, the confidential nature of interviews and the sensitive way in which any disclosure would be handled, was re-emphasized. It was important that the participants felt comfortable to speak openly about information that could potentially portray himself/herself, their peer colleague or the Dental School in a negative way. It was important that participants should not feel that disclosing their views would place them in any form of jeopardy.

The traditional view of an interview is where knowledge passes from the interviewee to the interviewer; they are distinct entities interacting by means of structured interrogation only (Grbich 2004). In contrast, within a constructivist framework the interview is considered a multifunctional conversation with fluidity and adaptability as the interview progresses. From this theoretical stance, interviewees are not passive holders of knowledge and researchers have a larger role to play than just asking questions (Mann and McLeod 2015). From a constructivist worldview, a participant does not 'contaminate' the data, as there is no correct answer; participants add to and build knowledge. Identifying the range of meanings and ideas shared by participants is critical from a constructivist perspective (Gubrium and Holstein 2003).

Previous authors have discussed the need to rapidly develop a positive relationship with the interviewee at the start of an in-depth interview (Palmer 1928, Douglas 1985). Rapport involves trust and respect for the interviewee and the information they are willing to share. It is important to develop a safe and comfortable environment that will allow the interviewee to talk about their personal experiences and share their true beliefs and attitudes. I was able to gain a conducive rapport more easily with some participants than others. On two occasions, I felt there was failure to achieve an in-depth understanding. In the first of these, the participant seemed particularly negative and dismissive about all aspects of the project but was not forthcoming about their reasons for this. In the second case, the participant appeared rushed and distracted because of other issues affecting their day (this participant became more animated during a second

interview). Descriptions of the stages of rapport during an interview are initial apprehension, exploration and cooperation followed by participation (Spradley 1979, Briggs 1986). The goal during the 'apprehension' phase is to settle the participant and get them talking, during this phase I focused on asking demographic questions and about their journey to becoming a chair-side clinical tutor. Following this, I asked the first pre-determined questions from the interview guide. It was important during this phase not to lead the participant, through word choice, to give a false representation of themselves. We reached the 'exploration' phase when the participant became engaged in in-depth descriptions; during this phase, I predominantly listened. We reached the 'cooperative' phase when the participant became so comfortable that they were willing to state their true thoughts and opinions even if that potentially meant offending others. Then during the final 'participation' phase, the participant would happily correct me when I did not seem to be expressing the correct understanding of what they were saying when looking for clarification.

I was in a position to provide refreshments during some of the interviews. Interview question guides were committed to memory as much as possible to allow maximum eye contact with the participant during the interview, thus facilitating a casual and free flowing conversation. Audio recording of the interviews also enhanced the ability to maintain eye contact, reducing the need to make copious notes during the discussion. Audio recordings

also allowed for an accurate representation of the interview for later analysis.

Through engagement in reflection, modification of the question guide followed each interview where there emerged a new theme warranting exploration. Participant factors and time available generally determined the interview length. Interviews lasted an average of 40 minutes. In line with ethical considerations, the digitally recorded data was securely password protected and subsequently destroyed following transcription and analysis. Field notes were written-up immediately after each interview as a method of enhancing reflection. I created a log of observations and thoughts from the data collection sessions to assist in future interviews and in later writing and analysis.

Along with one hired assistant, I transcribed the audio data verbatim. There was some difficulty in capturing the spoken word due to occasional broken sentence structure, use of quotes, colloquial language and missing words (something that is acknowledged as a challenge within the literature (Meadows and Dodendorf 1999). Spoken sentences tend to run-together so the transcriber has to decide where to punctuate when moving to written text. The use of a comma or full stop in the incorrect location, however, can change the entire meaning of a sentence. With this knowledge, I checked

the audio recording alongside the transcriptions received from the assistant to ensure the appropriate meaning was attributed to the written text.

3.4 Analytic Approach

Qualitative data analysis transforms the data from raw form to explanations, understanding and interpretations (Ritchie and Lewis 2003). There are many different approaches to qualitative data analysis and these have been widely debated in the literature (see for example Bryman et al 1994, Coffey et al 1996, Dey 1993, Mason 1996, Miles et al 1994, Silverman 1993, Strauss 1987). For example, Mason (1996, p.54) outlines three possible approaches labelling them "literal", "interpretive", and "reflexive". The first approach is an analysis process that focuses on, for example, the exact use of particular language or grammatical structure. The second approach is concerned with making sense of research participants' accounts, so that the researcher is attempting to interpret their meaning. Finally, the reflexive approach attempts to focus attention on the researcher and her or his contribution to the data creation and analysis process. Whichever of these three possible approaches is taken by researchers they face a choice of using either manual and/or computer assisted methods in their data analysis with the advantages and disadvantages of both.

3.4.1 Computerised vs Manual Data Analysis

Tesch (1989) noted some time ago that using a computer to facilitate analysis could save time, make procedures more systematic, reinforce completeness and permit flexibility with revision of analysis processes.

In this study, I used NVivo version10. NVivo is software that supports qualitative research, its design helps the researcher to organize, analyze and find insights in unstructured or qualitative data such as interviews. Choice of this package was to maximize available time, aid management and ease navigation through the data. It also helped to identify connections in the data. The researcher creates 'nodes' within the NVivo program. Nodes contained the 'codes' attributed to more traditional methods of interview analysis. Nodes allow the researcher to gather related material in one place; this allows identification of emerging patterns and ideas. In this study, the nodes were then organized into themes.

Using software in the data analysis process can potentially add rigour to qualitative research (Richards and Richards 1991). This was my experience in this study when, for example, using the "search" function in NVivo to find out how many participants without a teaching qualification felt "reassured" by the POT process. However, in terms of interrogating the text for multiple synonyms in more detail, I found the package offered little (an

experience also noted by (Brown et al 1990). Again for example, when manually interrogating the data, participants discuss reassurance in different terms like, “I realized I was like everyone else”, “it made me feel better about what I had been doing”, “it (the POT process) showed me I’m normal”. Clearly, using the search function in NVivo would not have located all the relevant data although manual coding of the text and requesting a “node coding report” did help with this. Manual scrutiny of text is clearly also essential and has the benefit of the researcher becoming more familiar with the data (Dey 1993), although it is slow and open to human error.

When interrogating codes and creating new nodes with each question I asked of the data set in NVivo, it was important to stop and think about the possible thematic connections, because the software makes answering these questions quick and simple it is easy to lose track of where the research is going. More codes and nodes do not necessarily contribute to a better understanding of the data, although, previous authors have suggested that in using computerised methods researchers may feel more confident in interpreting and presenting the data (Hinchchliffe et al 1997). It is much easier to code text on a screen than it is to cut and paste bits of paper, particularly in large scale studies, so (Smith and Hesse-Biber 1996) argue that computerised methods have great power as an organizing tool. In order to maximize the advantages and disadvantages of both methods of data

analysis, computerized and manual, it is important to blend them and use the best features of each.

3.4.2 Thematic Analysis- creating the themes

Thematic analysis was identified as the most appropriate method to analyse the data. There is widespread use of thematic analysis for handling qualitative data; its purpose is to identify patterns of meaning across a dataset that provide an answer to the research question being addressed. Themes emerged from grouping lower-level data points;

> **'**capturing something important about the data in relation to the research question, and representing some level of patterned response or meaning within the data set'
>
> (Braun and Clarke 2006).

In thematic analysis, themes can be identified deductively from the 'top down', or alternatively in an inductive or 'bottom up' manner. Induction in qualitative research 'looks for patterns and associations derived from observations of the world'. In contrast, deduction 'generates propositions and hypotheses theoretically through a logically derived process' (Ritchie and Lewis 2003).

Analysis informed by 'Grounded Theory' was given some consideration; this is an inductive form of theory development first described by Glaser

and Strauss (1967). At that time, theory development was mostly decided before collecting and analysing.the data. Glaser and Strauss argued for an alternative approach, one involving theory development connected to the data collection and analysis process. Many qualitative Data Analysis Software Packages claim a basis in grounded theory (Welsh 2002) and there already was an intention in this study to use computer software. However, I rejected using a strictly Grounded Theory approach, as there has been a significant volume of work already completed on POT for different groups and settings so it would be difficult to assume no existing theory in this area prior to the research. It would have been difficult not to have a pre-existing conceptualisation of themes that would emerge, and indeed shaping of the research question already identified certain themes and areas of practice considered important for exploration.

The qualitative process in this study combined deductive elements, in utilising the research questions outlined as key areas of exploration and potentially some of the key themes to focus upon, but also inductive elements in allowing other themes and subthemes to emerge from the data as analysis progressed.

3.4.3 Framework Analysis

It is important that qualitative research and data analysis be conducted in a manner that is thorough and transparent (Crawford et al 2000, Seale 1999). I identified Framework Analysis as a methodological tool to undertake thematic analysis (Ritchie and Spencer 2002). Ward suggests that framework analysis is sufficiently rigorous for use in healthcare research (Ward et al 2013). Analysis occurs 'iteratively and concurrently' with data collection. This assisted in further sampling and guiding of the content of questions (DiCicco-Bloom and Crabtree 2006).

Framework analysis is a matrix-based method of analysis that organises key data into a distinct unique set of themes and categories, subdivided into subthemes. This method allows for transparency and systematic conducting of the five different stages involved (see Table 3.1 below), with the advantage that the links with raw data are maintained (Ritchie and Spencer 2002). The right-hand column in table 3.1 identifies how the five steps are used in this study. These were not separate discrete stages, but rather a continuous process.

STEP	DEFINITION (adapted from Ritchie and Spencer, 2002)	UTILISATION IN THIS STUDY
1.Familiarisation	Gain overview of data by immersion in the data. Several readings to consider reflexivity.	For me this included participation in the interviews as well as transcribing and re-verifying transcription performed by an assistant. Hand coding using marginal notes and reflective log to gather early ideas and links to theory.
2.Identifying a Thematic Framework	Filtering and early classification of data	Manual coding of a randomly selected transcript for identification of main concepts and primitive 'codes'. Calibration with regard to codes alongside 2 supervisors. All coding independent. Additional codes added after analysis of further transcripts where appropriate.
3.Indexing	Draft framework re-applied to data	Initial codes identified and transcripts electronically coded in NVivo.

4.Charting themes and subthemes	Summarising data, abstraction and synthesis	Data summarised into condensed sections or 'nodes'.
5.Mapping and Interpretation	Reorganising and synthesising data set as a whole, ensuring appropriate context	Initial themes further condensed into higher-level themes, following consideration of key points for each research question. Comparing patterns across and within themes.

Table 3.1 - Methodology of Framework Analysis

3.5 Reflexivity and My Role as a Researcher

My view is that teachers improve their teaching skills by watching peers teach, engaging in conversations about teaching and becoming more self-aware and reflective with regard to their personal teaching practice. In other words, they construct their views of teaching as well as their teaching practices through interaction with others and the world around them. These opportunities are often provided through PGCAP programmes, but many NHS staff do not have access to this support for teaching. This perspective takes into account the unique nature of these chairside clinical environments and acknowledges that the majority of the tutors involved have no training in teaching skills. The setting and participants provide a departure from the bulk of what is already known about POT schemes from within the literature. It was also part of my initial worldview that teachers with a PGCAP and those who are in Senior Academic positions would be in an ideal place to nurture the professional development of untrained tutors. I also believed that due to the reciprocal nature of the POT scheme, those with PGCAPs and senior experience would also reflect, learn and develop from their interactions.

With me as the researcher having so much subjective association with the study, it was important to build reflexivity into the research process. Positivism informs many research projects where the data and the researcher are considered to be separate entities rather than interdependent, interconnected elements. In contrast, constructivist studies recognise that no

method of data collection can be considered neutral as it carries the epistemological, ontological and theoretical assumptions of the researcher who developed it, and in turn, the assumptions of the researcher subsequently using and interpreting information from its use (Alversson and Skoldberg 2000). In order to recognise that the researcher influences what comes out of the research it was essential for me to account for my effect on the study, this is termed reflexivity.

In this study, I regularly considered my role as a tutor within the community of practice, within the POT scheme and as the researcher. Reflexivity required that I give an honest account of how I interacted with the participants before, during and after the fieldwork interviews as well as when interacting with and preparing the collected data. It was important to realise that my approach to data analysis could be either hindered or enhanced due to my role as a clinical tutor within the community of practice. Within social science, reflexivity highlights that the meaning of knowledge is something we make rather than find. Scholars recognise the importance of being reflexive about how we interpret data, our role in the analytic process and the pre-conceived ideas and assumptions we bring to the analysis (Devine and Heath 1999). Reflexivity is considered in the literature mainly as a focus for interpretation of data with previous authors considering factors such as differences in gender, race, class and sexuality as potentially having an effect on how the researcher interprets the participants' responses (Cotrell 1992, Song and Parker 1995). Other authors however, have considered the difficulties and influences exerted by the

researcher during the actual collection of the data (Mauthner and Doucet 2003). The need to recognise the researcher's subjectivity and hence the need for reflexivity has been recognised by sociologists, anthropologists and philosophers alike (Denzin 1997, Rosaldo 1989). To maximise reflexivity researchers are encouraged to reflect on their interpretations and indeed, I kept a reflective log during this study in order to help me become more aware of my decisions throughout the research and to demonstrate and justify conclusions. Alvesson and Skoldberg (2000) describe the four elements of constructivist reflexive research practice. The first element is interaction with the concrete materials collected such as interview transcripts and field notes. The second element is interpretation; this involves thinking critically about the ways in which the researcher is making sense of the data. Accounting for social issues and power, the third element is critical interpretation. The fourth element is reflection on text production and language use. Here the researcher should think critically about questions of ownership. Who owns the knowledge under construction? Who has the authority? Who determines which voices we hear? These questions require the researcher to make decisions that determine the direction and outcomes of the research study in keeping with a constructivist approach.

3.6 Chapter Summary

This chapter has provided detail of the formulation of the research question along with the necessary groundwork required to set up a POT scheme and its subsequent evaluation. The study accounts for; ethical considerations;

stakeholder factors; the role of the researcher; the role of the institution; and logistics. I have described a philosophical world-view within the parameters of constructivism and its associated theoretical stance that has provided an overarching framework for the research. The chapter outlines how this world-view has shaped decisions made with regard to conduct of the research, data analysis and findings presented. The next chapter will present findings from the study that focus on participants' views of the POT process.

CHAPTER FOUR: THE PROCESS: RESULTS AND DISCUSSION

Peer observation of teaching is not a new concept. The literature review chapter demonstrates its wide use throughout higher education. What is unique in this study is the establishment of such a scheme for the teaching of chair-side clinical dentistry within a dental school, including its remote outreach facilities, and examining its influence on clinical tutors. This research examines the experiences of tutors with a traditional academic background alongside a cohort with no teaching background or formal qualifications.

The complexity and challenge of peer observation in this clinical setting should not be underestimated. The vast majority of POT studies focus on appraisal of lectures and seminars in situations where the tutor is clearly 'performing'. Observation of clinical supervision and individual conversations between tutor and student is much harder to observe (Gosling 2002) and more delicate to critique.

Chapter 3 discussed the establishment and setting up of the POT scheme. In this and the following chapter, I focus on the results and discussion. As mentioned in the methodology chapter an attempt was made to verify the dependability of the study by having some randomly selected participants (N=6, participant numbers 2,3,11,15,22,37. See table 4.1) confirm that these findings were consistent with at least some of their own personal

views and recollections of the interviews to which they were party. I argue, with use of the collated evidence, that POT is an authentic, acceptable, pragmatic and practical way to develop clinical chair-side teaching skills. I also argue that evidence here highlights the value of postgraduate teaching courses, with individuals who have obtained a qualification being in a much better position to facilitate scholarly discussion and dissemination of good practice. I will discuss the limitations of POT for clinical tutors and its potential for propagation of poor practice. Is there danger in allowing untrained tutors to try to make sense of their teaching skills without expert oversight?

The first section of this chapter provides demographic information to help give scale and context to the scheme. The second section deals with the POT process and its practical acceptability for the participants. In the next chapter, I describe the impact of the scheme on its participants and on the dental school as an institution. I also consider the value of formal teaching qualifications within the POT setting, the limitations of the scheme and possible alternatives before providing details of the participants reflection on the POT process overall.

4.1 Demographics and Motivation to Teach

This section is offered to bring context to the study. The section gives information about the study participants, the clinics they teach in and the personal motivations to become clinical tutors.

4.1.1 Personal Demographics

Demographic information was collected for each participant who was then randomly allocated an identification number for the purposes of the study. Table 4.1 shows gender, current professional job designation, years since obtaining their BDS qualification and whether or not they had obtained any formal teaching qualifications. The table also shows total years teaching and number of teaching sessions per week.

ID Code	Gender	Designation	Years BDS	Teaching Q or E	Teach Years	Teach Sessions	Interviews
1	F	PDS	30+	No	8	6	2
2	F	HDS	14	PGCAP (O)	5	1	2
3	F	Senior Uni	17	No (E)	8	2	2
4	M	GDP	30+	No	10	4	1
5	M	PDS	29	No	6	9	2
6	F	PDS	21	No	7	4	2
7	M	Jr Uni	4	PGCAP (O)	1	1	2
8	M	PDS	30+	PGCAP (O)		9	1
9	M	Senior Uni	30+	No (E)	23	3	1
10	F	Senior Uni	9	PGCAP	7	1	1
11	M	Senior Uni	17	PGCAP	11	4	1
12	M	Senior Uni	19	No (E)	11	3	1
13	F	Jr Uni	5	PGCAP (O)	2	2	1
14	F	Senior Uni	12	No	12	4	1
15	M	Senior Uni	30+	No (E)	17	7	1
16	M	Senior Uni	26	PGCAP (O)	7	5	1
17	M	PDS	27	No	3	10	1
18	M	PDS	13	No	6	5	1
19	F	PDS	22	No	4	2	1
20	M	PDS	23	No	10	7	1
21	M	PDS	23	No	3	8	1
22	M	PDS	29	No	8	1	3

23	F	PDS	17	No	6	2	3
24	F	PDS	19	No	6	1	1
25	F	PDS	30+	No	8	3	1
26	F	PDS	8	No	3	2	2
27	M	PDS	8	No	2	2	1
28	M	PDS	10	No	8	2	1
29	M	HDS	14	PGCAP(O)	2	1	1
30	F	PDS	9	No	5	2	1
31	F	Senior Uni	24	No (E)	20	3	1
32	M	GDP	10	No	1	9	1
33	M	PDS	30+	No	6	8	1
34	F	GDP	30+	No	1	2	1
35	F	PDS	30+	No	4	2	1
36	F	PDS	8	No	2	1	1
37	M	PDS	16	No	5	1	1
38	F	PDS	10	No	5	1	1
	Total Interviews						49

Table 4.1- Study Participants Demographic Information

Key:

M- male

F- female

PDS-Public Dental Service (NHS staff funded to teach via NES)

HDS- Hospital Dental Service (staff undergoing NHS speciality training who wanted to add teaching to their portfolio- no direct funding to teach)

Senior Uni- ACT D funded Honorary Senior Clinical Teacher, Senior Clinical University Teacher, Senior Lecturer or Professor

Jr Uni- Clinical Lecturer

GDP- visiting General Dental Practitioner

PGCAP- Postgraduate Certificate in Academic Practice

PGCAP(O)- as above but indicating that this period of study was ongoing at the time of the evaluation not completed.

(E)- clinical academics with at least 8 years of experience as a senior academic with a role in in undergraduate teaching but without a teaching qualification

4.1.2 Clinic Demographics

The information in table 4.2 shows the health board location for each clinic and the cohort of students attending. All clinics are “outreach” with exception of the final row of the table showing information for clinics within the Dental School building. Whether the clinics are paediatric or adult patient centred is recorded along with the staff and nurse ratios per student.

Location	Student Year	Type	NHS Health Board	Staff: Student Ratio	Student: Nurse Ratio
Castlemilk	BDS3	Paediatric	GG&C	1:2	1:1
Springburn	BDS3	Paediatric	GG&C	1:3	1:1.5
Pollok	BDS3	Paediatric	GG&C	1:2	1:1
Bridgeton	BDS4	Paediatric	GG&C	1:3	1:1
Bridgeton	BDS5	Paediatric	GG&C	1:4	1:1
RAH	BDS5	Adult	GG&C	1:4	1:2
Vale of Leven	BDS5	Adult	GG&C	1:4	1:2
Langlees	BDS5	Adult	Forth Valley	1:4	1:2
Carronshore	BDS5	Adult	Forth Valley	1:4	1:2
Coatbridge	BDS5	Adult	Lanarkshire	1:4	1:2
Kilmarnock	BDS5	Adult	Ayrshire and Arran	1:4	1:2
Campbeltown	BDS5	Adult	Highland	1:4	1:2
Dumfries	BDS5	Adult (some children/ special needs)	Borders	1:6	1:2
Glasgow Dental Hospital and School	BDS2-5	Adult and Paediatric	GG&C	Varies 1:5 and above	1:4 and above depending on clinic

Table 4.2- Demographic Information for Teaching Clinics

4.1.3 Why teach? Motivations to become a Clinical Tutor

For NHS staff the decision to become a clinical tutor often began with the same general motivations. These were perhaps not the traditional motivating factors leading someone to teach and were certainly different when compared to career academics involved in the scheme. Following the early years of their career as general dental practitioners, many were looking for a new challenge to keep them interested in dentistry and a teaching avenue appeared to be accessible.

> "To be honest I was bored in the job I had been in and was looking for a new challenge. I ended up tutoring after a chance conversation with a colleague who persuaded me to apply for the role as I fitted the calibre of dental practitioner that was being sought for the post that was being advertised at the time." (5)

> "I originally applied to be a clinical teacher, when I was in general practice, because I was conscious that I needed a challenge to keep me interested in dentistry." (32)

These quotes depict more egocentric, personal motivations than we might commonly associate with those wishing to teach. Another egocentric motivator displayed by these tutors was the assurance that their practice of dentistry was current. Student teaching is considered an ideal way to keep up to date with advances and changes in clinical dentistry. As such performing a teaching role can assist in fulfilling a dental practitioner's obligation to lifelong learning and continued professional development as set out and monitored by the General Dental Council.

> "(teaching is) something that would make me think about the rationale behind what we do." (32)

> "… by teaching others, you end up questioning aspects of your own practice and ensuring best practice." (19)

> "I was interested in a new challenge and felt that being a tutor was a good way to stay more current and learn from the students as well as hopefully helping them to put some of their knowledge into practice." (35)

Although not a primary motivator, some had enjoyed being a Vocational or Core Trainee trainer in the past and considered student teaching as an extension of this educational role.

> "I was involved in clinical teaching… for a couple of years and I enjoyed the education side of things." (19)

Many tutors had no previous experience in teaching. As mentioned earlier, for some of the tutors recruited from the primary care salaried service teaching was not an option; they were simply required to do it by their NHS clinical line managers at the outset of the outreach programme. For some staff members this did not work well, however, most of these individuals have, over time, managed to remove themselves from the teaching programme. Those who remain, predominantly enjoy what they do. Academic staff who are career teachers display some of the more traditionally held views as to why someone is motivated to teach.

> "Teaching allowed me to share my enthusiasm for Restorative Dentistry with students and give something back to the profession by helping to educate the future dental workforce." (31)

This tutor does however also recognise the potential for personal professional development that teaching undergraduates brings.

> "Reflecting on my teaching experience over the years, it is apparent that teaching clinical dental students has contributed to my development as a clinician." (31)

4.2 The POT Process – Authentic, Acceptable, Pragmatic and Practical

The most authentic element of this POT scheme is its implementation in actual, real time clinical chair-side teaching. In contrast to the hypothetical stance of a didactic teaching programme, POT offers direct observation of a situated environment. Previous authors have recognised the importance of this (Bell and Mladenovic 2015). Within an authentic setting, participants can examine their teaching and learn from the teaching approaches and techniques of others. The following sub-sections answer questions about the POT process such as; 'Who do I actually consider a peer?', 'Should I be able to choose who I am teamed up with?'; 'Can I trust the person watching me?'; 'How do I really feel about being observed?' and 'Can colleagues really give and receive honest feedback?' Practical issues are also discussed such as the usefulness of guidance and how often the process should be repeated.

4.2.1 Who is a Peer? Power and Personality

Although the model used in this study is that of Gosling's 'peer review' (Gosling 2002), it is clear that the participants are not all equal. As previously discussed in the literature chapter, there is also evidence here of a perceived or real professional hierarchy influencing the two individuals paired together for POT observations (Keig and Waggoner 1994). Evidence

shows that participants are aware of power dynamics existing between individuals who on paper can look perfectly matched. This power mismatch occurs due to the complicated nuances of personality factors and existing interpersonal relationships. This is important as authors such as Tremlett (1992) argue that the relationship between an individual tutor and their peer observer is critical in achieving the desired developmental outcomes, and that these outcomes effect the more widespread institutional enhancement processes (Lomas and Kinchin 2006).

In most cases, the participants perceive colleagues' seniority with regard to their dental training and clinical career pathway or chronological age. They are less likely to consider an individual's teaching experience or qualifications even though these might be considered more appropriate measurement indicators of seniority within a POT scheme.

> "I think there is a power scenario going on that makes it very difficult, if I were in the military doing this I would put people of the same rank together for that reason." (8)
>
> "I'm more experienced than (name removed) as I am a Specialist Registrar, but I'm less experienced than (name removed) as she is a Consultant." (16)

It may well be that teaching experience is less obviously evident or less esteemed compared to clinical experience and this in turn may reflect how expertise in teaching and scholarly activity is recognised by the institution. Unless you actually read an individual's Curriculum Vitae it is hard to know exactly what their previous teaching practice has consisted of.

Someone looking on may well expect that a Professor has completed years of teaching and educational scholarship when this may not be the case, their main activity of recognition may have been clinical research or educational management rather than ‘coal face’ teaching.

It is evident that the cohort of tutors, who participated in this study, consider themselves foremost as dentists and secondarily as teachers, and this may be an obstacle in relation to personal development in teaching skills. Beijaard at al. (2000) talk about the importance of identity formation as a teacher, and explore how tutors see themselves in this professional role. The majority of participants do not consider being a ‘teacher’ as their principal identity; discussed elsewhere in the literature (Smith and Boyd 2012). Tutors who principally identify themselves as a ‘dentist’ may hold ideas and perceptions that conflict with their role as teacher; this is most evident when dealing with the needs of a patient. In paediatric dentistry, for example, a tutor may sense that a child patient will struggle with the time it takes a student to place a restoration so complete the task for them, and whilst the student may learn from observing the treatment they will be no further forward in regard to ‘hands-on’ experience.

Students learn their dentistry at a level well within the clinical capabilities of all appointed tutors. However, the assumption made is that if someone is older or more clinically experienced they will be a better teacher and this is not sound reasoning.

Although the scheme is described as involving 'peers' it is clear that the definition of who a peer is can be diverse amongst participants. Previous authors have pointed out how a power relationship between observer and observee can become imbalanced (McKinnon 2001). For many pairings, there was a clear senior/junior split, as discussed, but how this actually affected the process was perhaps more to do with the personalities of the individuals involved. Some of the participants who felt more subservient noted:

> "Individual personality plays a huge role ...There are people with whom you'd feel comfortable and I think if you can have a natural conversation with that person and relate to them on a non-threatened basis, that's the best way to approach this. There are senior academics in here that I couldn't feel comfortable with." (15)

> "If a junior member of staff is landed with somebody who's perhaps very senior, they may feel intimidated and not able to be open about what they feel about their teaching ... It very much depends on personality I think." (9)

In general, it is clear from the evidence that those participants with less teaching experience felt more anxious during the process. This included the majority of the outreach tutors. A great deal of scrutiny was felt by those who were chronologically older with years of clinical experience; they had moved past any traineeship stage of their career, but were now receiving critiques from more senior members of staff or perhaps more junior staff who knew more about teaching. Generally, staff who are younger and in clinical training find it much easier to receive criticism as they see

themselves as a ‘trainee’ with less pressure to perform at a very high level when they are ‘still only learning’.

Within the ethos of POT, it was encouraging that more senior staff members were trying to engage with their junior colleagues as an equal peer but were aware that this did not always work out:

> “I think possibly when I was discussing this with (name removed) she felt that she was observing her superior. I don’t feel that way and I don’t want to be that way because I know it’s not conducive to learning ... When she mentioned this (hierarchy), I told her very clearly not to think that way. I want to be considered as being approachable and if I’m not approachable what’s the point?” (12)

> “(He was my peer), in terms of that clinic, as he’s done it for a good while now. I respect him in terms of he’s very enthusiastic and very knowledgeable and I think on that level he is my peer… I think everyone finds it a bit difficult to get criticism, but he was positive. I hope he wasn’t being overly positive because he was a junior.” (31)

Unfortunately, the junior colleague paired with this participant had quite a different viewpoint:

> “I wouldn’t consider (name removed) as my peer, she is superior, it was really tricky to be paired with her.” (7)

In cases such as this there was a partial shift towards Gosling’s evaluation, appraisal oriented model of POT, (Gosling 2002) even if this was just in the perception of one participant in the pairing. However, these cases are not really examples of a move towards Goslings ‘expertise’ model as the seniors in this instance are seen as expert dentists not necessarily expert

teachers so the slant on the relationship is certainly more one of ‘power’ in relation to clinical dentistry.

In some cases, it was clear that more junior partners wanted to provide criticism of a peer's teaching but felt unable to do so as the following statement illustrates;

> “I found it difficult to give criticism - because he’s my superior…” (13)

In other instances, giving any kind of critique would have seemed disrespectful (here again, seniority is in terms of clinical not teaching experience):

> “I think the age difference is something which you should also consider in the future (when pairing participants) ...as the age difference makes the other person much more experienced clinically. (Name removed) is 34 years experienced and I am 12 years experienced, so I wouldn’t treat him as a peer ... I cannot give advice to someone who is much more experienced than I am. (14)

In some cases, the definition of peer is blurred by friendship, the fact that someone had already adopted their peer as a career or life mentor, or due to the previous relationship between the pairing. It is important that peer observation does not become too cosy or a substitute for a social agenda (Hammersley-Fletcher and Orsmond 2005).

> “(Name removed) and I get on so well I don’t think it would have mattered if I told him his entire teaching session was pants for the following reasons…he would have taken it, but I didn’t say that.” (8)

> "I've got a lot of time for (name removed), he reminds me of my Dad, we get on really well and he has given me lots of good advice, most of it over a pint!" (7)

> "It would have been difficult for me to discuss something with her which I thought was negative… She is just wonderful… I would try to be true to the process but we were at uni(versity) together and go back a long way." (27)

These quotes bring into question how deep personal understandings are between these participants, and how this affects their ability to stay true to the aims of the POT process. Tremlett (1992) points out that an effective relationship between peers is crucial and although these relationships are happy and comfortable, they may be far from effective.

In one case, the supposedly senior peer seemed to misinterpret the ethos of POT and used the sessions principally to impart knowledge to their colleague who they perceived as junior, again demonstrating a more appraisal-oriented model approach (Gosling 2002). Learning within POT should be more self-directed with the observer coming to a realisation of the learning objectives rather than having them dictated by an observing peer who has assumed a role outside that defined by the POT philosophy adopted in this scheme. The senior peer said:

> "I was teaching (name removed) …on the way. I was teaching in order to get him moving through the students more smoothly rather than just focusing on one student for a large part of the session… I feel I'd watched (name removed) continuously from the moment he arrived and I had been on his case from the very beginning." (9)

As one partner had assumed the role of 'teaching the teacher' within the pair it made it difficult for the other participant to fulfil their reciprocal role. The paired partner's thoughts were:

> "I didn't get much chance to give criticism… I think it would have been a bit of an obstacle to say something was wrong, so when (name removed) suggested doing it her way I just went along with it." (4)

Clearly the power dynamic in this situation lead to an unsatisfactory outcome for both parties involved and while the more junior in the pair may well have learnt something during the process it was via an alternative method that involved the senior tutor taking on more than an observational role. The more senior of the pair clearly had a different agenda and did not even attempt to enhance her own personal development.

Another participant also saw himself as a voice of seniority:

> "I am more experienced at it, I know that. So I found it easier to go into a kind of natural mode as well, and that's not discrediting (name removed) because I think he's actually got great potential with a gentle nature, good manner with the students and good at delivering the feedback, but I… felt senior." (15)

In other cases, a more balanced perspective was demonstrated by participants despite differences in seniority, clinical experience or age:

> "I would happily listen to what (senior academics- names removed) had to say about my teaching… I would hold value in what they said. (Likewise) if it was one of our CTs (very junior trainee without teaching experience) who were teaching on the clinic… in many ways their opinion is just as valuable… (and) the dental nurses see the communication with the students as clearly as anyone else does (so I would listen to them too)". (10)

> "If we're all involved in delivery of teaching in any form then I think we're all peers. We bring different things to the table - so the (general dental) practitioners bring in a different view point and NHS only staff that do some teaching bring a different view point. I think even the nursing team could offer a different view point." (11)

> "I think I would consider anyone to be my peer. Because I've learned from Professors and equally I've learned from Students. So I think you learn from everyone." (17)

> "I try to avoid the seniority thing. I've been trained by (name removed) who would never think of a top-down hierarchy. He would always say it's all down to competency." (12)

Some participants were paired with someone they considered a peer without any confusion of hierarchy. These pairings mostly held similar positions within the workplace as well as common attributes and respect for each other. Evidence for this is seen in the following quotes:

> "(We are peers), we had our interviews for our jobs on the same day – he's around about the same age as me, he's got around about the same qualifications and around about the same experience of doing things." (16)

> "(Name removed) and I have many common things like the same age, the same scientific interests and the same clinical interests… so I feel (name removed) is very much my peer". (14)

> "I consider all the adult outreach teachers to be my peer…(a) peer (is someone with the) same or similar job to me." (21)

> "I have respect for (name removed) and I hope she has respect for me as a clinician. So I think if you're in a position where you're both assessing each other and you have respect for each other's clinical skills and judgement, then it's an honest appraisal isn't it and you are peers." (19)

> "I don't get hung up on equality – we're all different and all have something different to give." (26)

These examples fit Goslings (2002) equality/mutuality/peer review model very well. In some cases, differences in peer attributes or seniority are

identified as a positive attribute with some tutors actively seeking out pairings where they felt the feedback may be more critical:

> "I would say that I might have had a bit of an advantage over my colleagues because I had someone from the senior staff observing me and I think that is a different perspective again from one of my colleagues. One of my colleagues might not have picked up on everything that (name removed) picked up." (1)

To help negate the effect of hierarchy some participants discussed pairing with tutors from different clinical areas. A tutor teaching Orthodontics in the Dental School may seem less threatening to an Adult Outreach tutor even if they were a Consultant or Senior Lecturer as their clinical expertise is so different, they do however maintain the commonality of understanding the clinical context and the remit to teach. It was felt that maximising the differences between clinical backgrounds might allow a firmer focus on the critique of teaching skills. Some felt it less threatening to have a peer whom they did not know while others felt that was more stressful. With regard to hierarchy, most wanted to be observed by someone who held no influence on their current position, even if they were more senior in regard to their clinical background. It is clear that participants in the current study liked the idea of the scheme being supportive and non-judgmental as opposed to a more appraisal-orientated model (Gosling 2002). Several participants talked about the merits of pairing with an educationalist from the University's Learning and Teaching Centre, this was viewed as a route to a thorough and honest critique without political bias. However, recruitment of educationalists is a clear departure from the reciprocal context based

aims of this POT scheme. Added to this, the resource required would involve substantial University investment, making the scheme unfeasible.

> "I think maybe someone observing you who isn't a dentist might be a good thing as they are not going to get bogged down in the dentistry - you're not going to have that anxiety about someone dental watching you, they'd be purely watching you on your teaching method." (13)

Other authors have discussed the difficulties involved where an observer is an educationalist and uses pedagogic terminology. These observers are often seen as 'outsiders' and as holding a different world view away from what the participants would consider to be the 'real' world (Weller 2009). As this study follows Gosling's peer review/collaborative model all participants were seen to be talking a common language within their own disciplinary parameters and in that sense were all peers. This said, other studies looking at multiple types of 'peer' observations have shown participants to gain most benefit and insight from the observations made by career educationalists (Bovill and Cairns 2014, appendix XII) but this clearly falls into a different category of POT involving the 'expert'. In summary, many and complex factors affect the consideration of who a peer is and this consideration is personal to each participant. While some dismiss the whole idea of hierarchy, others see it on many different levels relating to clinical experience, age and personality and to a much smaller extent, teaching experience and qualifications. The presence of this hierarchical system is something that can be used to benefit both parties where the proviso of honest critique is implicit. Engaging colleagues in peer review within the workplace is the most practical and pragmatic solution for observations within the given resources.

4.2.2 Peer Pair: To choose or not to choose?

During the Paediatric Dentistry pilot phase of the study, I allocated the POT peer pairings. Allocation of pairs was born out of practicality rather than any conscious effort to match participants in any particular way. This made planning of the pilot phase easier as I had decided to provide a substantial amount of clinic cover personally to facilitate the successful launch of the scheme. Availability of clinic cover was dictated by my timetable and colleagues were freed up to observe their allocated peer whenever I was free. As the Paediatric Dentistry outreach teachers are a relatively small cohort, most people knew each other to a greater or lesser extent with the exception of one pairing where they knew of each other but there had been no previous interaction. The second phase of the study included Paediatric Dentistry, Adult Outreach, the dental school staff in Restorative Dentistry and visiting General Dental Practitioners. It was logistically impossible and inappropriate for me to offer to cover all clinics during peer observations. Even if this had been possible, it would have been unsustainable for the long-term continued success of the scheme. With this change in organisation came the possibility of allowing some staff to select their own peer partner (16/49 interviews). This in turn enabled investigation into the advantages and disadvantages of allocated pairing versus self-selecting POT partners. The major advantages of choosing your own peer were comfort and familiarity:

> ” More comfortable and relaxed with someone you know” (22)

> "I felt less threatened when I chose, (I was) happy choosing someone I liked and felt that we probably worked in similar ways". (3)

> "… more comfortable if it is your pal… don't worry as much about it." (38)

In contrast, others appreciated the freedom to select someone who they thought would give them a thorough critique, or someone who might challenge their current teaching approach.

> "(if the individual chooses) you can tailor it to what you want, like wanting someone more senior for advice on how I can improve my teaching, to stretch me or challenge me." (26)

> "If you can pick someone you can give yourself more of a challenge in the hope of more quality feedback." (27)

> "(I could choose name removed) I know he's an education man and (I would get more from being paired with him) …I would be expecting more critique." (29)

Interestingly, this last quote suggests that some participants were aware of the benefits of having someone with teaching expertise to provide feedback and indeed previous authors have advocated the benefit of more novice teachers observing those with more experience (De Rijdt et al 2013). Some participants who had their first pairing selected for them appreciated the ability to choose their next peer following reflection from the first cycle.

> "Next time I am going to ask (name removed) to do it (POT) with me. It will put me under more stress but at least I know I will get a really through critique from someone that knows more about teaching". (26)

To prove an earlier point regarding how these tutors perceive each other, the person quoted above is aiming to pair herself up with someone who is a

dental consultant but is not employed by the university and has no teaching qualification. The consultant is being held in esteem because of her position within clinical dentistry not because of her teaching background so in actual fact may not be the type of pairing this participant is really looking for.

The biggest perceived disadvantage of choosing your own peer is selecting someone you are so comfortable with that both peers avoid giving honest developmental feedback including areas for possible improvement. Previous literature (Yiend et al 2012) has shown that close pairings are actually more likely to be over-critical; this however, was not the case in this study. Another identified concern was that participants might keep repeating the process with the same peer and this might not enable transfer of different ideas and knowledge with regard to good practice and it might limit the feedback discussions.

> "if you pick your best mate or someone like that, you're just going to pat them on the back instead of getting on with it." (26)
>
> "…you can get into a rut and someone who isn't close to you will point that out, whereas someone who is very close to you or you were really friendly with might not want to hurt your feelings by saying so." (25)
>
> "…you could just choose the same person (that would be a disadvantage) … if you are made to observe everyone you have more of a chance of picking up something you don't know…if you stick to the same people with the same techniques you won't get as much". (18)

One pairing involved close friends with similar personalities and styles; this was perceived as a barrier to finding out about alternative approaches.

> "… (when we did it there were) probably less changes or suggestions for practice because (we were) too similar and familiar with each other." (3)

Some participants were able to express that their ideal peer would be someone quite different from themselves:

> "You want somebody different…someone with a different personality, a different slant to dentistry, maybe of a different era…mixing and matching." (34)

> "... someone (that's) quite different… you might get more in the way of constructive feedback and be able to observe a different way to do things. You want someone who is just as effective but doing it a different way." (3)

The advantage of not choosing your peer included the possibility of increased challenge, of unfamiliarity and removal from your comfort zone. Where a third party selected distant peers, participants hoped they would find a different perspective on teaching or observe alternative methods of practice. Participants appreciated that having a peer allocated would avoid pairings of people who worked on the same clinics on the same sites. This would give the added benefit of seeing how other clinical locations conduct their teaching and run their student clinics:

> "… it's a bit more nerve wracking but perhaps you have the potential to learn more from someone you are unfamiliar with and they may find it easier to be critical." (23)

> "If you had partnered everyone up I think that would have worked...It worked well for us, we weren't too close to want to avoid criticism. Comfort zone is the worst thing to put yourself in, it's a cop-out." (21)

> "(If you are just allocated it's more likely to get) mixed up a bit and we can see what other clinics are doing, which would be very useful in seeing what's happening elsewhere". (19)

The disadvantage of not choosing was the risk that as well as feeling less comfortable there was the possibility of being paired with someone you have a lack of natural affinity for or perhaps have had strained differences of opinion with in the past:

> "…back to the personal dynamics…if it's someone you don't get on so well with or where there are a few issues it's just not going to run as well." (1)

Perhaps unsurprisingly, for a few of the participants the main driver behind peer self-selection was all to do with logistics:

> "The advantage of choosing your own peer is that you are obviously going to choose your own centre or one that is quite easy to get to…I think that's all…I don't think it really matters who you are paired up with, just convenience that's all." (17)

> "…(pick someone so there is) no significant disruption to timetables, no travelling involved." (18)

In one case, however the selected pairing was of mutual convenience as both participants were undergoing the PGCAP programme and were required to complete a POT exercise with a classmate as part of the programme. This was clearly a useful requirement that added motivation for completing observations that could also contribute to the current scheme.

In summary, practicality was the main driver when looking to pair people and a major factor when peers were self-selecting. Either method of pairing is acceptable to participants with advantages and disadvantages to each. As the scheme continues, it will be prudent to record the pairing experiences of

each participant to ensure continued variability and to prevent self-selection bias. Issues in pairing exist but as there is no way to standardise people, the most pragmatic and practical way around this issue is to ensure a different pairing each time in the knowledge that some cycles of the process will be more conductive to educational development than others. It is important to note, pairings with the greatest development potential are not necessarily predictable.

As an action point, I will consider introduction of cross-speciality pairing to analyse its effectiveness at negating some of the challenging issues discussed above.

4.2.3 Trust, honesty and respect

Trust, honesty and respect are clearly essential elements of POT if participants are to feel supported and unthreatened by the process. There is evidence from participants that a lack of these elements would act as a barrier towards feeling able to continue with clinical practice and teaching as normal, as well as to free flowing discussion and reflection about current clinical teaching practice. Gosling (2000) has already reported that when the teacher under observation accepts, or even welcomes, the comments of the observer, it can be a powerful learning experience, but it can also prevent full engagement if the colleague is not fully trusted.

> "...if you don't trust your observer you're not comfortable with what you're doing at all. (19)

The participants were relying on their peer to act professionally, to discuss any negative outcomes from the observations and to keep private the sensitive nature of any adverse findings.

> "I wouldn't want to think that someone was out there being openly negative about me." (34)
>
> "If I felt that someone was likely to undermine me; say well done and then go and say otherwise, I wouldn't like that, so trust it's very important." (33)
>
> "… if you make a mess of it you don't want it going any further." (20)

The issue of confidentiality is also discussed by Hammersley-Fletcher and Orsmond (2005).

Honesty is considered a key attribute for the trustworthy peer partner, participants were keen that their peer give an honest representation of what they had witnessed rather than trying to sugar coat or avoid discussion on aspects of clinical teaching that they were secretly disparaging of.

> "I want someone who's honest. It's useless having someone who tells you half-truths because then it invalidates the feedback." (12)
>
> "…you want them to give you a true reflection of your performance. You don't want to be doing a poor performance and them saying, oh yes that's great." (7)

The best critiques were deemed to be those that came from a peer who was respected and highly regarded as a person and not necessarily as a teacher.

> "How much credence you put on a person's view depends on how highly you regard them, the more they're regarded the more likely you are to take things on board. That might not necessarily be someone who's really experienced… you might take critique better from someone as poorly experienced as you from a teaching point of view, they may not be able to offer educational theoretical background but in terms of how much it improves your teaching practice it can actually be more." (29)

Participants were more protective of their reputation as a clinician than as a teacher, they were happier being told they did not teach something well as opposed to learning that what they were teaching was inaccurate from a clinical context. As previously mentioned this reflects their dominant professional identity as dentists rather than teachers. If they were doing something wrong as a dentist there are potentially severe consequences for the patient, and this is considered as more important than whether they are effective as teachers.

> "I don't mind if someone tells me that teaching was wrong because as far as I'm concerned no one has told me any differently and I am still quite new to it really, it would be different if it was clinically wrong." (21)

While this viewpoint still exists for those tutors with a teaching qualification the line here is blurred, and for them identification as a poor teacher would be considered as more of a professional failure. Overall, the "I am a dentist" view of the world may make all participants more amenable to changes in their teaching practice leading to positive outcomes for teaching and learning.

During the interviews there was hypothetical evidence that participants would not trust some potential peer partners. Reasons for this were; people they did not respond well to on a personal level, people for whom they had a lack of respect or people who would make them feel threatened due to the belief that there was an undisclosed hidden agenda.

> "One of the difficulties is when you get people who don't like each other." (9)
>
> "… if I don't appreciate or admire someone's skills I would not treat their advice as valid… you need to pair people that want to learn from each other." (14)
>
> "… I think if you're being observed by one of your peers, you have got to be happy that they're a decent enough teacher themselves." (16)
>
> "There are some people that I probably wouldn't want to assess me, because I think there might be an agenda to it, it wouldn't be a fair or balanced view." (11)

For others the experiences of POT were pleasant but they did not entirely trust the judgement of their peer as they thought they were just being a bit too nice!

> "(Name removed) was terribly nice. I think that was part of the problem actually, she was far too nice." (10)
>
> "(Name removed) is so polite I don't think he would have said anything negative." (26)

In summary, the participants in the study were cognisant of possible issues concerning trust, honesty and respect. Thankfully, negative aspects were seldom witnessed. The scheme was acceptable to almost all staff involved and although the potential for uncomfortable pairings exists the vast

majority of participants were in a position to say they trusted and respected their peer partner(s) at the time of the interviews.

4.2.4 So you're just going to stand there and watch me!

Although POT was explained to the participants as something to enhance their teaching skills and in turn improve student learning, for many, their initial reaction to the scheme was stress and anxiety. So much so, that in at least one case there was resistance to participate at all. This next quote is from the initial peer partner of the one participant below who pulled out of the scheme:

> "she said she wasn't comfortable and didn't want to do it… said she didn't want the stress." (6)

There is convincing research evidence that reason and emotion are inextricably related in their influence on learning and memory and that negative emotions such as fear and anxiety can block learning for development (Kolb 1983). I have concerns that the negative reaction of the following participant prevented them from fully using the scheme as a developmental tool:

> "I hated it! I don't think I am very confident so I did not like being observed... I think everyone felt a bit self-conscious…they (peer partner) told me they felt like they were being criticised… I don't know how you fix that." (34)

Although this participant claims that others also felt negatively towards the POT experience, evidence from the study results suggest that perhaps

others were not so much negative, as keen to ensure that they were doing a good job. Other concerns about negativity may have reflected some anxiety about being observed. Most participants were able to control their anxiety in order to participate in the scheme but many did express some of their concerns:

> "It (POT) induces a degree of anxiety, doesn't it? You hope that your observations about yourself, that you're pleased with, are in line with the person observing you." (11)

Some participants had an initial negative reaction to the idea of the introduction of the scheme but once they became fully informed about the purposes and potential value of the scheme, they became more comfortable:

> "From the very beginning I didn't want to participate in it as I thought it was unfair to my colleagues… then you explained to me that it's more of a supportive collaboration with each other. It's developing, it's not meant to be stressful or create a strange atmosphere." (14)

Cosh (1998) and Keig and Waggoner (2000) have pointed out that staff training is essential to avoid misapprehensions which heighten anxiety.

Participants recalling the time when they acted as the observer were aware of how their peer may have been feeling about being watched. For some this may have lead them to be more lenient in their critique and perhaps let some evidence of poor practice slip away uncommented on.

> "I did notice some things that I would do differently but I think you need to give a bit of leeway to the other tutor as things are a bit artificial and they know they are being observed." (32)

Some participants were concerned about their position within the Dental School. Some worried that the POT process was an assessment by their 'boss' which they were required to pass in order to continue teaching. Others were concerned that if someone was to find fault in their teaching methods now, it would somehow be embarrassing as they had been teaching for so long.

> "It (POT) always opens you up to the possibility that you're not as good as you think… it obviously raises anxieties. I was anxious about receiving feedback because I didn't want to have confirmation that I wasn't doing things as I should in my position." (11)
>
> "I did feel anxious before it. I think just because it's someone watching you doing things, especially if you've done it for years, what if it's wrong!" (31)

Some of the participants expressed these anxieties about being observed as 'intimidating' but appreciated the reciprocal nature of POT as something that relieved their anxieties to some extent:

> "I've learned that it's always an uncomfortable experience. It doesn't matter how many times you do it as I've been in observation sessions before. I don't think it would be fair or balanced to just do one or the other, I think it's right to go both ways it worked well that I observed my observer and she observed me because that made it equal and less intimidating for both of us." (35)
>
> "It's quite intimidating, even though they're colleagues and friends. It's quite informal, but it's still quite stressful." (6)

Thankfully, many of the tutors were able to tolerate these uncomfortable feelings for the opportunity to develop their teaching skills by being involved in POT. POT was considered to be easier for clinical academics

who regularly provide lectures and tutorials and are perhaps more accustomed to an audience:

> "I think it makes you a better teacher because you can get too relaxed at what you do and then you continue to do the same thing and you might not improve." (13)

> "I think it's not such a huge stress for the academic teachers because we are used to giving lectures and talking to people who are being observed, its development. I think it's part of our job and so I think it's not so stressful that it's not worth doing it, it's just a good technique I guess to improve our teaching skills." (14)

Many participants were also aware that being observed has the potential to make the observee change and modify their usual teaching approaches and behaviours. Some participants were consciously aware of trying not to change anything in the hope of an honest and useful critique but this was perhaps sometimes more difficult than one would think.

> "Felt awkward to start off with… bit like being on stage. It made you adapt to employ styles that sometimes you get a bit lazy about. It was slightly artificial at first…it was a more formalised way to help each other with the way we currently teach." (5)

> "It's a bit of an artificial environment when you know someone's watching you as you get that Hawthorne effect, you act differently when someone's watching however much you try." (13)

> "I think it probably made me more acute in my awareness of what I was doing and therefore I was probably 'sharper' in my teaching than might normally have been the case." (29)

One participant felt that as his peer partner knew him well and had been around on clinics with him before so doing anything other than what he normally does would not have been possible;

> "…he would have known if I was doing something purposefully different… if you had a stranger you might teach the way you think you should be teaching rather than your normal (teaching)". (18)

In many cases, the fact that the clinic became very busy with patient related activity allowed participants to forget that they were being observed and their authentic teaching style would have been evident at those points.

> "It was a busy clinic and he was very unobtrusive, I pretty much forgot he was there. I didn't change anything I usually do." (26)

For those participants interviewed after having more than one experience of POT, it is clear that subsequent POT interactions were less anxiety inducing:

> "Felt easier this time as I knew what to expect, a bit more chilled about it… I did still think about it beforehand though as obviously I was going to be watched." (23)

> "I was more relaxed about it, maybe the first time around you were conscious that you were doing it, but second time around you felt it was more natural. I'm just doing it now, I'm not preparing for it and I'm not trying to think about my teaching until after I have the feedback." (6)

Anxiety levels were also affected by whether or not the peer partner is someone already known and whether or not they were observed first or second.

> "I don't know (name removed) that well, it was a bit unnerving… I would not have been so uptight about it if you had sent someone that I know, it did add an extra level of stress." (23)

> "Think I would have been more apprehensive if (name removed) had observed me first, but I watched first so that broke the ice, she was the guinea pig!" (28)

One of the most significant themes emerging from initial anxiety was the overwhelming sense of reassurance following POT. Blackwell and Mclean

(1996) also found that a positive teaching observation experience contributed to the reassurance and confidence building of teaching staff. Reassurance and relief that a participant was teaching in a similar fashion to their colleague was commonly the first reaction displayed during the interviews. This reaction was more powerful for those teaching in locations remote from the Dental School and for those without teaching qualifications.

> "… they just kind of assume that you can do it, 'away you go and teach that class'… apart from as an undergraduate, I've never seen anyone teach a class… it was reassuring watching someone else do it." (16)

> "(I now know) I'm normal… that's the big thing… there's no reference in outreach, you come in from a clinical background and get on with it." (32)

> "… other people have the same problems when teaching, it's not specific to me… that's very reassuring." (22)

> "… reassuring to see someone else teaching and to know that I am getting it right… It was reassuring and it's an opportunity that you don't usually get." (1)

Regarding the last quote, we perhaps need to question whether it can be presumed that what happens during observations is really an affirmation of 'getting it right'. I explore this further in section 6.3, Limitations.

In summary, being observed is obviously a very authentic way to appraise someone's teaching skills but as discussed here it can have an effect on behaviour which can be seen as a limitation (further limitations are discussed in section 6.3). One participant suggested that perhaps the use of a hidden camera would be the only way to get a true reflection on day-to-

day teaching behaviours. Indeed previous authors (Keig and Waggoner 1994) have argued strongly for using video recording to help validate feedback, documenting and preserving the strengths of teachers, identifying weaknesses, and comparing teaching at different points in teachers' careers'. While this does seem like a good suggestion, it brings with it many logistical problems. Technically, it would require expensive equipment and bring complexity to consent issues with respect to the tutor, students and especially the patients. Filming on NHS premises would contravene NHS policy and it would be almost impossible to anonymise the subject (tutor), patient and student or not let them know when the filming was actually taking place.

4.2.5 I Liked Watching

Some participants preferred the observing element of POT. Previous authors have argued that observing is the most valuable aspect of POT and it would appear that some participants in the study would agree with this stance (Hammersley-Fletcher and Orsmond 2005, Hendry and Oliver 2012, Hendry et al 2013, Cairns et al 2013, Gusic 2013, Bovill and Cairns 2014)..

> "I think watching (was the best part), because you can then compare and think over your technique and so it gives… more depth into the teaching process." (14)

Participants appreciated distance from the usual distractions. This afforded them the ability to concentrate solely on their peer's teaching. This was in stark contrast to the usual juggling act they performed on everyday student clinics.

> "(I preferred) observing…you pick up more of what is happening around you. Rather than focusing on the patient, parent, student and watching the nurse, with this I was able to concentrate just on the teaching practice, anything else I could just ignore and concentrate on 'right he's done that, would I do that? When would I have said that? Would I have said it differently?'" (22)

> "(I preferred) observing someone else, when you are busy…you don't really notice much but when you are watching and giving feedback you have more time to think about it, you're learning as you go along." (21)

Observing others gave participants' the potential to find examples of good or bad practice previously unknown to them. In some cases, the observer quietly took on board good clinical teaching practices later admitting that they had not been doing it that way but now felt that everyone else probably had.

> "I picked up more things observing than on being observed myself. I feel I had missed some stuff so changed what I did straight away." (18)

This statement is backed by Martin and Double (1989) 'I found it useful to watch someone else teach: it gave me ideas for my own teaching'.

4.2.6 Give it to me straight: the giving and receiving of feedback

External feedback is an essential element of professional development if we are to stretch beyond our own personal boundaries, thoughts and beliefs. A developmental peer observation of teaching is to identify, disseminate, and develop good practice so feedback is key in the POT process (Donnelly 2007). Although staff were very familiar with processes of feedback and

assessment through their own dental career and via working with students, many of the tutors had never received feedback about their own teaching skills. Hogston (1995) discusses how tutors must have the mind set to allow for reflection on constructive criticism during the observation process and evidence for this was looked at during this study. The non-judgemental ethos of POT was welcomed as a method to open up discussions about teaching practice and approaches, as well as enabling POT participants to enhance their understanding of the development of teaching skills, which had until this point been largely ignored.

> "(It's good) to be observed in a non-judgemental way… maybe I am doing something that's different from everyone else? I didn't get feedback from peers at all (before POT)". (17)

Some of the participants were not in the position of having to give negative feedback to a colleague but were able to postulate how challenging that might be; something that is consistent with the literature (Weller 2009). Most talked about using diplomacy skills and delivering bad news in a tactful way. Some also identified giving honest feedback as being the only way for POT to be effective in changing a colleague's current practice.

> "I wouldn't have a problem (giving a peer negative feedback), but I would have to adopt a manner that was diplomatic and wasn't going to cause any problems." (11)

> "I think you need to be diplomatic…you need to be brutally honest. If I look back on my career, there are people who were brutally honest with me, it was painful but those were the key points which made me change practice." (12)

Participants were acutely aware of the effect that any insensitive or negative interaction with their peer partner may have on future working relationships or on the working environment. Previous authors have also discussed the potential impact on relationships that a POT scheme may have (Hammersley-Fletcher and Orsmond 2005). These issues were new to the tutors as they had no previous cause to consider them when receiving or delivering feedback to undergraduate students. While some tutors may try hard not to 'hurt the feelings' of a student, offending a colleague was clearly seen as something different with greater personal ramifications.

> "Obviously, you don't want to offend somebody that you work with every week, so I could have been doing something terrible and I don't think (name removed) would have said. I think if I was completely off he would, but I don't think you would really want to hurt someone's feelings if they were doing their best job." (32)

Linking to section 6.1.1 'who is a peer', participants talked about the nature of the relationship and the individual personalities of those in the pairing as having an effect on the ability to have a completely frank conversation when delivering feedback.

> "I think it's hard to criticise…it depends on your relationship with the individual doesn't it? It's not an easy thing to say to someone, 'I don't think you're doing that correctly'. People tend to take it quite personally." (32)

Here critical feedback is considered as criticism rather than the offering constructive comments that offer a developmental opportunity. When questioned the majority of participants were much happier to receive criticism than to deliver it. They did not want to deliver potentially negative feedback for fear of being thought of as a bad or cruel person. This suggests

a potential area of development for dental staff. They may need to develop skills in being able to adopt an alternative mind set: one where they are happy to listen to, and reflect on, their potential failings followed by discussion and suggestions for their improvement. Currently they feel uncomfortable providing this in a reciprocal manner for their peer partner. Some of the following participants felt let down by the process, in some cases this was due to the lack of input from their peer, in other cases it was a recognised failing in themselves.

> "I don't remember getting a great deal of feedback specifically on the various aspects of my teaching, which might have been helpful. I suspect my peer observing me didn't feel comfortable commenting on my teaching?" (2)

> "I found it (feedback) difficult to give it and I didn't actually receive it. I think it would have been beneficial if we had been more structured about it." (6)

This highlights the importance of the pre-observation meeting and the statement of intent that constructive criticism is an essential part of the process in order to deliver an outcome that will facilitate personal development.

Another issue identified as a possible barrier to critical review was a tutor's popularity, again this links to the issues raised in discussion of potential imbalances between paired peers. This quote comes from the previously mentioned case where a peer is regarded as a mentor and 'father figure'.

> "It's hard to critique (name removed) as he is very popular, you can see why, he is such a good teacher, so it was hard to critique someone like that." (7)

Thankfully although recognising the challenges of providing feedback to a peer, most participants felt that they would be able to provide honest feedback if the perceived issues with their teaching were seen as substantial.

> "I would still feel that if I disagreed with something I could definitely say something. It would be much harder to do as I think there would be friction involved." (32)

> "If I had something negative to say it would be really difficult but I think I would say it as you have to be honest, the whole point of the exercise is to point out good and bad… the negatives need to come out alongside the positives." (7)

> "I generally think critique is something which improves us and everything which helps me to be better is good… I think that if people are afraid of giving advice as they are afraid of it being perceived as criticism, if this happens then we have less and less new development during our professional life." (14)

The final quote here suggests that constructive criticism is what makes the POT scheme useful, but maybe there is a need for help and support or training for staff to give this form of constructive criticism especially in circumstances where their peer partner is someone they work closely with or where the peer is more senior or highly popular.

Some felt more comfortable with the feedback process and put this down to the fact that their peer was also their friend.

> "I think the fact that we're friends made it easier for us to spend a lot of our time criticising each other in a friendly manner…I might find it

> slightly more difficult with a stranger- I think it would have been awkward if it was someone else." (16)
>
> "I have no problems getting feedback from friends of mine. I'm not receiving (the) critique as a criticism, but receiving it as good advice." (14)

The comfort here is presumably due to a perceived lack of threat or potential embarrassment. There are, however, potential pitfalls of being observed by a friend. On the one hand most people expect a comfortable, friendly and stress free critique from a friend which would hopefully lead the observation to be authentic and true to life without anxieties getting in the way. However, on the other hand, literature has shown that having a close peer observing may lead you to be under the scrutiny of your worse critic exposing the observee to harsh and judgemental feedback.

For those who were in a position to give negative feedback this seemed to occur without detriment.

> "I'm not backward at coming forward, I gave him the negatives but not nastily… people go away and think, they will change things if the comments have been taken on." (15)
>
> "I gave some negative feedback which was taken on board quite happily, almost with a sense of gratitude." (21)

There are examples of good feedback practice that have clearly resulted in a positive feedback experience for some participants. The following quote emphasises the vital importance of the tone of the discussion when

delivering feedback to a colleague as opposed to a student. There is more emphasis on 'suggestion' rather than 'instruction'.

> "I took that (feedback) on board because I felt there was honesty there. It was positive, but at the same time it was, 'this is what you could do to improve things or have you tried that?'." (5)

Positive feedback was welcome and recognised when given. This positive feedback provided reassurance and was actually one of the most important outcomes of the POT scheme for the tutors without postgraduate teaching qualifications.

> "The positive feedback really helped, it's hard when you are working alone in outreach to gauge where your teaching is at…it was good to have peer feedback." (24)

> "This feedback reaffirms that what you're doing is in line with what everyone else is doing… other than this (POT) you don't hear anything good or bad. (6)

Participants who valued the feedback they received via the POT process started to think about expansion of this and how to get 360 degree feedback on their teaching skills. This is evidence that the POT scheme is making participants more aware of the importance of getting feedback from different sources.

> "This (POT) is valuable… feedback from students is also important and the nurses. I now want to draw on as many sources of feedback as possible. Different people have a completely different perspective." (8)

Some of the identified limitations with regard to feedback related to availability of time and the logistics of a busy clinic. Most pairs tried to

give their feedback immediately, this was regarded as the most efficient way but it often encroached into personal time and was sometimes impossible to fit between clinical sessions on a busy day.

> "(It would be easier to have the feedback session) straight away…if you leave it to the time the pair of you are free to catch up without protected time that might be a while away and then things are forgotten about." (19)

Others who preferred time to reflect on the session and consider a strategy for the discussions liked having some distance between the observations and the feedback. Participants who felt they needed to deliver negative points mostly held this opinion. Previous authors have suggested that having a greater period of reflection prior to discussion helps create the preconditions for a different kind of reflection that may be more worthy (Clegg 2002) and more of a focused summary of important points for consideration (MacKinnon 2001).

A further limitation for consideration during feedback was the fact that, in most cases, the peer partner was not considered an expert in the field of teaching and this raised some questions about the validity of feedback (see limitations section 6.4). One participant was able to compare their experience during the POT process with an earlier observation encounter they had had from a staff member employed by the University's Learning and Teaching Centre:

> "the nature of the feedback was quite different…I preferred the advice on teaching style and strategies it was more useful, but then of course they were from the teaching unit so they may have had more experience. But it wasn't to say that what (name removed) fed back to me wasn't useful, there were just fewer suggestions for change." (11)

This finding is consistent with other work I have carried out (Bovill and Cairns 2014, appendix XII) where given a set of three different observations (peer, senior colleague and educationalist) the advice and feedback received from the educationalist was found to be of most value.

Some tutors, having been interviewed after only one cycle of the scheme, saw a single set of feedback as a limitation. This becomes insignificant as the scheme progresses, following the suggestion given by this participant:

> "It might be useful to rotate and then have feedback from different people over a period of time." (11)

Indeed, the later stages of the scheme ensured that peer partners changed, enabling participants to benefit from different perspectives and personalities feeding back on their teaching approaches.

Participants were quick to contrast the mechanisms of delivering feedback to a colleague in comparison with their usual role of providing students with feedback. Although most employed the same basic principles, they identified the need for increased sensitivity and mutual understanding, they were more likely to 'offer possible suggestions for change' as opposed to 'telling a student what they should do next time'. It is easier to give instruction to a student; it is after all what they are there for, in their inexperienced state. Even if provision of feedback to a student becomes uncomfortable and adversely affects the student-teacher relationship, they

will soon move on as opposed to an experienced colleague with whom at least a basic working relationship will be required long-term.

> "I wouldn't say to you, 'you should do this or you should do that', I would say, 'I find this way is better'. For a student you say, 'this is the way to do it'." (29)

> "Although I give feedback to students all the time, when you're giving it to a colleague it's hard to make it constructive without seeming negative or you have to be more sensitive about it." (6)

Participants were asked if they felt they required targeted training regarding how to give feedback to a colleague. Surprisingly many felt that extra training on feedback was unnecessary, as they already possessed the skills to feedback to students. The consideration of a greater need for diplomacy or emotional intelligence was perhaps lost on those participants who either avoided giving any potential negative criticism or did not observe anything they would consider to be in need of improvement. Participants who found themselves faced with an awkward conversation were more open to the potential need for more specific, targeted training. Previous authors have recognised that giving constructive feedback to a colleague is a demanding skill, and as such, there is a need for specific training in order to maximise the benefits of POT (Cosh 1998). The following quotes show evidence of reflection on the strategy being used to deliver feedback. The first quote illustrates well the good practice of being specific with regard to feedback. It discusses the need to be selective about comments that should be balanced and tailored to the perceived needs of the individual. It reminds us that too much criticism can be detrimental and a pragmatic step-by-step approach to improvement may well be the best strategy. The second quote illustrates the need to be considered and thoughtful when delivering this

type of feedback. These are all useful points for future group discussion during targeted training events.

> "… you don't want to upset any one, I could have given more constructive criticism had I chosen to but I chose to give feedback on the three most pertinent bits of info that I thought would be helpful. I tried to tailor it to the amount of feedback I was given, I thought if I gave more it might become destructive." (3)

> "There was difficulty with wording the feedback… (I) scrawled bits down and didn't think about it again until the meeting afterwards. It might have been better to … think 'how am I going to word this to the person I've observed'." (6)

In summary, many of the participants recognized the issues associated with providing constructive criticism to a colleague and realized that although the basic principles were the same this was quite different from commenting on a student. The relationship stakes between colleagues are much higher. Added to this the process of reciprocation means that the person providing the feedback may feel vulnerable to retaliation in the critique they then receive. Participants who found themselves in an awkward feedback conversation felt there is a need for targeted training on giving colleagues feedback. Giving and receiving of feedback was acceptable to the study participants although there may be clues to the differences in quality of some of the critiques given. As found previously (Allen 2002), staff valued feedback from colleagues and felt it assisted development of their teaching practice.

4.2.7 Structure and Guidance

To aid with the POT process some information for participants was emailed out shortly after the recruitment of participants. This contained introductory information on the concept of POT, reassurances about the support that was being given to POT from the Dental School and Clinical Directors of the relevant Health Board and some guidance information about how to conduct the process. The information provided about how POT was to be carried out included information about: pairing; pre and post observation meetings; and direction on some of the things observers may like to look at or think about while they were watching their peer partner. In particular, the participants were asked to comment on the usefulness of the notes about what to look out for during observations, this is the 'Guidance for Observations' document (appendix I) and on the concept of a 'Time-log' (appendix III). The experience and level of expertise of the observer influences what is considered and what is dismissed during an observation (Chism 2007). To avoid the subjective/anecdotal nature of observation it is advisable to use a systematic means of collecting information about the observation and both the guidance notes and time log represent this. Their use was however not mandatory as for the purposes of POT in a developmental model, informal recording of what happens has previously been considered favourable (Gosling 2002). It is important for the observer to try to observe and record what happens and not rely on memory and interpretation without any evidence.

With regard to the Guidance for Observations, tutors were informed that the content of the document was not intended to be prescriptive and was not to be viewed as a checklist for a 'good teacher'. I informed participants that the guidance could be used or ignored as they saw fit. There were no negative comments gathered in relation to the Guidance for Observations document and its use was universal. The majority of participants found this tool useful and admitted they would have had difficulty constructing salient points for discussion without it.

> "It was a good starting point, better guidance than saying 'he's nice to the students or he smiles'." (13)
>
> "I would not have naturally come up with the things on that list myself, helped with focus." (36)
>
> "I would have missed bits if I hadn't had that amount of guidance… I didn't think of it as a check list to good teaching, just a steer of what to look for." (22)

Some participants saw the provision of this information as essential to provide focus in order to try to meet the aims of the POT scheme and that this could be made even more explicit. Some requested that this information be further embedded into the process for future cycles.

> "If you don't know what you're looking to gain from it then it's probably difficult to make sure you're giving the right information back… I suppose it could have been slightly more prescriptive in a way." (33)
>
> "It was useful to have this in a succinct form…it was something to refer to as a starting point… we should use it every time; it should be part of the process." (11)

The concept of the Time-log was to help structure the notes that participants were making whilst observing as well as actually encouraging them to make written notes that they could refer to during their post observation

feedback session that was not always on the same day. The Time-log was regarded as a good way to remember how busy a tutor was when any particular incidents were occurring.

> "Good for sorting feedback, useful in the post obs(ervation) debrief… I would have forgotten certain areas if I didn't have this." (5)

> "… the format was helpful, it made sense to have a written record of it rather than trying to keep everything in your memory. I think the time thing gave a good impression of how busy the person was and how many thought provoking processes they had going on." (18)

> "Things don't always go to plan and difficulties can be run into so that is a good way of accounting for stuff like that, how the difficulties fitted in chronologically, then you see how the teacher adapts and copes, transition. Might bring up reminders for stuff that was never addressed at the time- did they remember to come back to it?" (7)

> "The Time-log was great, the examples were very helpful, I would have been lost without that. Helped me to structure my thoughts and get them down on paper." (24)

Whilst the time itself was not considered important the hope was that participants would find it easier to record seemingly trivial incidents and add clarity to topics which would surface in their later conversations. This function was fulfilled with participants crediting the time-log as a facilitator to some very specific feedback steering them away from more generalised discussion.

> "… you get to say 'you actually said this' to give a bit of substance behind what you're saying." (20)

> "… it is easier to be a bit picky about things using this…It lets you flit back and forward and write down sort of minor things, things that might be quite on the margin." (5)

> "I think if you do have a time log you're probably more likely to get people doing accurate reflections… otherwise you might just get someone who does it off the top of their head at the end of the day." (32)

The next two quotes are examples of where observers offered very specific feedback that was facilitated by use of the time log. One deals with how tutors should be precise in their instructions to students to ensure there are no ambiguities in clinical instructions they give. The second deals with missed teaching opportunities and how the pressures of a busy clinic often do not lend themselves to the most conducive learning environment.

> "I picked up a point with (name removed), he said at 9.45 to a student 'we will then wash it out with as much irrigant as we can'- I actually wrote that down then afterward said, 'so what exactly does that mean 10ml, 20ml, 2L?" (8)

> "… he told the students they were going to use a different type of LA (local anaesthetic) but did not say why, log helped me to look back and find out if he discussed why later, reasons why he did not say at the time etc. I had a record of everything else that was going on at the same time, that might have been a factor." (36)

Not all participants used or liked the Time-log. Some found it intrusive and were concerned that note taking made it appear more formal and possibly even judgemental with the potential to modify the observee's behaviour.

> "We did do the time log to start but it just seemed a bit formal walking around with a clip board… I kept a little notebook but was conscious of not wanting to look like the inspector as I think that might have made people more likely to modify their behaviour… I personally didn't really like it." (21)

Some found that time restrictions and very busy clinics were not conducive to keeping a log.

> "I started off using a time log, but it ended up we were swapping about the clinics so fast and moving back between patients that the times got mixed up, but it was useful to start off because it reminded me of the sequence of things and you can remember more about them." (19)
>
> "the time log just didn't really work out… it was so busy." (34)

In one case, the participant under observation was anxious and felt threatened by the process, for that reason, her peer partner thought it would be best to appear as informal as possible. This demonstrates a good level of judgement about when to use the log or not, and is indicative of someone who is sensitive in responding to their colleague's needs. It implies a supportive colleague with good judgement.

> "(Name removed) was so uncomfortable with the whole concept and was very suspicious of it (POT) so I didn't take the crib sheets, we just had a conversation, because I thought I'm not going to go in guns blazing and give a big long list of x, y and z, as I think it was more of a don't panic scenario for her." (10)

Another peer pair seemed to find time within the session to discuss issues as they went along. However, this was not the usual approach encouraged by the POT scheme and I am unsure as to how effective this approach would have been on a clinic with both students and patients present.

> "I didn't use the time log. We didn't write things down, but as we were going along we would talk to each other about the teaching and about the session." (9)

On reflection, the Guidance for Observations appears to be essential and can be further developed, perhaps into a table format with an addendum of

more elaborate descriptors for those who feel they would like further information. The Time-log was not universally accepted. On analysis however, it appears to have been valuable and enriching in most instances where it was used. Availability of the time-log in some format should be encouraged in the future. Perhaps some participants were distracted by the notion of writing down the time when in reality the actual time was not important. Evidence however, regarding the number of simultaneous activities a tutor was performing, led to rich post-observation discussion about time-management and its interaction in the provision of quality educational opportunities.

4.2.8 How often should we do POT?

Participants were asked to reflect on how often the POT process should be repeated. The next quotes sum up the general opinion with consensus being at least once per year but perhaps more.

> "… you should do it yearly… perhaps best early in the term before the students are off and flowing." (32)
>
> "I think twice a year, at the very start and then maybe January." (34)

There was consensus that the ability to organise a POT event at any time should be possible. This would allow tutors to access advice about difficulties or challenges in their teaching during a timeframe most useful to them.

> "I also think you should be able to just set up an observation at any time on an ad hoc basis if you think there is something you would want looked at, something you were worried about, as a more informal appraisal." (5)

Another suggestion for development was that there should be some group discussion, perhaps during a planned 'Education Day' where everyone should be encouraged to talk about their peer feedback experience and reflection on it, what it made them realise and what changes, with or without the help of their peer partner, they had made to their teaching practice.

> "I think if you're peer reviewing it's good, but then you need (more) feedback after the peer review. So for instance, at the restorative study days a little bit of time could be set aside by saying 'ok this is what we got from all the peer reviews, this is what your input was, these are the areas you felt least comfortable in and can we address that'." (19)

This chapter has presented the results and discussion related to the processes of the POT scheme. Chapter five will now present the results and discussion focused on the impact of the POT scheme.

CHAPTER FIVE: THE IMPACT: RESULTS AND DISCUSSION

5.1 The Impact of POT- Talking, Reflecting, Learning and Enhancing Teaching Quality

Several factors within the data clearly indicate the impact of the POT scheme. As already discussed in the literature there is increasing importance being placed on informal discussions about teaching practice as a form of relevant and worthwhile scholarly activity and this is something that has clearly been stimulated by the POT process. Again, there is increasing importance being placed on reflective learning and frameworks which may support reflective practice, and once again POT's ability to increase participant self-awareness of their teaching practice is consistent with these aims. The collected evidence demonstrates many and varied examples of learning amongst the participants, and although this was not a specific focus of the interviews, there are useful points contained here for further discussion and for potential staff training. A further impact of the POT process is perhaps on a more institutional level with its function as a quality enhancement process for Glasgow Dental School undergraduate teaching clinics.

The sub-sections here explore the impact of the POT process on: scholarly conversations about teaching; reflection; self-awareness; what the participants have learned about teaching; and the role of POT in quality enhancement of teaching.

5.1.1 Informal conversations about teaching

Conversations about teaching are essential in the support of scholarly activity and in enhancing learning and teaching outcomes Roxå and Mårtensson 2009). Within many academic disciplines, there have been a lack of 'safe' places where discussion about teaching can take place, but POT can play a large role in creating an environment in which such discussions can occur (Gosling 2002). In this study, POT certainly increased the number of scholarly discussions about teaching that took place in a supported and non-threatening environment. I wanted to examine to what extent the tutors already talked informally about teaching and their teaching practice.

It was encouraging to see that many of the tutors already felt supported in their working environment to engage in teaching conversations, and that they recognised the POT scheme as a way of further affirming and extending these conversations.

> "I'm grateful for the environment we have in the university. I think I've got good relationships with (other clinical teachers) … I find it very easy to relate and discuss situations on an ad hoc basis, we discuss ways of how we teach". (12)

> "We share a room so we regularly talk about things like getting more clinical teaching into early years. (I) also (chat) with (name removed) when we get a bit of breathing space on the clinic, it's important to be able to do that." (10)

> "I talk over the desk to (name removed), saying what would you do with this or that, or I had a student say this or being like this, and what would you normally do about that...but POT helps with that." (13)

There is evidence that informal observation and discussion of teaching does already exist to some extent within the Dental School and the benefits of this have been appreciated by the participants. POT is clearly a way to propagate this informal process and make it more accessible to all tutors involved in chair-side teaching.

> "You might have had something (before POT) that you're trying to teach and vice versa…(with POT) you discuss and then model what they've done or they can model me." (11)

It was reassuring to find that the outreach staff also formed informal groups to talk about teaching. Discussions here were principally around things which perhaps did not go so well and analysis of what the solutions may be as opposed to discussing aspects of innovation or more fundamental changes in teaching. Some of their conversations perhaps harp back to anxieties and insecurities they have about being in the teaching role (see earlier section) but it is encouraging that they are able to support each other.

> "we always do it (chat) on an informal basis just between the four of us… especially when we are not sure how to handle a situation…we discuss how a situation has escalated out of control, 'could I have handled that better?', 'what would you have done?' Sometimes you are just looking for a little bit of support and reassurance." (5)

Sadly, however, some of the outreach locations do not appear to facilitate informal discussions about teaching. In some clinics there is a call to set up more formalised meetings in order to facilitate more discussion, however, larger scale formalised meetings do not always have the same set of

outcomes possible in a culture of informal chats (Roxå and Mårtensson 2009). In some areas the opportunity to discuss with colleagues has been diminished due to the existence of some single-handed dental practices or part time working between near colleagues who communicate via email and post-it notes, but never see each other face to face. The value of POT for these individuals is perhaps magnified and raises the question that for those who are working in more isolated settings or who have limited contact with colleagues, more regular POT might be particularly valuable.

> "…we end up emailing and hope that gets fed back to everyone else…POT has helped but we are now going to have meetings… just get everyone together and see what's going on." (6)

> "It's great just to get to talk to someone about it (teaching), I don't get the opportunity on a day to day basis so it was really good. A lot of positive reinforcement… by and large we didn't get that kind of opportunity before this (POT)." (21)

Some isolated outreach tutors are happy to have their informal discussions about teaching with the students:

> "I discuss with UG students in terms of teaching styles, what they have encountered and how it made them feel. We have a good wee network for chatting to each other." (8)

In the current climate of increased attention to the importance of involving students as partners in learning and teaching (Brooman et al 2014, Cook-Sather et al 2013, Healey et al 2014). Participants who have been forced to discuss teaching with their students due to their isolation from other clinical teaching staff, have perhaps inadvertently stumbled upon an excellent solution to ensuring discussions about teaching take place, but in ways that

meaningfully involve students. However, this is not to suggest that these conversations with students replace the benefits of informal opportunities for teachers to discuss teaching with one another both within and outside a formal POT scheme.

Those who were currently studying, or had completed the PGCAP, felt they had multiple opportunities to informally discuss teaching. Some participants have maintained relationships with their previous peer observer/observee and other classmates following the end of the programme and these conversations about teaching are one of the drivers for this.

In summary, the POT process has increased the recognition of informal discussion about teaching as a worthwhile scholarly activity. Whilst some of this activity was evident before the advent of POT these types of discussions have certainly increased in frequency and value, this is especially pertinent for those clinical tutors practicing in relative or actual isolation.

5.1.2 Reflection and Increasing Self-Awareness

Carrying out teaching observations alone does not enhance or develop teaching practice, but rather, placing personal meaning upon the observations, engaging in collegial discussion and reflection are the critical

drivers for professional development (Peel 2005, Bell and Mladenovic 2015). A teacher's self-awareness and ability to reflect upon their teaching skills with the goal of improvement has been highlighted as a defining element for a good teacher (Schindler-Raiman 1960, Pinsky et al 1998, Boendermaker et al 2003, Irby and Papadakis 2001, Markert 2001, Boendermaker et al 2000, Sutkin et al 2008). Self-evaluation and self-appraisal skills have been enhanced via POT (Martin and Double 1998, Bell and Mladenovic 2015). POT is an excellent process for developing personal reflective skills and Brockbank has reported that being involved in enhancing these skills in others is also a key part of becoming an effective reflective practitioner (Brockbank and McGill 1998).

There are several opportunities for reflection during the POT process, some of these opportunities are formalised within the process but many more are informal. Formalised, facilitated episodes of reflection occur during the pre- and post-observation discussions. In the pre-observation meeting, the participants discuss ground rules and logistics for the observations. They are asked to identify any particular aspects of their current practice upon which they wish the observer to provide increased focus. This could be aspects they find challenging to teach (ranging from simple to threshold concepts) or areas where they feel students do not respond well to their teaching methods. During the post-observation conversation, the peers dissect the observed sessions discussing both good and not so good aspects of what was seen. The feedback discussion should be specific rather than

generalised and allow room for both parties to analytically reflect and develop an action plan for moving forward.

Informal opportunities for self-reflection occur at all other stages of the POT process; prior to the first meeting, prior to the first observation, during the observation sessions, prior to and during the post-observation meeting and at any point following the formal conclusion of the process.

Self- reflection is a major constituent of the learning process and something we strongly encourage our undergraduate students to do (Gibbs 2005, Helyer 2015, Sandars 2009). Methods to formalise the reflective process are embedded in the UK undergraduate curriculum and for years have featured as a formal process within early postgraduate training. For many of the tutors involved in this POT study however, reflection as a formal process has not featured in their career or if encountered, it may be considered a modern and somewhat alien concept. Most learners do reflect to some extent intuitively but POT serves as a conduit to highlight the benefits of reflection and to focus reflection on current clinical teaching practice.

> "So I think this (POT) brings a commitment to reflecting on what you've done, right or wrong… you continue to do the same thing and not improve otherwise." (13)
>
> "… more than the observation, it's the discussion and reflection before and after that's beneficial, it highlights the areas of concern which allows you to deal with them." (12)
>
> "I am now thinking more about what I do and how I teach…. Lots more reflection and thought about it because of POT." (24)

The participants were asked if they decided to change something they normally do during a clinical teaching session because they knew they were to be observed. There is evidence that the vast majority of participants did reflect on and consider this possibility prior to being observed but that most made a conscious decision not to introduce any changes.

> "I just did it as normal teaching because I thought you're not going to get anything out of it if it's not what usually goes on." (7)
>
> "I thought about the fact that he was going to be present… I guess we all have pride in what we do and we want to do our best but I don't think I went out of my way to change what I did." (11)

Early evidence of increased self-awareness is also displayed in the way that most of the participants were insightful enough to recognise the effect of having someone observe them; this led them to believe the chair-side clinical session may have been less than 100% authentic. Even if they intended to conduct themselves in a completely normal manner it was still difficult to do so, at least in the early stages.

> "I think you are conscious that you're being observed so you maybe try to be on your best behaviour… I might have been more conscious about how I was explaining things." (31)
>
> "I spent more time going to look to see what they (the students) were doing, whereas in a normal day I would probably just have left them to it." (6)

Having to deal with a hectic clinic was probably the most conducive factor in allowing the normal teaching business of the session to proceed without focusing on the observer in the room. This adds greater authenticity to the observations made on busy clinics.

> "… it was really busy; I did at times forget she was there." (1)
>
> "I did reflect (consider making changes) but if you have a busy clinic you go into automatic unless you have changes all thought through and planned, and that came later (in the POT process)." (21)

One participant reported that they did intentionally change their practice prior to observation, this occurred because they observed their peer first, reflected on their own teaching and learned from what they had seen. By the time it was their turn to be observed they had already introduced some new developments into their chair-side teaching. They were then clearly in a position to receive feedback of how successful these changes were.

> "I got to watch first, so after that process I reflected about some of the points I had picked up when watching and had already incorporated them by the time I was observed. It was a good process to think about the way you teach." (37)

Whether changes occurred or not there is plenty of evidence to indicate that POT was leading the participants to reflect on their clinical teaching even before the formal process began.

> "I would not normally mull aspects of teaching over before a clinical session, it did make me think about teaching." (36)
>
> "I probably did think a little bit more about starting off the session and what resource materials I would have available. In another session I might have just got resource materials a bit more randomly." (1)

The consciousness of an observation taking place and increased self-awareness of current practice clearly afforded many of the tutors an excellent development opportunity. MacKinnon (2001), talks about

feedback in terms of developing a teacher's 'self-concept' and this certainly appears to be true here. Much of what was learnt was perhaps not new material brought to them by their peer but rather a self-evaluation by the observee themselves in contemplating what they already knew about good teaching practice and how that applied to them as a teacher. In some cases, previously obtained knowledge about good teaching skills had been side-lined but the POT process was now asking them to reconsider this knowledge and its possible place in their current practice.

> "I became more aware of what I was doing because someone was watching me… (POT) kind of taught me to think about what I was doing… more than (my peer) actually teaching me anything new. It was almost like refreshing my mind to what was actually important." (35)

> "To be honest it (POT) didn't highlight anything that seemed to be good or bad other than the fact that I hadn't really thought about it for a while. That focus made me think about employing some of the techniques I had learnt about on the 'START' programme we had done a few years ago." (5)

> "You finish your PGCAP and you're full of these great ideas, but it takes quite a bit of energy to maintain that and I think that's where this (POT) is quite good." (11)

Increased self- awareness and a refocus on teaching practice is clearly a strength of the POT process and goes some way to add to development of teaching practice, but feedback and reflection focused on new knowledge about behaviours, styles and techniques can enable the cohort to develop faster and further as some participants commented:

> "I can pick up something completely new…with this (POT), something I would never have thought of on my own. Reflection is self-limiting if we don't get new input." (22)

> "… stealing good ideas or just seeing how other people do things differently. You need input to help with your reflection." (36)

> "I liked finding out these little gems that other people know and do, stuff I have never thought of, it (POT) gives you new ideas." (23)

Some participants used the written information supplied to them at the introduction of the scheme (see appendix I) to start them off on their reflective process.

> "… even just the process of reading through the considerations that were attached to the instruction emails made me reflect and look critically at my own teaching, I became much more self-aware!" (2)

For some participants it was discussion with their peer pair that encouraged them to reflect on the effect they were having on the students and to visualise things from a student's perspective to improve their teaching practice. Previous authors have advocated reflecting from the learner's viewpoint as being fundamental to effective reflection (Boud and Walker 1998).

> "… you try to be conscious of what you're doing, but you're not always, this (POT), really made me think about what the students went away thinking about." (10)

As is typical with students' experiences of reflection the tutors also tended to focus on aspects which perhaps did not go so well.

> "I guess you always dwell more on the things that weren't right rather than thinking about the good things, just human nature. It's all part of self-reflection, thinking about what you want to do better next time." (1)

In some cases, these negative aspects were picked up by the observer and discussed, in other cases these more negative aspects were brought to the discussion by the observed tutor themselves. For some, solutions were found via interaction with their peer, for others a plan of action was principally formulated by themselves although perhaps facilitated through the act of conversation about teaching afforded to them by the POT process. Nevertheless this is evidence of the emotional response to negative aspects of practice which is an important consideration in some theories of reflection.

This next quote talks about POT as a method for encouraging reflection. This idea could possibly be developed through the provision of a reflective framework with a more defined structure and paperwork such as that currently experienced by our undergraduates. In an acceptable format this could help the tutors to think in a more structured way about their POT experience both before and after the feedback session.

> "Whilst the theory of reflective practice can be instilled, it is much more tangible when it is directly encouraged through a more physically tangible process such as POT." (29)

This participant also hints to the wider reflective process that POT hopes to foster within the community of practice where reflection is a continuous active process involving the whole Dental School.

There is however some evidence that development in reflective practice is happening without any further intervention. Participants within the scheme who completed more than one cycle of POT reported that by the second and third times they had conducted observations their willingness and ability to reflect on and modify their own teaching had improved.

> "The second time I did it, (I reflected) because I knew it was coming up again (POT), but now I find myself thinking and changing a lot, especially trying to put myself in the students' shoes". (22)
>
> "I think this (POT) has probably developed my ability to reflect, the students do it all the time, I feel like I'm catching up a bit." (23)

As mentioned earlier the tutors were more likely to focus on aspects of their practice that were not so great. Provision of a formalised structure could lead them to give due consideration to the things they do well and whether those positive aspects could be developed even further.

In summary, increasing self-awareness and encouraging reflection on current teaching practice has led to the development of the majority of participants taking place in the POT scheme. There is evidence that sustained yearly involvement in a POT scheme could increase a participant's effective use of reflection and self-assessment to develop their teaching practice.

5.1.3 What participants learned about their teaching practice through POT

One of the major functions of the POT process in this context is that participants gain fresh knowledge and articulate ideas that will help both themselves and their peer colleague to develop their teaching practice in the clinical setting. Whilst I have already demonstrated that many of these learning events take place through self-reflection, other opportunities are facilitated via either direct observation or discussion with their peer colleague.

It was evident that some of the tutors were able to learn things about themselves as a teacher, with POT highlighting aspects of their teaching that they had never previously noticed or considered. Previously Brookfield (1995) reported that POT could lead us to 'notice aspects of our practice that are normally hidden from us'. He went on to say that 'for those of us with egos strong enough to stand it, colleagues' observations of our practice can be one of the most helpful sources of critical insight to which we have access'. The following group of quotes all illustrate something participants have learned about their teaching approach:

> "… (name removed) said I was really calm and respectful of the students – I've never really thought I was like that… he said I chatted as a colleague, but there was definitely a line that I was superior to them and they knew that." (13)

> "I have learnt the need for slight restraint because I tend to build a wee bit of humour into it (teaching) and my humour can be slightly sarcastic… I've learned to pull back on that until I know the person

> on receipt can handle it… humour is useful but sarcasm is perhaps not." (15)

> "He pointed out something about communication, I'm a bit of a 'mumbler' and I always wore a mask and a visor but now I don't wear the mask because he pointed out that that could be perceived as a barrier, not necessarily just because of people perhaps not hearing me but if you're talking to a student with a mask on you are sort of distancing yourself from them." (21)

> "You learn perhaps things that you do that you're not aware that you do - that you do subconsciously, because that's how you've always done it." (9)

Section 5.1.1 discussed the importance of having conversations about teaching and how POT can help facilitate this. This is especially important for those who have little opportunity to discuss teaching during their normal working day. The following quotes illustrate some specific examples of where observation and discussion of a particular incident led to a solution or the discovery of a better way to approach something.

> "… we came across that classic cartoon of 'I know you think you've understood what I said, but I don't think you understood what I meant'… so the answer is to somehow check, to actually ask a question which demonstrates whether they've understood." (10)

> "… we talked about how I missed an opportunity to get the students to sit down for 5 minutes and work independently with an x-ray, I basically went in and told them where all the caries was[sic] rather than ask them to do it, I will certainly change this in the future." (24)

> "… when he did the competency with them. He was a lot more thorough in the feedback… and discussion… I'd never seen any of the other tutors… do a competency… he was asking details about stuff that I probably didn't know myself… it was good to see that." (6)

Away from specific examples, the following quotes demonstrate areas of general learning which the participants have observed and discussed. The problems and solutions spoken of here would not be out of place in the discussions of a postgraduate teaching programme. The interesting point here is that most of these participants have not been on a PGCAP or equivalent programme and have no teacher training whatsoever, yet they are able, when given the chance, through involvement in a POT scheme, to identify key issues with their own or their peers' teaching. They are then able to work together to formulate solutions or new ways forward. I provide a few specific examples here to illustrate some of the ways in which participants were able to work towards new teaching approaches.

> "… we chatted about trying to get the students more engaged with us, trying to get more back out of the student with relation to options rather than me just saying 'well we are going to do it this way because…'. I wanted to get the student to reflect a bit more… I made changes the day after POT." (5)

> "… we did discuss how we don't want to ridicule the student in front of the patient… we have agreed there needs to be time set aside in the morning for the student to get prepared and ask questions before the patients turn up." (18)

> "One thing that probably sunk home was… asking a student how they had felt in terms of self-evaluation. I hadn't done that previously but then I realised the value of it… you get a lot of honesty as I've tried it since. You start off from a low point because they're usually aware that they haven't done well, but then you can usually support them and say, well actually I admire the fact that you were candid about that, however, it wasn't as bad as that. So you actually start rising from that and you end up coming out as positive, even though they start off really negative." (5)

Many of the participants focused on timing and structure of their clinical teaching sessions in order to improve student learning and understanding. Following lessons learnt during the POT process, some have adopted new ways to manage the protected time required for competence assessment of an individual student on a clinic and new approaches to efficiently dealing with the necessary 'paperwork' which is principally carried out on a computer. Many identified the difficulty in making time to feedback to the students at the end of a clinic when everyone is trying to pack up and leave; for some this was about setting ground rules for the students and what the expectations at the end of the clinic would be. This particular feedback activity has been enforced following the introduction of the electronic system 'LIFTUPP', used for comment and grading of dental undergraduates, however, this system was not in place during the period of this study. Some tutors learned from their peers that good preparation was the key to successful clinical sessions with the students.

> "I now say at the beginning of all the sessions… what I'm expecting them to take away from it. I didn't always make that clear before." (15)

Time taken for thorough groundwork with the student prior to inviting the patient into the surgery paid dividends during the actual patient's appointment. There was a decreased need for tutors to provide corrective advice in front of the patient that also enhanced the trust and rapport within the student-patient relationship. Other forms of student preparation ahead of a session were adopted from peers. Some made the arrangement that whenever possible instead of the tutor telling the student what to do in front

of the patient they would instead explain to the patient what was going to happen next with an understanding that the student would recognise this as their instruction on how to proceed. This technique was not adequate for every instruction but would help enhance patient and student confidence. This next quote may also hint at another innovative and interesting development to come out of the POT process.

> "I've tried to copy some of what (name removed) has been doing… I would like to try and make the teaching more interesting by the use of visual aids. I bought some nutcrackers, it's just to indicate that incisors give a much lesser purchase than say a pre-molar or a molar." (4)

Some participants learned from their peers to explicitly remind students when they were receiving feedback. Student surveys, such as the National Student Survey are prone to lead the casual observer to believe that dental students never receive feedback on their clinical work. Again, some of these issues have been superseded by the advent of LIFTUPP. There is also evidence that tutors have adopted skills from their peers with regard to awareness of the educational environment especially when demonstrating techniques inside the patient's mouth. Some participants picked up on the idea that perhaps their teaching was very focused and specialised, and that they would do well to relate what they were teaching to the holistic overall picture by discussing with students how certain things link and impact on each other.

Throughout participants' interviews, a common theme mentioned was different methods of answering student's questions. Once again, there is good evidence of participants learning and enhancing their skills in how to answer students' questions, which included: asking students more questions before answering questions; asking more general questions before asking more specific questions; and inviting students to provide patients with explanations rather than the tutor providing an explanation. Other participants commented:

> "… he told me that I don't let the students make the decisions… the main thing I will do now is to get the students to give me their treatment plan or make their decisions verbally and to try and help them come to their diagnosis rather than me just telling them everything." (6)

> "I learned a lot… I like the way she handles her students' questions and doesn't give a straight answer to them immediately, but is guiding them towards answering the question themselves. I noticed that this technique is much better and I could then discuss and prepare for implanting this technique into my teaching." (14)

Throughout the interview, responses there are a number of new strategies the participants have picked up to help with their clinical teaching development. These included ways of maintaining student attention and interest again through questioning but also just through the physical presence of the tutor and where they decide to physically place themselves at any given time. Some tutors realised that they did not have to let the students do everything especially when they were struggling or poorly managing time, while other tutors learned that perhaps they should be

standing back more, giving the student more responsibility and autonomy and not so readily diving in to finish their clinical treatments.

> "(I learned) don't be afraid to get in there, get some gloves on and just look in and point things out to the students, or even do a small bit of the treatment… a good demonstration for the student… sometimes its better just to actually show them what you want." (7)

> "This week in the clinic I deliberately stood up and took my gloves off and said, 'right you do it', whereas before I wouldn't have." (10)

A few tutors realised how engaging their peers were when they discussed their own clinical experiences, bad and good, with the students, and planned to incorporate their own stories more in teaching.

> "Rather than just trying to teach them all the time about what to do, sharing your own experiences is something I have learnt to be valuable." (23)

It was very encouraging to see participants draw inspiration from the teaching skills of their peers; they clearly enjoyed their observations as much as the students must have enjoyed the teaching.

> "(name removed) is exceptionally motivated and enthusiastic, her enthusiasm is just boundless… her teaching seems very effective. Her students are mesmerised by her, she gets them really excited." (23)

> "I thought she had a very humble approach… she is very respectful of both the patients and the students in the teaching situation… the manner of her delivery is particularly inspiring." (4)

This next participant demonstrates how POT can lead a participant to identify key elements of good teaching following a valuable session of observation.

> "The process of observing made me aware of how valuable approachability and empathy is for a clinical teacher. It made me aware that I vaguely attempt to display these qualities... (I) need to consciously promote this in my outreach sessions." (2)

In summary participants clearly feel that their teaching skills have been developed via the POT process.

5.1.4 Quality Enhancement of Teaching

The University of Glasgow Dental School has many quality assurance and quality enhancement procedures and policies in place to measure and maintain quality within the undergraduate degree course. These procedures include regular need for accreditation by the General Dental Council involving visits to the Dental School and scrutiny of clinical and teaching procedures. Other quality assurance and enhancement is overseen by;

1. The Quality Assurance Agency (Scotland) involving external scrutiny of the University as a whole every 5 years in the Enhancement Led Institutional Review (ELIR).
2. The five yearly internal review of the Dental School's teaching as part of the Periodic Subject Review (PSR) Cycle.
3. Annual Course Monitoring of all programmes of study within the Dental School.

Outcomes from these measures are shared at the highest levels within the University. The QAA (Scotland) has been influential in creating a quality framework that emphasises both quality assurance as well as quality

enhancement and ensures there is a quality system in place that is proactive and that strives to ask if anything can be done to improve the current situation.

POT provides one of the few opportunities where tutors can come together and discuss learning and teaching issues in a meaningful way. POT needs to be central to higher education institutions' learning and teaching strategies, and linked into continuing professional development programmes (Hammersley-Fletcher and Orsmond 2005).

The establishment and maintenance of the POT process within the Dental School and associated Outreach clinics that I have been responsible for leading, received praise during the 2014 General Dental Council visit and was held up as an example of good practice following the 2015 PSR within the University. Developmental outcomes for individual tutors contribute to development of the wider teaching community/community of practice within the Dental School, enhancing quality and raising standards, this impact of POT schemes has been recorded in the literature (McMahon, 2007). Quality teaching cultures are developed through the scholarship of teaching and learning, with POT being an excellent vehicle for this (Mårtensson et al 2011).

Improving the success and learning experience of the students is important and this can be achieved by enhancing the teaching skills and confidence of clinical tutors. As previously mentioned, all of these clinical tutors are considered good dentists but few have formal teaching experience or qualifications. Lack of teaching expertise was clearly identified as a cause for anxiety amongst some of the participants. Although this study did not look at student performance before and after POT, there is evidence that tutors' confidence in their teaching skills has improved and it can be extrapolated that this is likely to enhance the experience for the students. The best evidence for growth in confidence was found amongst the tutors who were interviewed following their participation in multiple cycles of the POT process.

> "I came into it with very little (knowledge of teaching), repeating the process has made me see I have improved… Enhancements through the process had come to me already but there is always more to learn." (22)

> "I think this (POT) has given me some training, I have adopted what I learnt with the students to use with the DF2's[1] now as well. I am more confident and happy to have certain conversations with the students (which before POT would have been avoided)." (23)

In an attempt to raise the profile of POT as a quality enhancement process, paired tutors are now encouraged to issue each other with a certificate of participation (see appendix VII). Evidence of participation in POT is expected to be shown within the professional development record of clinical tutors working in the outreach centres within Greater Glasgow and

[1] DF2's- Newly qualified dentists working in a supported environment with the provision of postgraduate training

Clyde. This was a decision made by the Associate Medical Director (Dental) of GGC following the results of the pilot project of the current POT scheme. For tutors working in the Dental School or in other health board locations it is evidence of scholarly activity and professional development in teaching practice for formal appraisal and personal development processes there.

Although no formal feedback has been collected from the students asking for their views about the POT process there is anecdotal evidence that at least some students have appreciated the existence of the scheme and its role in supporting the development of their tutors and their teaching approaches.

> "Before we did it (the observation) we had to explain to the students what was going on, students immediately think it's them under double scrutiny. They seemed to like the idea that I was being assessed instead of them. I think they appreciated that we are all still learning too and that teaching is not always that easy." (18)

In summary, the current POT scheme has been recognised as a powerful method of quality enhancement throughout clinical chair-side teaching at the Dental School and its affiliated Outreach Centres. In the future, the scheme can be used as a platform to nurture a culture of debate with presentations before and after the POT process. This could give tutors a say in the direction of teaching developments with healthy discussion directing practice away from the superficial, cosy and stagnating. Enhanced academic debate about 'how' rather than just 'what' we teach our students will

continue the Dental School's journey to provide high quality learning opportunities for our students. It is important for tutors in our outreach centres that they are not working in 'pedagogical solitude' (Martsolf et al 1999), and POT is a very cost effective way of doing this.

5.2 Key Considerations- Qualifications, Limitations and Other Methods of Enhancing Teaching

Throughout the study, there appeared to be some differences between individual tutors who had completed the PGCAP or other teaching qualification and those who had not. The sub-sections here will discuss the value of having participants with teaching qualifications within the scheme, as well as the limitations of the scheme and what could be considered instead of POT for development of teaching skills within this group of clinical tutors.

5.2.1 POT Highlighting the Value of a Postgraduate Teaching Qualification

The findings suggested some differences between the responses given by those tutors who have completed a postgraduate teaching qualification (PGQ), those who have not completed a PGQ but who had at least 8 years of experience as a senior member of staff with a teaching remit (E) and those without a teaching qualification and limited teaching background (No Q). These differences are indicated in table 1 section 4.1.1. On analysis of the data, it became apparent that it was not so important whether someone was in a clinical academic or in a purely clinical role, but rather, it was

found that the qualified scholars of teaching and learning engaged differently in their teaching practice and hence with the POT process. Clearly the Postgraduate Certificate in Academic Practice (PGCAP) and Postgraduate Certificate in Learning and Teaching in Higher Education (PGCLTHE) are not the only formal teaching qualifications available to staff but these were common qualifications that participants were either currently studying or had previously obtained (N=8). These qualifications are offered at most Universities in the UK and participants had experienced a mixture of face-to-face teaching and online learning. New and junior teaching staff employed by the University of Glasgow, are expected to complete the PGCAP qualification as part of their probation requirements and so the programme is fully funded for these staff (N=4). Some NHS tutors had or were undertaking the PGCLTHE online programme either as self-funders or following successful application for special NHS grants (N=4). The group containing experienced teachers without a teaching qualification (N=5) all had responsibilities for course structure and administration as well as a clinical chair-side teaching role, these participants were all employed by the University. The third group had no teaching qualifications and varied but limited teaching background, this cohort were principally employed by the NHS (N=25). Analysis demonstrates that the 'PGQ' group are more engaged with teaching techniques, models of learning and student centred philosophies.

> "Chairside teaching is one to one… it's much easier to maintain a level of engagement and respond to individual student needs. You can think about Millers Triangle and where an individual student should be working on that for a particular procedure at a particular stage of

> their training. That helps in deciding whether or not to take over or to encourage them to power through" (11)
>
> "You need to work on strategies to interact and engage them – that makes a huge difference to teaching". (8)

In most cases, the participants were aware that they had brought knowledge obtained from the PGCAP/PGCLTHE programmes directly to the POT process:

> "I think it's useful that I've done the PGCAP and have some understanding in educational theory and practice. I think that helped me give feedback and it certainly helped me in what I do in terms of being a teacher". (11)

This is an important point as having these participants within the POT process enhanced its value and raises the quality level of what was shared within the process over time. It is clear that they have something extra to offer and can help to disseminate this to other participants who have no access to a postgraduate qualification. This group more than any other enjoyed the opportunity, through feedback, to articulate previously undisclosed interpretations of their teaching and this helped them to more fully understand some of the terminology surrounding pedagogy they had encountered on their teaching programmes.

Chadwick (1995) also noted an increased willingness to share best practice amongst this group. Thankfully, however, these qualified participants did not bring an unwelcome amount of pedagogical jargon to the discussions as

has been seen in other POT studies (Weller 2009). Previous authors have also indicated that reflective practitioners are involved in comparing the quality of their teaching against experiences and knowledge of educational theory (Hammersley-Fletcher and Orsmond 2005), this knowledge is an advantage the PGQ group have over the others.

Being aware of the value of their studies in teaching practice has prompted some of those with the qualification to call out for increased prioritisation of scholarly activity and that this should be instigated at a more institutional level:

> "It would be sensible to continue with something like this (POT) as part of our development. But also I think it's essential that the school facilitates and promotes more scholarly activity". (16)

Participants in the 'PGQ' group found that they could be helpful to others in developing their teaching skills through POT:

> "It's great if you have been struggling to teach something, some people have seen what I do and they have modelled what I do, and asked about how I've done it, and I have done the same with them". (11)

Those with a 'PGQ' seemed to view the process differently and gain more benefit from it, their views were more in depth and overarching. The following quotes link back to the work previously mentioned by Kugel (1993), giving further evidence that more developed teachers focus more on the students.

> "You get the benefits of watching others teach because you're removed from the direct process, you're able to view how the students are responding. It's quite good to see how the students behave." (7)

> "I was able to just look at what he was doing and how the students were responding to his strategies to deliver the teaching, it makes you think about your own strategies and how that links in with what I have been taught about teaching" (16)

In most realms of education, student centred teaching is seen as good practice. In clinical teaching, it can be difficult to promote this stance when the over-riding focus has to be on the best interests of the patient. While all groups shared a strong obligation to the patient, the 'PGQ' group were also able to blend this well with a student centred ethos.

> "make sure that the patient is informed…they're our first priority… but actually think- the student could probably do that or could be directed to say these things instead of me." (7)

Those with a 'PGQ' seemed better equipped to combine patient safety along with enrichment of the student experience and protection of the student-patient relationship that is essential to promote confidence and trust on either side.

> "…we don't want to ridicule the student in front of the patient… the patient-student relationship is very important." (16)

In contrast, for some tutors, care of the patient was so prioritised that it seemed to be at the expense of the student.

Many of the participants were well aware of the issues faced when dealing with a patient as well as trying to teach a student. The most common situation experienced is about how to deal with situations where the student needs correction or when procedures which students are undertaking require intervention. Again, as you would expect all clinicians revert to putting the patient's interests first, but through the POT process some were also able to reflect on how this affects the student:

> "What exactly do you say in front of a patient especially if a student's doing something inappropriate? I think you need to be diplomatic…but then brutally honest with the student when the patient is not listening, it's essential that that happens." (10)

Following POT some of the 'No Q' group participants were aware that perhaps there was a better way to deal with the triad relationship between the teacher, student and patient:

> "On the clinic I tended to deal with the clinical situation and get on with it so the patient is not stuck there for hours, but maybe I'm missing the opportunity to test students a wee bit more in that environment."(1)

> "(when watching a 'PGQ' participant), their explanations tended to be much more directed at the student (rather than the patient), leaving the student to communicate the issues directly to the patient. Instead of asking the student what they will say to the patient I just say it directly to the patient, I'm thinking maybe that's not good for teaching?" (6)

As the next participant points out, even though this triad relationship exists the teacher may also have between two to five other students to deal with on a particular clinic, which clearly complicates their teaching management:

> "...for patient safety reasons the dentistry has to take over rather than teaching sometimes. There are ones (students) that suggest something completely outlandish and if I've got five other students on a clinic, I can't let them make that decision in front of a patient…it's a bit of damage limitation…pick and choose which ones (students) to be prescriptive for, you have got to get a measure of the students". (19)

Another highly recognised problem with clinical teaching is the length of time it takes a student to complete a procedure. As a result of the POT process some participants became more aware of just how long some procedures were taking. Again sometimes it is difficult to keep track of time when there are multiple students and patients to look out for and the clinical tutor themselves is extremely busy.

> "I've probably learned to be aware of how long students are taking and then just try to push the clinic on. I know its clinical teaching but you have to look out for the patient too. I think I need to be a wee bit more aware of what's going on in the clinic and ensure that the students are pushing on and not dilly dallying about because it's not fair on the patients first and foremost." (7)

It was clear from some participants in the 'No Q' group that they just 'didn't know what they didn't know', with this then being translated to the student. In this example, students were given advanced knowledge before they had mastered skills that are more basic and were unable to understand the leap.

> "… I was teaching a point which was perhaps not what I should have been teaching- I thought what I was saying was quite practical but it probably wasn't appropriate." (1)

Some in this group were found to be demonstrating what would be considered poor teaching practice.

> "I have a very relaxed, friendly relationship with the students…I really only go over to them if they ask, rather than watching over them as it were." (17)

For the 'No Q' group one of the major advantages of the POT process was that they received reassurance that their teaching practice seemed similar to other teachers. Blackwell and McLean (1996) found that a positive teaching observation experience contributed towards reassurance and confidence building.

> "I realised that we really do the same thing which was very reassuring." (28)
>
> "You see (via POT) the pattern followed by other tutors is pretty predictable, even though we haven't been standardised. It's reassuring that most of us approach it (teaching) in the same way." (21)

The 'PGQ' and 'E' groups also mentioned similarity in teaching style but did not indicate this as a source of reassurance. The 'PGQ' group were much more likely to hone in on aspects of teaching they had observed which could be adopted into their own portfolio of teaching approaches armamentarium. The 'E' group had no need for reassurance but were perhaps more closed to ideas about changing their practice. A similar approach to developing teaching approaches did begin to show for the 'No Q' group once they had entered into their 2nd and 3rd cycles through the POT process. This can be seen as one indicator of the development of their teaching practice and evidence of the value of POT (see later section on what the tutors learnt).

Those in the 'PGQ' group recognised the value of their qualification and the disadvantage that the 'No Q' group tutors had.

> "… it (PgCAP) certainly helped me… if you ask one of the others (non PGQ) to come in and do this (POT), versus someone who's been on PgCAP… you would get a different quality of feedback. They would be looking at different things… it's useful to have some training… (like) the PgCAP process." (11)

The 'E' group were held in esteem by the other tutors as experts in the field of teaching due to their experience and involvement in course design and administration but this esteem was perhaps in some instances misplaced when it came to teaching skills (there is an example of this in the limitations section 5.4.2). Participants in the 'E' group did engage with the POT process but the depth of their feedback and reflection was not as insightful as one may have imagined. Some admitted they did not want to be 'caught out' displaying what would be regarded as poor practice due to the fact that they had been teaching for so long and were in an elevated position. Some in this group found it difficult to fully engage in reciprocation, instead they felt it was their job to impart knowledge to their paired tutor, perhaps this was just a habit that was hard to break (an example of this was given in section 5.2.1). While Gosling (2002) does describe an appraisal-orientated model of peer observation, the current scheme clearly sits within the peer review model where there is mutuality and respect for each of the participants as equal. Again Gosling's (2005) paper indicates that there should be no distinction between who is the developer and who is being developed, hence as argued by Cosh (1998)both the observer and the observee have equal potential for development. In the future, it would be

interesting to see the results of having participants from this 'E' group paired together as this did not happen during the time of this investigation, unlike for the other two groups. This is an interesting finding, and one of importance to the wider institution and to Learning and Teaching Centre. It may be impractical to ask these particular individuals to participate in a taught teaching course now, but perhaps mandatory engagement with the universities RET[2] scheme would be appropriate in encouraging these relatively experienced individuals to engage more formally with literature on teaching theory and methodologies. Previous authors have commented that this group are less likely to participate in teaching-related continuing professional development activities (Martin and Double 1998, Lueddeke 2003, Botham 2017) but that they may be more interested in working with educational developers within their teaching setting (Ferman 2002, Green and Little 2015).

In summary, this POT process has highlighted the value of postgraduate teaching qualifications as having a considerable effect on the insight of their recipients. Having such qualified individuals within the scheme certainly enriches it with regard to the dissemination of good teaching practice and topics for conversation during feedback sessions. Comparison between these groups has also highlighted what non-qualified tutors do not often consider when attempting to analyse and develop their teaching practice. It has also shown, that where more senior staff members are

[2] RET scheme- Recognising Excellence in Teaching. A scheme that is aligned to the UK Professional Standards Framework and accredited by the Higher Education Academy.

concerned, there may be a lack of good theoretical knowledge about different teaching practices despite their years of teaching experience, but where no teaching qualifications have been gained. Tutors need to stretch beyond being subject specialists in dentistry and become teaching practitioners who reflect on learning cultures and teaching philosophy (Boud and Walker 1988).

5.2.2 Limitations of the POT Process

During the course of the interviews some limitations of the POT process were highlighted by the participants: the effect of being observed (discussed in section 6.1.3); participants being too nice or polite to critique appropriately; not being teaching experts; participants being distracted from the teaching processes by aspects of clinical dentistry; staff shortages; tutors who did not consider teaching to be their main focus; time and logistics including geography; number of observations to date; being too familiar with a peer partner and issues regarding the dissemination of bad teaching practice. As mentioned earlier a further limitation is imposed when colleagues do not see themselves as genuine peers although the majority did have real mutuality and respect for each other regardless of their status in the department.

Some participants found it difficult to separate observation of clinical dental practice or content of the session from observation of teaching practice.

This may have been an attempt for some to stay within their comfort zone and area of expertise, for others it may have been easy to be distracted by clinical practice that was of interest.

> "… (name removed) was perhaps looking more at (technicalities of the procedure I was teaching rather than how I was teaching it.)" (11)

Previous authors would perhaps consider this to be poor reflective practice with the focus being on content asking "how" of the observed session rather than "why" (Hammersley-Fletcher and Orsmond 2005).

As a result of this focus on content, several participants felt it may be more fruitful to have observations out with their immediate dental discipline so they would be less familiar with clinical treatment procedures, thus allowing them to focus on the teaching approach.

> "I think it would be quite interesting to have people from different specialties mixing it up, because it would be easier to disassociate the clinical side from the teaching side." (10)

> "I would find it easier to go and watch someone in (a different department) and have limited knowledge of what's going on just to see how they're delivering their teaching." (9)

Although this next participant admits the line between 'dentistry/content' and 'teaching' had become blurred he correctly points out that the students are learning how to be dentists by following the example of their tutors, this is part of what is often termed 'the hidden curriculum'. The following quote also highlights the unique nature of clinical POT where something

fundamental to the teaching of dentistry would not have been picked up by a non-clinical observer.

> "... there was a cross infection issue… I wasn't there to look at that, I was there to observe teaching but I guess part of that teaching is setting an example for the students. Someone from the teaching service[3] would not have picked that up but this scheme makes it possible. It was an uncomfortable thing to do, you don't expect students to get it right all the time but I guess staff are different." (32)

Where peer pairs come from the same workplace an added conflict was identified. It was difficult for observers not to 'help out' when the clinics became very busy and students were waiting to have items checked or questions answered. When clinics are busy, this is a potentially rich time for the observer to witness how their peer copes with this familiar pressure whist maintaining the focus on teaching.

> "The thing that is difficult is that you are itching to help out when you see how busy your colleague is, the fly on the wall status is hard to keep." (22)

A further limitation of the scheme was identified as staff shortages. Clearly for the scheme to work the observer needs to be taken out of the teaching workforce so that they are free to observe only. This adds pressure to already tight staff timetables and multiple participants experienced aborted attempts to undertake POT observations until circumstances changed to allow the observations to take place.

[3] Learning and Teaching Centre

> "The one difficult thing in the process is, for example, in (our) department we are very short of clinicians and it's very difficult to organise." (10)

> "… the first day that I tried to observe (name removed) it was very, very busy so you felt it was just a matter of getting through everything… that day it was all go and they were short-staffed, you have to help." (34)

The participants themselves can also limit POT. The participant quoted below had little interest in teaching and no real desire to develop her teaching practice, but did recognise the value in the POT scheme's potential to help her develop new skills for minimal effort.

> "I am not really interested in teaching; my main point of interest is scientific development… so through POT I can be taught best teaching techniques from those who study teaching. Nowadays, it's impossible to do everything – once you start going to some teaching courses and so on, you cannot really do any scientific work because it's just time consuming." (14)

The major limiting factor in most innovations is time and this was no exception to the POT scheme.

> "It would be nice to have a bit more time to do it... we managed a post-observation meeting but not in protected work time… it was done during a short period of our own time and it was a different day so things get forgotten." (19)

> "Personal development with regard to teaching was time well spent, but, time out of clinics, my clinical boss might have a different opinion! It was also tricky to meet up before and afterwards." (22)

The logistics of getting time off from scheduled clinics was difficult for some and in at least one case may have had financial consequences.

> "I was meant to be working in practice and had to cancel patients to go. I couldn't get cover, there wasn't really any cover." (34)

Another participant was grateful that I was able to offer to cover their clinic to allow them to take part. Although this worked well during the study period, when research time was given up to help with the logistics of the project, this clearly does not have long term viability and could not be offered to participants working within alternative dental specialities.

> "We managed to fit it in, I didn't think it was a real issue. It would be harder if you had not offered to cover the clinics." (37)

Travel time and logistics were also a factor for some participants with observations away from their usual workplace. For one participant logistics were the only factor considered when agreeing to a peer pairing;

> "… you are obviously going to choose a partner at a centre that is easy to get to… I don't think it really matters who you are paired up with, the advantage is just convenience that's all." (17)

> "The only thing I would have changed... (was) the geographical location." (8)

As well as travel time and logistics causing problems for the participants it was also a point of discussion for the Clinical Directors of the primary care services within the health boards. Some Clinical Directors were happy for their staff to arrange for funded travel and time away from their usual work as long as they could persuade a colleague to cover for them. In other health

boards, participants were only allowed to participate with a peer within their own area with limited unfunded travel time.

Other comments regarding time related to the date within the academic year, with participants indicating that POT is more useful during semester 1 (August- December) when the students are less adept at clinical procedures they are undertaking and with more intense teaching intervention being required.

> "… part of the problem… was the time (in academic year) we were observed… the students were more or less ready to leave us." (17)

At the time of the interviews, many participants had only been through one cycle of POT and they recognised that this was a limiting factor. They realised that it would be important to repeat the cycle multiple times and that this should be done with different peer partners to maximise the effect that POT can have. Being too similar to a peer partner was also seen as a limitation.

> "I think peer observation of teaching is very good. I think it's always good to see how other people see you. You probably need more than just one person to view you and everybody views it slightly differently, so keep going." (9)

> "(Name removed) and I are quite similar, I may have had different feedback from someone else." (11)

Some participants felt that they had not received appropriate critique from their peer, sometimes in relation to aspects such as seniority and personality, which were discussed in section 6.1.1.

Another reason some participants felt reluctant to critique colleagues was their concern that they were not qualified to comment on aspects of teaching practice;

> "I think it was difficult to be critical of someone else's teaching when you don't feel like much of an expert yourself." (5)

Gosling (2009) claims that many staff need further training or preparation to be able to effectively evaluate and provide feedback on others' teaching. Yiend et al (2012) postulated that peer observation of teaching sessions carried out without any prior development in the delivery of critical feedback can lead to an inability to provide critical feedback to the observed. Cosh (1998) and Keig and Waggoner (2000) also advocate the importance of pre observation training. In Bovill & Cairns (2014) a peer's failure to criticise and provide suggestions for development was the leading cause of dissatisfaction.

A method previously used to counteract this lack of training or experience has been to employ a hybrid model as suggested by Atkinson and Bolt (2010)where different types of peer are involved in multiple observations in order to engender an overall culture of reflection on teaching practice, but this type of scheme is not always practical and would have been difficult to employ in this particular situation.

Following on from this, another concern and possible limitation of POT was the potential for dissemination of poor teaching practice (Yiend et al 2012), this is perhaps impossible to detect within pairings where there are very limited teaching skills. Participants have reflected on the possibility of this. This next participant even thinks this may have a unique professional slant:

> "The danger might be that bad teaching is disseminated that way, maybe something that dentists like, might horrify educationalists." (20)

It would appear that the tutors who were 'thrown in at the deep end' with teaching, try to make sense of how to teach by using successful models from within their practice of clinical dentistry, which do not always necessarily translate or adapt well to educational models. As part of the non-teaching side of their position, one clinician was accustomed to the concept of a 'surgical pause'. A surgical pause is a specific check made within a general anaesthetic operating theatre to check that the correct patient is present, that they are about to have the correct procedure carried out and at the correct site. Following discussion with her peer, this clinician decided that it would be good to introduce a 'teaching pause' where a similar list of balances and checks could be made. Although this may not be recognised teaching philosophy it makes sense for untrained clinical tutors to draw inspiration and structure for their teaching sessions from parallel situations within their specialist discipline that they are more comfortable or familiar with. Not only did she want to make clinical checks as above she wanted to confirm that the student was fully informed regarding the skills

and knowledge required for them to continue with the patient consultation that day.

In summary there are a variety of limitations in the current POT process, many of these are without solution within the scheme but do highlight areas where further training could be targeted. Many of the limitations could be overcome with more time, money and staff but the scheme does well to have achieved what it has with the limited resources available.

5.2.3 Other Methods of Enhancing Teaching Skills

During discussion some participants considered whether other forms of developing their teaching skills would be preferred to the POT process. A few mentioned formal teaching qualifications:

> "… some sort of didactic course or university certificate. I think if you have the ability to teach better because you have been taught to teach better that's going to improve everything." (5)

Others mentioned teaching seminars and away days such as those previously described in the literature (Blackwell and McLean 1996) and had concerns that they had not previously received any formal tuition with regard to teaching methods.

> "Perhaps a better method would be more formal lectures and things on the subject of what we're supposed to be doing… I've not had any formal teaching training." (17)

It was felt that more institutional support would be required for delivery of any didactic courses; bearing in mind institutional support in this context refers to both the University and the NHS. Although official University policies imply there may be time and even sometimes funding to support attendance at teaching courses, in reality this does not always materialise, and support from the NHS to undertake teaching courses is even less clear-cut. The first quote here is from a University employee and the second is someone working for NHS Primary Care.

> "So I think it's useful to have some training and maybe that would just be having gone through the PgCAP process... I think it's essential that the school facilitates attendance at seminars and lectures, supportive help like in-house education seminars … in our field, and make sure that we could get leave to attend things like that." (11)

> "I can't see a better way of doing it (enhancing teaching skills) within the constraints of what we have available… it would be nice to have a boss say these are the standards and this is what you should be doing on a day to day basis. Maybe the PG Cert is the way to go if you're supported, but how are we all going to get supported in the NHS? Or make development in teaching a requirement for our CPD that would give us more of a framework." (21)

Evidence of the development in teaching skills via POT at Performance and Development and Appraisal Reviews is now mandatory for clinicians in the Medical School at the University of Glasgow but not yet for the Dental School. To encourage use of the POT process as evidence of scholarly activity, a CPD certificate of participation has been provided for participants (see appendix V) in order for them to be able to certify completion of POT for each other. However, as the participant above has indicated, making POT certification mandatory would also stimulate the

supply and demand of more training opportunities and formal teaching courses.

Some NHS Primary Care participants mentioned the START course that they had completed prior to starting as a tutor on the student clinics. As previously introduced, this is a 'train the trainers' type course provided by NHS Education for Scotland (NES) for dentists starting out with a Vocational Trainee[4]. However, several participants considered that this particular course is not fit for purpose.

> "… we have been on the START course, some of that was really out there- we were asked to draw a picture of what a VT trainer would look like- I hate that sort of thing and it's not even relevant to undergraduates." (18)

This next participant still clearly felt out of their depth following the START course and had to draw on personal experience to inform their teaching approach. After a while, it became apparent that drawing on personal experience alone was not adequate for the effective teaching of chair-side clinical skills and could potentially expose students to inappropriate and poorly evidenced information.

> "I had done absolutely no teaching. I didn't really think the START course was very relevant, certainly not to undergraduates. I was just teaching from my own experience in practice… the real world is definitely a lot different from the Dental School. I should have had more help with teaching." (34)

[4] Vocational Trainee, newly qualified dentists in the UK completing their first year post qualification in a salaried post with the support and mentorship of an experienced primary care dentist.

When discussing methods to develop teaching skills, many of the participants appreciated the authenticity of POT as a development tool.

"You can send me on as many courses as you like on how to be a super teacher, but evaluation of that is seeing what actually happens on the day." (16)

Several authors have also indicated that enhancement of teaching practice is more likely when activities are carried out within the social and disciplinary context of where the teaching takes place (Knight and Trowler 2000, Clark et al 2002) . This form of development has greater potential for longevity of change in comparison to one-off more removed development activities (Knight et al 2006). Some participants suggested that a group meeting to discuss experiences and findings from the POT process would be valuable to share on a wider scale with a more experienced educator present, and that this should be visited regularly at one of the scheduled trainers' education days. Previous authors have also recognised the benefits of entire department engagement to help identify the key development needs of staff (Gilpin 2000). There was perhaps a recognition between participants that they did not know what they did not know and presumed this might also be the case for the peer who was observing them. Whilst this did not detract from the usefulness of POT, it could perhaps be seen as one of its limitations.

"At the study days a little bit of time could be set aside for … what we got from POT… peer review is really good, but if you're being judged by your peer who also doesn't have an educational degree…" (19)

In summary, participants could all benefit from participation in a teaching qualification. In the absence of this, the authenticity of the POT scheme provides development potential in excess of that offered by short didactic courses or one-off lectures. The POT process itself can be enhanced by follow-up group discussion to widen dissemination of good practice and identify areas where practice is potentially unsound but has gone unnoticed within the peer pair.

5.3 Participants Overall Reflections on the POT Process

Following a complete cycle of the POT, process participants were asked to reflect on their overall experience. To summarise their comments, they found the process; authentic, focused, confirmatory, positive, instructive, transferrable, valuable and not as much of a nuisance as they thought it would be!

> "I think going through an experience like that just makes you think more about your delivery and approach to it (teaching), your interaction with other people... it certainly was authentic and worthwhile. It was a good focusing experience." (5)

> "I think it's important to have someone look at you to confirm that you conform to what would be seen as satisfactory… it is a really positive tool." (18)

> "This (POT) is a good idea, we get little feedback or instruction about teaching." (22)

> "…it (POT) has also made me think about what I do in other sessions where I am not necessarily there to give clinical teaching but where students are present observing and how I get them involved." (23)

> "Well I must say before it I was a bit sceptical and I thought I can't really be bothered with this, but actually when it came to the bit I

didn't find it any nuisance at all and it was useful. I think it was valuable." (31)

In summary, the POT scheme has not been without challenges but has been almost universally accepted and is recognised as an effective and valuable conduit for the development of teaching practice amongst clinical chair-side tutors at the University of Glasgow Dental School.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Healthcare Professionals have often found themselves inadequately prepared for roles in teaching. The current study has shown this to be true of the NHS tutors at the University of Glasgow Dental School and suggests that some groups of academic staff also feel inadequately prepared for their teaching practice, specifically those who have not obtained a teaching qualification or been mentored only in regard to research during their early career. This study has highlighted that many of our front line teaching staff have a desire for further development in the field of teaching and scholarship. The University and General Dental Council share the desire and necessity for professional development leading to the provision of high-quality teaching and quality assurance of undergraduate dental degrees. Introducing this POT scheme and evaluating its impact has clearly enhanced participants' knowledge and skills with regard to teaching. Opportunities for quality enhancement of teaching through the development of an enriched teaching dialogue and the creation of communities of practice have all had an impact on the Dental School. Positive feedback from the Periodic Subject Review and GDC visitation as well as the Associate Medical Director of GGC approving the expectation of POT CPD certificates to be in the portfolio of all teaching staff at the time of appraisal are all external measures of the success of the scheme.

The POT scheme has inspired and empowered tutors to change, adapt and develop how they teach undergraduates in the chair-side clinical environment and given them personal ownership of this process.

Teaching in the chair-side clinical environment is extremely demanding. In addition to the barriers already set out in the literature this teaching environment has provided further layers of complexity to the POT process. These complexities include the need to provide ‘one to one’ teaching within small groups with varied student ability, skill and knowledge. Students within this environment require continuous re-assessment to ensure patient safety and provide developmental feedback. Each patient brings his or her individual needs with regard to communication, anxiety management and treatment. Each student and patient are within a private or semi-private clinical area so the tutor is constantly making judgements as to when the student is safe to provide independent treatment while they interact with other members of the group. Each student has a different nursing assistant and tutors are required to make a judgement on the effectiveness of this working relationship and their ability to function as a team. The environment requires flexibility and multiple contingency plans for when things do not go as expected. Contingency plans need to be fluid and dynamic to fit any given clinical situation. Time management is extremely difficult and it is frequently impossible to determine exactly when a clinical session will end. Questioning and correction of a student requires careful management when a patient is present, because of this, tutors are required to retain information for later discussion, complicated again by having

multiple students to supervise. Overriding all these factors is the professional duty to ensure patient safety, which does not always facilitate the desire to maximise student experience and practical exposure.

It is of interest that Peers were generally not judged by their experience in teaching but rather for their years of clinical expertise, this suggests the need to raise the status of teaching within the dental school and the POT scheme attempts to correct this issue by raising conversations about teaching. Many of the participants were more concerned for loss of face over clinical dentistry being done badly than losing a reputation for teaching; this condition suggests that there is far less to lose in making changes to teaching. This is a potentially useful stance from which to be using POT (and other education days) to encourage tutors to be open to changes in their teaching.

The POT scheme under evaluation has provided a social structure for informal scholarly interactions. Prior to the POT scheme any formation of a community of practice focused on teaching, was fostered solely through occasional study days, symposia and when coming together to conduct examinations. The POT scheme has provided a further opportunity to share, develop and maintain the specific knowledge gained throughout the community of tutors and has encouraged formal but mainly informal learning within the physical workplace. As a facilitator for the community, POT may not be able to ‘standardise’ teaching but it can lead the way to ‘normalisation’ and enhancement, with tutors constantly checking their own

and others' attitudes and actions to ensure a standard of professionalism and good practice. Experience of the POT process has led tutors to identify elements of good teaching that were not overtly apparent to them before, such as the value of approachability, empathy and displaying your own fallibilities to help students put failures and disappointments into context allowing them to build personal resilience.

Tutors recognised and welcomed feedback when given. Positive feedback provided reassurance and was actually one of the most important outcomes of the POT scheme for the tutors without postgraduate teaching qualifications. The POT scheme made tutors more aware of the importance of getting feedback from different sources. The scheme has allowed the NHS tutors to build their own personal identities as educators where previously this identity was only really held by the university staff.

The POT scheme has been an authentic and acceptable way to develop teaching practice in clinical skills while also being pragmatic and practical. Given a landscape of limited time and monetary resource, POT is effective and helps promote a healthy teaching ethos. Evaluation of this POT scheme has strongly highlighted the value of a postgraduate teaching qualification and POT may go some way to disseminating good practice from individuals in the scheme who have benefitted from having completed such development qualifications, thus maximising the mutually beneficial outcomes from both PGQs and the POT scheme.

It would appear that senior academics placed in a teaching role without a postgraduate qualification may feel pressured into conveying that they have appropriate experience in teaching when they are not entirely sure they do and that this pressure becomes exaggerated over time. Keeping a diary throughout this research has enabled me to be more aware of my decisions and track how my ideas changed over time. Reflexivity revealed how my worldview changed from a belief that the senior academics without a teaching qualification would be as good at providing feedback as the group who were less experienced but had obtained a teaching qualification. This finding is important on an institutional level. These senior teachers may not be as good at teaching as we expect them to be. They may be efficient from a logistic and organisational viewpoint but may have limitations in knowing how to develop chair-side clinical teaching.

Glasgow dental student levels of satisfaction have remained close to or at 100% since before the start of this study (according to the National Student Survey). No obvious changes in student satisfaction ratings have been detectable. The Browne Report (Review, 2010) has however emphasised that peer review processes are one way to demonstrate the quality of the student experience through reflecting on the quality of teaching, learning and assessment practices. Anecdotally, when students become aware of the POT process occurring in their clinics, they appreciate the effort made by staff to improve and hone their teaching skills. One such intervention employed by a tutor was the adaptation of a ‘clinical pause’ used in operating theatres to create a ‘teaching pause’. This is a great example of

dentistry specific teaching that was an explicit and welcome change observed by the students. This is also a good example of how dental peers observing each other can ensure the recognition and development of disciplinary authentic and relevant teaching practices. However, even in the face of excellent student satisfaction there is always room for improvement in teaching, staff morale, the value of scholarship and motivation.

6.2 Answering the Research Question

This thesis has analysed and discussed the challenges and limitations in the development and implementation of a Peer Observation of Teaching (POT) scheme for chair-side clinical tutors teaching at Glasgow Dental School and its associated Outreach Centres. In the absence of increased funding, time and resource, POT, despite its limitations, provides positive development of tutors' teaching skills and enhances their sense of identity as teachers. The scheme is acceptable to the tutors who have used it and the vast majority have a positive attitude towards their involvement in POT. The impact of the scheme was comparable whether or not a tutor had years of experience, a postgraduate qualification or were a relatively inexperienced NHS tutor. Differences between these groups were in relation to the quality of feedback provided and the possible teaching innovations adopted. Therefore, in answer to the overall research question there is great potential for Peer Observation of Teaching to develop the teaching practice of a community of chair-side clinical dentistry tutors with diverse backgrounds.

6.3 Recommendations

There are four recommendations arising from the research. The first looks towards further development of the now established community of practice in order for it to reach maximum potential. The second looks at how to embed POT for the development of chair-side tutors within the Glasgow Dental School. The third recommendation considers the wider national and international implications and the direction required to improve the quality of teaching provided. Enhanced teaching quality should produce better trained students and hence safer patients. The fourth recommendation considers the future direction of research in this area for the benefit of dental schools internationally.

Recommendation A: Development of a Community of Practice

The study highlighted that some clinical tutors felt isolated and ill-informed about teaching and that they are uncomfortable in this situation. Tutors require support to develop their teaching skills. Introduction of the POT scheme has impacted on these individuals positively by providing development opportunities but has also highlighted the need for further engagement in teaching development. This process has provided awareness for a growing community of practice at Glasgow Dental School, especially among outreach tutors who have been most engaged in continuation of the scheme. Involvement in POT has established a community of practice for discussion, scholarly activity and educational research, this needs to be harnessed and built upon. Tutors need to feel more supported by academic staff within the dental school and university.

I propose the development of an online resource with short, practical teaching tips (including suggestions of what not to do), discussion fora (including a platform for reflection on POT experiences), training resources (especially for new tutors, on subjects such as how to provide critical feedback to a colleague) and a tool to access and organise scholarly activities such as POT. Production of training and calibration videos so that tutors can compare their performance and pick up new skills would also be useful and available for further evaluation of teaching skills development. This online resource will provide a means of sharing information about ongoing educational research and signpost ways for clinical tutors to become involved in scholarship and research. I recommend sporadic involvement of a specialist academic developer from the Learning Enhancement and Academic Development Service (LEADS) both in the online setting and on occasions when it is possible to get the community of practice together in person.

From within the community of practice, tutors with teaching qualifications should be encouraged to share their knowledge by mentoring less experienced colleagues. Tutors can use the community to help them engage in further educational activities, including the Recognition of Excellence in Teaching scheme at the University of Glasgow.

Recommendation B: Embedding POT at Glasgow Dental School

I suggest that POT needs to be embedded within the mainstream activities and quality enhancement processes of Glasgow Dental School. The scheme

has already been held up as exemplary through the Periodic Subject Review (PSR) and commended by the GDC at their last inspection so should be continued with universal participation of all clinical tutors.

All clinical tutors with teaching as part of their job plan should be expected to provide evidence of professional development in teaching. Evidence of participation in scholarly activity should be available to students detailing which staff take an active role in maintaining and improving their subject knowledge, teaching skills and teaching creativity. Students value teachers with subject expertise and well developed teaching skills. If this recommendation is not currently deemed feasible or acceptable it could form part of a 'bottom up' approach encouraging engagement of all new staff.

I recommend a move to the more appropriate terminology of 'peer supported development' (PSD) or 'peer supported teaching development' (PSTD). Gosling and O'Connor (2009) have suggested a need to move away from the term 'peer observation' towards the direction of 'peer supported review'. I am in favour of this terminological shift as it lessens the concept of POT being a passive tick-box exercise and portrays the process as requiring active participation in service of a colleague. I do feel however, the term 'review' still provokes negative connotations and hence prefer peer supported development or peer supported teaching development.

Recommendation C: Professionalism and professional standards: the impact of teaching quality

Patients have the right to expect the best possible healthcare and to always be treated with dignity and respect. In recent years the UK General Dental Council, in their 'Preparing for Practice' document (GDC 2015), increased focus on development of communication skills, complaints handling and matters of professionalism for undergraduate dental students. Now that these elements are embedded in all UK undergraduate dental school curricula the GDC may next turn its attention to the quality of dental teaching; there is currently little emphasis on teaching in their document 'Standards for Education' (GDC 2012).

If tutors lack professional development as teachers it is difficult for them to impart professional knowledge as a dentist yet they have a crucial part to play in role-modelling for the dentists of the future. Experienced clinical teachers are aware that teaching some elements of clinical practice are not appropriate for dental students at this early point in their career, yet, under-developed clinical teachers are not always aware of this and can unwittingly promote unsafe practice or suboptimal professional standards. This problem is not unique to dentistry; there are many clinical teachers in medicine, nursing and other allied health professions who have received no formal training in how to teach. As the demands of teaching grow, most healthcare professionals will at some point be expected to train other teachers and it is

important that they can access the knowledge, skills and resources that will help them to do this successfully.

Ensuring professional standards and instilling professional values in students is clearly of national and international concern and this research study offers a solid basis from which others can build their own professional development models to enhance teaching quality. Increasing globalisation of higher education brings dentists and students from all over the world to study in the UK. The numbers of global educational exchange programmes are on the increase and currently the University of Glasgow Dental School accepts students into the 3rd year of the BDS Degree from International Medical University, Malaysia (IMU). It is important that all students have the same grounding in professionalism and have been taught according to the same high professional standards. In another example of internationalisation of higher education, the University of Glasgow along with the Royal College of Physicians and Surgeons of Glasgow are assisting the University of Malawi to set up the country's first dental school opening in 2019 and the development of high quality teaching staff to support this venture will also be required. These are just two examples of the international relevance of the peer observation of teaching scheme at the Glasgow Dental School. The importance of enhancing the quality of teaching in dental schools is of national and international importance.

Recommendation D: Conduct a programme of theory-driven research into POT

Following this study, at a local level, I would like to measure the impact and influence of the community of practice in Glasgow Dental School for all teachers, students and also patients. Clinical tutors within the community of practice should have a greater voice and autonomy to source or even produce their own tools and resources for development in teaching. Research in this area will look at ways to facilitate the growth of teaching resources and expertise within the community of practice and evaluate its impact.

Research focusing on the benefits for students from POT is needed, and would look to measure a shift towards student centred innovations for the teaching of clinical skills as well as evidence of increasing levels of professionalism. For students enhanced teaching may impact by reducing numbers referred to progress committees and those going through fitness to practice procedures. The impact on patients may be measured via satisfaction rates, numbers of patient complaints and reported clinical incidents. Another potential focus for future research is on the patient-student relationship and how this is influenced by the clinical tutor. Most tutors admitted to being patient-centred first and student-centred next, so a move to increase professional teaching knowledge should have a direct and measurable effect. The current study is a starting point for both national and international research in all of these areas.

Future work should primarily be of a collaborative nature to maximise the shared benefits and impact of any research, and to increase the likelihood of

international peer reviewed publications of greater relevance to a wider audience. I am already involved in collaborative work with dental schools in Newcastle, Sheffield, Liverpool, Cardiff and Malawi and I intend to use these connections, as well as forging new partnerships to share the outcomes of this research and to highlight the key recommendations to a wide national and international audience.

References

Adshead, L. White, P. Stephenson, A. (2006). Introducing peer observation of teaching to GP teachers. Medical Teacher, 28(2), 68-73.

Akkerman,S.F. Bakker, A. (2011). Boundary crossing and boundary objects. Review of Educational Research: 81,132-169.

Allen, L. (2002). Consenting adults in private-union and management perspectives on peer observation of teaching. http://www.Itsn.ac.uk/genericcentre/: LTSN Generic Centre. Last accessed Jan 2012

Altheide, D. (1994). An ecology of communication: towards a mapping of the effective environment. Sociology Quarterly, 35(4).

Alversson, M. Skoldberg, K. (2000). Reflexive methodology: new vistas for qualitative research. London: Sage.

Askew, S. (2004). Learning about teaching through reflective, collaborative inquiry and observation. Learning Matters, 15, 2-4.

Atkinson, D. Bolt, S. (2010). Using teaching observations to reflect upon and improve teaching practice in higher education. Journal of the Scholarship of Teaching and Learning, 10(3) 1–19.

Beaty, L. (1998). The professional development of teachers in higher education: structures, methods and responsibilities. Innovations in Education and Training International, 35(2), 99-107.

Beijaard, D. Verloop, N. Vermunt, J. (2000). Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective. Teaching and teacher education, 16, 749-764.

Bell, A. Mladenovic, R. (2015). Situated learning, reflective practice and conceptual expansion: effective peer observation for tutor development. Teaching in higher education, 20(1), 24-36.

Bell, M. (2001). Supported reflective practice: A programme of peer observation and feedback for academic teaching. International Journal for Academic Development, 6(1), 29-39.

Bell, M. (2002). Peer observation of teaching in Australia. LTSN Generic Centre, http://www.Itsn.ac.uk/genericcentre/. Last accessed Jan 2012.

Bell, M. (2005). Peer observation partnerships in higher education. NSW, Australia: Higher education research and development society of Australasia.

Belvis, E. Pineda, P. Armengol, C. Moreno, V. (2013). Evaluation of reflective practice in teacher education. European Journal of Teacher Education. 36(3), 279-292.

Bennett, S. Barp, D. (2008). Peer observation- a case for doing it online. Teaching in higher education, 13(5), 559-570.

Berk, R.A. Naumann, P.L. Appling, S.E. (2004). Beyond student ratings: peer observation of classroom and clinical teaching. International Journal of Nursing Education Scholarship, 1(1), 1-26.

Bezuidenhout, J. van Schalkwyk, S. (2015). Developing the research question: setting the course for your research travels. In J. D. Cleland, Researching medical education (pp. 35-41). Chichester: Wiley- Blackwell.

Bingham, R. and Ottewill, R. (2001). Whatever happened to peer review? Revitalising the contribution of tutors to course evaluation. Quality Assurance in Education, 9(1); 22-30.

Bishop, D. (2016). NSS and teaching excellence: the wrong measure, wrongly analysed. Times Higher Education, Found at www.timeshighereducation.com/blog/nss-and-teaching-excellence-wrong-measure-wrongly-analysed.

Blackmore, J. (2005). A critical evaluation of peer review via teaching observation within higher education. International journal of educational management, 19(3), 218-232.

Blackwell, R. McLean, M. (1996). Peer observation of teaching and staff development. Higher Education Quarterly, 50(2), 156-171.

Blumberg, P. (2009). Developing learner-centred teaching: a practical guide for faculty. Jossey-Bass.

Boendermaker, PM. Conradi, MH. Schuling,J. Meyboom-de Jong,B. Swierstra, RP. Metz, JCM. (2003). Core characteristics of the competent general practitioner trainer, a Delphi study. . Advances in Health Science Education Theory and Practice, 8: 111–116.

Boendermaker, P M. Schuling, J. Meyboom-de Jong, B. Zwierstra, RP. Metz, JCM. (2000). What are the characteristics of the competent general practitioner trainer? Fam Pract., 17: 547–553.

Bolin, F.S. (1988). Helping student teachers think about teaching. Journal of Teacher Education, 39(2), 48-54.

Bordage G, Dawson B. (2003). Experimental study design and grant writing in eight steps and 28 questions. Medical Education, 37, 376-385.

Botham, K,A. (2017). An analysis of the factors that affect engagement of Higher Education teachers with an institutional professional development scheme. Innovations in Education and Teaching International, https://doi.org/10.1080/14703297.2017.1407664. Last accessed Dec 2017.

Boud, D. Walker, D. (1988). Promoting reflection in professional courses: the challenge of context. Studies in higher education, 23(2), 191-206.

Bovill, C. (2011). Peer observation of teaching guidelines. http://www.gla.ac.uk/media/media_205277_en.pdf. Last accessed Jan Jan 2015.

Bovill, C. Cairns. A. (2014). Peer observation of teaching as part of strategic academic development. . International Conference of Educational Development. www.iced2014.se/proceedings/1576_Bovill.pdf). Stockholm. Last accessed Jun 2014

Boyd, P. (2010). Academic induction for professional educators: Supporting the workplace learning of newly appointed lecturers in teacher and nurse education. International Journal for Academic Development, 15(2), 155-165.

Branard, A. Nash, R. McEvoy, K. Shannon, S. Waters, C. Rochester, S. Bolt, S. (2015). LeaD-In: a cultural change model for peer review of teaching in higher education. Higher education research and development, 34(1), 30-44.

Braun V, Clarke V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3, 77-101.

Brew, A. (1995). Directions in staff development. Milton Keynes: SRHE/Open University Press.

Brew, A. G. (2008). The relationship between engagement in the scholarship of teaching and learning and the students' course experience. Assessment and evaluation in higher education, 33(5), 535-554.

Briggs, L. (1986). Learning how to ask. Cambridge: Cambridge University Press.

Brockbank, A. McGill, I. (1998). Facilitating reflective learning in higher education. Buckingham: Open university press.

Brookfield, S. (1995). Becoming a critically reflective teacher. San Francisco: Jossey-Bass.

Brooman, S. Darwent, S. Pimor, A. (2014). The student voice in higher education curriculum design: is there value in listening? Innovations in Education and Teaching International. 52(6); 663-674.

Brown, D. Taylor, C. Baldy, G. Edwards, G. Oppenheimer, E. (1990). Computers and QDA- can they help? A report on a qualitative data analysis programme. Sociological review, 38(1), 134-150.

Brown, J. Collins, A. Duguid, P. (1989). Situated cognition and the culture of learning. Educational Research, 18(1) 32-42.

Brown, N. Wall, D. (2003). Teaching the consultant teachers in psychiatry: experience in Birmingham. Medical Teacher. 25(3): 325-327.

Brown, S. Jones, G. (1993). Editorial. In S. J. Brown, Observing teaching. Birmingham: Staff and Education Development Association.

Browne, J. (2010). Securing a sustainable future for higher education; an independent review of higher education funding and student finance (Browne Report). Department for Business, Innovation and Skills. BIS/10/1208.PDF, 777KB, 64 pages.

Bryman, Alan & Burgess, Robert G. (Eds.)(1994). Analysing Qualitative Data. London: Routledge .

Bryman, A. (2008). Social research methods. Oxford: Oxford University Press.

Buckley, A. S. (2015). The 2015 Student Academic Experience Survey. Accessed 24th October 2017: https://www.heacademy.ac.uk/system/files/resources/StudentAcademicExperienceSurvey2015.pdf. Last accessed Jan 2017.

Bunniss, S. Kelly, D. (2010). Research paradigms in medical education research. Medical research, 44, 358-366.

Busari, J.O. Weggelaar, N.M. Knottnerus, A.C. (2005). How medical residents perceive the quality of supervision provided by attending doctors in the clinical setting. Medical Education, 39, 696-703.

Butcher, J. Stoncel, D. (2012). The impact of a Postgraduate Certificate in Teaching in Higher Education on university lectures appointed for their professional expertise at a teaching-led university: 'It's made me braver'. The International Journal of Academic Development, 17(2), 149-162.

Cairns, AM. Bissell, V. Bovill, C. (2013). Evaluation of a pilot peer observation of teaching scheme for chair-side tutors at Glasgow University Dental School. British Dental Journal, 214(11), 573-576.

Cantillon, P. D'Eath, M. De Grave, W. Dornan, T. (2016). How do clinicians become teachers? A communities of practice perspective. Advances in Health Science Education, 21:991-1008.

Carter, K., & Doyle, W. (1996). Personal narrative and life history in learning to teach. . In In J. Sikula (Ed.), Handbook of research on teacher education (pp. pp 120–142). New York: Macmillan.

Carter, M. and Clark, A. (2003). Peer observation: a training pack. University of Wales Institute, Cardiff : http://www.Uwic.ac.uk/itsu/documents/peer%20observation%201.pdf.Last accessed Jan 2012.

Chadwick, P. (1995). Academic quality in TQM: issues in teaching and learning. Quality assurance in education, 3(2), 19-23.

Chalmers, C. Gardiner, D. (2015). The measurement and impact of university teacher development programs. Educar: 51(1), 1-28.

Chamberlain, J.M. D'Artrey, M Rowe, D.A. (2011). Peer observation of teaching: a decoupled process. Active Learning in Higher Education, 12(3), 189-201.

Childers, T. A. Van House, N. A. (1993). What's good? Describing your public library's effectiveness. Chicago: American Library Association.

Chism, N.V.N. (2007). Peer review of teaching: a sourcebook. Bolton, MA: Anker Publishing.

Clancey, W.J. (1995). A Tutorial on Situated Learning. International Conference on Computers and Education (Taiwan), (pp. 49-70). Charlottesville, VA .

Clark, G. Healey, M. Jenkins, A. Wareham, T. Chalkley, B. Blumhof, J. (2002). Developing new lecturers: The case of a discipline-based workshop. Active Learning in Higher Education, 3(2),128-144.

Clegg, S. Tan, J. Saeidi, S. (2002). Reflecting or acting? Reflective practice and continuing professional development in higher education. Reflective practice, 3(1), 131-146.

Coffey, Amanda & Atkinson, Paul. (1996). Making Sense of Qualitative Data . California: Sage.

Cole, R.E. (2003). New organizational designs for sustainable quality improvement. 6th International Conference on Quality Management and Organisational Development. Paris.

Cook, D.A. (2010). Getting started in medical education scholarship. Journal of Medicine, 59, 96-103.

Cook, V. (2009). Mapping the work-based learning of novice teachers: Charting some rich terrain. Medical Teacher, 31(12), E608–E61.

Cook-Sather, A. (2013). Student-faculty partnership in explorations of pedagogical practice: a threshold concept in academic development, International Journal for Academic Development,19:3, 186-198.

Cooper, K. Olson, M. R. (1996). The multiple 'I's' of teacher identity. In W. R. In M. Kompf, Changing research and practice: Teachers' professionalism, identities and knowledge (pp. (pp. 78–89)). London/Washington, DC: The Falmer Press.

Corbin, J. S. (2015 (4th Ed)). Basics of qualitative research: techniques and procedures for developing grounded theory.

Cosh, J. (1998). Peer observation in higher education- a reflective approach. . Innovations in Teaching and Training International, 35(2), 171-176.

Costello, J. Pateman, B. Pusey, H. Longshaw, K. (2001). Peer review of classroom teaching: an interm report. Nurse Education Today, 21(6), 444-454.

Cotrell, P. (1992). Interviewing women- issues of friendship, vulnerability and power. Woman's Studies International Forum, 15 (5-6).

Cox, B. and Ingleby, A. (1997). Practical Pointers for Quality Assessment. London: Kogan Page.

Crabtree B, M. W. (1999). Doing Qualitative Research (2nd Edition). In M. W. Crabtree B, Doing Qualitative Research. London: Sage.

Crawford, K. Leyborne, M. Arnott, A. (2000). How we ensure rigour in a multi-site, multi-discipline, multi-researcher study. Qualitative social research, 1(1) Art 12.

Creswell, J. (2009). Research Design: Qualitative, Quantitative and Mixed Methods Approaches, 3rd Ed. London: Sage.

Dall'Alba, G. Barnacle, R. (2007). An ontological turn for higher education. Studies in higher education, 32(6), 679-691.

Damp, J.B. Dewey, C.M. Wells, Q. Horn, L. Kroop, S.F. Mendes, L. (2016). Faculty development on clinical teaching skills: an effective model for the bust clinician. Journal of Medical Education and Curricular Development. Jan (3), 187-191.

Darling-Hammond, L. Bransford, J. (2005). Preparing teachers for a changing world: what teachers should learn and be able to do. Hoboken- New Jersey: Jossey-Bass/Wiley.

Denis, JL. Hebert, Y. Langley, A. Lozeau, D. Trottier, LH. (2002). Explaining Diffusion Patterns for Complex Health Care Innovations . Health Care Management Review.

Denzin, N. (1997). Interpretive ethnography: ethnographic practices for the 21st century. Thousand Oaks, London, New Delhi: Sage.

De Rijdt, D. Stes, A. van der Vleuten, C. Dochy, F. (2013).Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education. Educational Research Review. 8(1), 48-74.

Devine, F. Heath, S. (1999). Sociological research methods in context. Palgrave.

Dey, I. (1993). Qualitative Data Analysis. London: Routledge .

DiCicco-Bloom, B. Crabtree, B.F. (2006). The qualitative research interview. Medical Education, 40(4) 314-321.

Dixon, K. Scott, S. (2003). The evaluation of an off-shore professional-development programme as part of the university's strategic plan: A case study approach. Quality in Higher Education, 25(2), 63-80.

Donnelly, R. (2007). Perceived impact of peer observation of teaching in higher education. International journal of teaching and learning in higher education, 19(2), 117-129.

Dornan, T. Scherpbier, A. King, N. Boshuizen, H. (2005). Clinical teachers and problem-based learning: A phenomenological study. Medical Education, 39(2), 163–170.

Douglas, J. (1985). Creative interviewing. Beverly Hills, California: Sage.

Dowling, S. (2001). Supervision: strategies for successful outcomes and productivity. Boston: Allyn & Bacon.

Durning, S. Artino, A. (2011). Situativity theory: a perspective on how participants and the environment can interact. Medical Teacher, 33(3)188-199.

Egan, T. Jaye, C. (2009). Communities of clinical practice: the social organisation of clinical learning. Health: An interdisciplinary journal for the social study of health, illness and medicine , 13(1): 107-125.

Elton, L. (2009). Continuing Professional Development in Higher Education: The Role of the Scholarship of Teaching and Learning. International Journal for the Scholarship of Teaching and Learning, Vol. 3: No. 1, Article 28.

Entwistle, N. P. (2004). Conceptions of learning and knowledge in higher education: relationships with study behaviour and influences of learning environments. International Journal of Educational Research, 41:407-428.

Entwistle, N. Walker, P. (2000). Strategic alertness and expanded awareness within sophisticated conceptions of teaching. Instructional Science, 28: 335–361.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. . British Journal of Educational Psychology, 70(Pt 1), 113–136.

Ewens, D. Orr S. (2002). Tensions between evaluation and peer review models: lessons from the HE/FE border. www.heacademy.ac.uk. Last accessed Jan 2012.

Ferman, T. (2002). Academic professional development practice: what lectures find valuable. International Journal for Academic Development, 7(2), 146-158.

Fernandez, J. (2013). Professionalisation of teaching in Universities: implications from a training perspective. Universities and knowledge society journal, 345-356.

Foy, R. MacLennan, G. Grimshaw, J. Penney, G. Campbell, M. Grol, R. (2002). Attributes of Clinical Recommendations That Influence Change in Practice Following Audit and Feedback. Journal of Clinical Epidemiology, 55(7):717–22.

Fullerton, H. (1999). Observation of Teaching. In H. K. Fry, A handbook for teaching and learning in higher education. London: Kogan Page.

GDC. (Revised 2015). Preparing for Practice. www.gdc-uk.org.

Gee, J. P. (2001). Identity as an analytic lens for research in education. In W. G. Secada (Ed.), Review of research in education (pp. Vol. 25 (pp. 99–125)). Washington, DC: American Educational Research Association.

Gibbs, G. (2010). Implication of 'dimensions of quality' in a market environment. HEA Research Series.

Gill P, Stewart K, Treasure E, Chadwick B. (2008). Methods of data collection in qualitative research: interviews and focus groups. British Dental Journal, 204, 291-295.

Gilpin, A. (2000). Peer observation in departments of education. http://www.escalate.ac.uk/exchange/peerreview/page10.php3: Escalate regional networking seminars. Last accessed Jan 2012

Glasser, B.G. Strauss, A.L. (1967). The discovery of grounded theory: strategies for qualitative research. Chicago: Harvard (18th ed.).

Gosling, D. (2000). Using Habermas to Evaluate Two Approaches to Negotiated Assessment. Assessment and Evaluation in Higher Education, 25 (3), 293-304 .

Gosling, D. (2000). Guidelines for peer observation of teaching and learning. The Higher Education Academy, http://www.esca-late.ac.uk/exchange/peerreview/. Last accessed Jan 2012.

Gosling, D. (2002). Models of peer observation of teaching. http://www.heacademy.ac.uk/resources.asp?process=full_record&section=generic&id=200. Last accessed Jan 2012.

Gosling, D. (2005). Peer observation of teaching. Implementing a peer observation of teaching scheme with five case studies. Staff and educational development association. SEDA, (p. paper 118). London.

Gosling, D. O'Connor, K. (2009). A new approach to peer review of teaching. In D. Gosling & K. Mason O'Connor (Eds.) Beyond the Peer Observation of Teaching, 7–15. SEDA (Staff and Educational Development Association), (p. Paper 124). London.

Grbich, C. (2004). New approaches in social research. London: Sage.

Green, D,A. Little, D. (2015).Family portrait: a profile of educational developers around the world. International Journal of Academic Development, 21(2), 135-150.

Greenhalgh, T. Robert, G.MacFarlane, F.Bate, P. Kyriakidou, O. (2004). Diffusion of innovations in service organisations: systematic review and recommendations. The Millbank Quarterly, 82(4): 581-629.

Guba, E. Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. L. Denzin, Handbook of qualitative research (pp. 105-117). Thousand Oaks, California: Sage.

Gubrium, J. Holstein, J. (2003). From the individual interview to the interview society. In J. H. Gubrium, Postmodern interviewing (pp. 21-49). London: Sage.

Gusic, M. Hagerman,H. Zenni,E. (2013). Peer review: a tool to enhance clinical teaching. The Clinical Teacher , 10(5) 287-290.

Hammersley-Fletcher, l. Orsmond, P. (2004). Evaluating our peers: is peer observation a meaningful process? Studies in higher education, 29(4), 489-503.

Hammersley-Fletcher, L. Orsmond, P. (2005). Reflecting on reflective practices within peer observation. Studies in higher education, 30(2) 213-224.

Hanbury, A., Prosser, M. Rickinson, M. (2008). The differential impact of UK accredited teaching development programmes on academics approaches to teaching. Studies in Higher Education, 33(4), 449-483.

Handal, G. Lauvas, P. (1987). Promoting reflective teaching: supervision in action . Milton Keynes: SRHE/Open University Press.

Harvey, L. Knight, P. (1996). Transforming higher education. Buckingham: Open University Press.

Higher Education Authority. (2011). The UK professional standards framework for teaching and supporting learning in higher education. UK Higher Education Sector. Guild HE. Universities UK. https://www.heacademy.ac.uk/ukpsf. Last accessed Jan 2012.

Heale, R. Mossey, S. Lafoley, B. Gorham, R. (2009). Identification of facilitators and barriers to the role of a mentor in the clinical setting. Journal of Interprofessional Care, 23(4) 369-379.

Healy, M. Flint, A. Harrington, K. (2014). Engagement through partnership: students as partners in learning and teaching in higher education. The Higher Education Academy. https://www.heacademy.ac.uk/system/files/resources/engagement_through_partnership.pdf. Last accessed Jan 2012.

HEFCE, Higher Education Funding Council England. (2017). About the TEF. www.hefce.ac.uj/lt/tef. Last accessed Dec 2017.

Helyer, R. (2015). Learning through reflection: the critical role of reflection in work-based learning (WBL). Journal of Work-Applied Management, 7(1),15-27.

Hendry, G. Bell, A. Thomson, K. (2013). Learning by observing a peer's teaching situation. International journal for academic development.

Hendry, G. Dean, S.J. (2002). Accountability, evaluation of teaching and expertise in higher education. International Journal for Academic Development, 7(1), 75-82.

Hendry, G. Oliver, G. (2012). Seeing is believing: the benefits of peer observation. Journal of university teaching and learning practice, 9(1).

Higgs, J. McAllister, L. (2007). Being a clinical educator. . Advances in Health Sciences Education: Theory and Practice, 12(2), 187–200.

Higher Education and Research Act. (2017). Higher Education and Research Act 2017. Found at https://services.parliament.uk/bills/2016-17/highereducationandresearch.html. Last accessed Dec 2017.

Hinchliffe, S. Crang, M. Reimer, S. Hudson, A.1997). Software for qualitative research: 2. Some thought on "aiding" analysis. Environment and planning, 29, 1109-1124.

Hinett, K. (2003). Improving learning through reflection: part 1. http://www.ilt.ac.uk/portal/showfullarticle.asp?_article=3601&_se. Last accessed Jan 2012.

Ho, ASP. Watkins, D. Kelly, M. (2001). The conceptual change approach to improving teaching and learning: an evaluation of a Hong Kong staff development programme. Higher Education, 42:143-169.

Hogston, R. (1995). Evaluating quality nursing care through peer review and reflection: the findings of a qualitative study. International journal of nursing studies, 32(2), 162-172.

Hugly P, Sayward C. (1987). Relativisim and ontology. Philosophy Quarterly, 37, 278-290.

Hunt, K. Kennedy-Jones, M. (2010). Novice occupational therapists' perceptions of readiness to undertake fieldwork supervision. Australian Occupational Therapy Journal, 57(6) 394-400.

Irby, D. M. (1995). Teaching and learning n ambulatory care settings: A thematic review of the literature. Academic Medicine, 70, 898–931. .

Irby, D. M. (1994). What clinical teachers in medicine need to know. Academic Medicine, 69(5), 333–342.

Irby, DM. Papadakis, M. (2001). Does good clinical teaching really make a difference? Am J Med, 110:231–232 .

Jippes, E. Steinert, Y. Pols, J. Achterkamp, M. C. van Engelen, J. M. L. Brand, P. L. P. (2013). How do social networks and faculty development courses affect clinical supervisors' adoption of a medical education innovation? An exploratory study. Academic Medicine: Journal of the Association of American Medical Colleges, 88(3), 398–404.

Johnson, J. (2002). In-depth interviewing. In H. J. Gubrium J, Handbook of qualitative research (pp. 103-19). Thousand Oaks, California: Sage.

Kadi-Hanifi, K. Keenan, J. (2016). Finding the 'a-ha' moment: an exploration into HE in FE teacher self-concept. Research in post-compulsory education, 21(1-2), 73-85.

Kaufman, D. Mann, K. (2014). Teaching and learning in medical education: how theory can inform practice. In T. (. Swanwick, Understanding medical education- evidence, theory and practice (2nd ed.) (pp. 7-29). UK: Wiley-Blackwell.

Keig, L. (2000). Formative peer review of teaching: attitudes of faculty at liberal arts colleges towards colleague assessment. Journal of personal evaluation in education, 14(1), 67-87.

Keig, L. Waggoner, M. D. (1994). Collaborative Peer Review. The Role of Faculty in Improving College Teaching. ASHE-ERIC Higher Education Report No 2. Washington, DC : The George Washington University .

Kell, C. Annett, S. (2009). Peer review of teaching embedded practice or policy-holding complacency? Innovations in Education and Teaching International, 46(1), 67-70.

Kerby, A. (1991). Narrative and the self. Bloomington: Indiana University Press.

Kinchin, I. (2005). Evolving diversity within a model of peer observation at a UK university. British educational research association annual conference. Glamorgan: www.leeds.ac.uk/educol/documents/153411.htm. Last accessed Jan 2012.

King, N. Horrocks, C. (2010). Interviews in qualitative research. London: Sage.

Klob, D. (1983). Experiential learning: experience as the source of learning and development. New York: Prentice Hall.

Knight, P. Trowler, P. (2000). Department-level cultures and improvement of learning and teaching. . Studies in Higher Education, 25(1), 69-83.

Knight, P. T. (2001). Departmental leadership in higher education: new directions for communities of practice. Buckingham: Open University Press.

K Knight, P., Tait, J., Yorke, M. (2006). The professional learning of teachers in higher education. Studies in Higher Education, 31(3), 319-339.

Knight, P. T. (2006). The professional learning of teachers in higher education. Studies in Higher Education, 28(2), 213-228.

Kolb, D. (1983). Experiential learning: experience as the source of learning and development. New York: Prentice Hall.

Kolb, D. (1984). Experiential learning. New Jersey: Prentice.

Kreber, C. Brook, P. (2001). Impact Evaluation of Educational Development Programmes. International Journal for Academic Development, 6(2), 96-107.

Kugel, P. (1993). How professors develop as teachers. Studies in Higher Education, 18:3, 315-328.

Kuit, JA. Gill, R. (2001). Experiences of reflective teaching. Active learning in higher education, 2(2), 128-142.

La Boskey, V.K. (2006). The fragile strengths of self-study. In P. S. Aubusson, Teacher learning and development: the mirror maze. Dordecht: Springer.

Lave J, Wenger E. (1991). Situated learning. Legitimate peripheral participation. Cambridge: Cambridge University Press.

Leslie. K. Baker, Egan-Lee, E. Esdaile, M. Reeves, S. (2013). Advancing faculty development in medical education: a systematic review. Academic Medicine, 88(7)1038-1045.

Li, L. Grimshaw, J. Nielsen, C. Judd, M. Coyte, P. Graham, I. (2009). Use of communities of practice in business and health care sectors: a systematic review. Implementation Science.

Lincoln, Y. Guba, E. (1985). Naturalistic inquiry. London: Sage.

Lincoln, Y. Guba, E. (2013). The constructivist credo. Walnut Creek, California: Left Coast Press.

Little, B. Locke, W. (2011). Conceptions of excellence in teaching and learning and implications for future policy and practice. In M. M. Rostan, Questioning excellence if higher education (p. Chapter 7). University of Pavia, Italy: Sense Publishers.

Lomas, L. &. (2006). Developing a peer observation programme with university teachers. International Journal of Teaching and Learning in Higher Education, 18(3), 204-214.

Lomas, L. Nicholls, G. (2005). Enhancing teaching quality through peer review of teaching. Quality in Higher Education, 11(2), 137-149.

Lubin, J. 2. (2002). A guide to peer review of teaching. University of Tasmania. : Available at www.utas.edu.au/tl/improving/peerreview/. Last accessed Jan 2012.

Luddeke, G. (1998). UK higher education at a crossroads: reflections on issues and practice in teaching and learning. Innovations in education and training international, 35(2), 108-116.

Lueddeke, G. (2003). Professionalising teaching practice in higher education: A study of disciplinary variation and 'teaching-scholarship. Studies in Higher Education, 28(2), 213-228.

Lye, P.S. Simpson, D.E. Wendelberger, K.J. Bragg, D.S. (1998). Clinical teaching rounds: a case-oriented faculty development program. Arch Pediatr Adolesc Med. 152(3): 293-295.

Lye, P.S. Heidenreich, C. Wang-Cheng, R. Bragg, D.S. Simpson, D.E. (2003). Experienced clinical educators improve their clinical teaching effectiveness. Ambul Pediatr. 3(2): 93-97.

MacDougall, J. Drummond, M. J. (2005a).The development of medical teachers: An enquiry into the learning histories of 10 experienced medical teachers. . Medical Education, 39(12), 1213–1220.

MacDougall, J. Drummond, M. J. (2005b). The development of medical teachers: An enquiry into the learning histories of 10 experienced medical teachers. Medical Education, 39(12), 1213–1220

MacKinnon, M. (2001). Using observational feedback to promote academic development. . International Journal for Academic Development, 6(1), 21-28.

Mann, K. (2011). Theoretical perspectives in medical education: past experience and future possibilities. Medical Education, 45(1)60-68.

Mann, K. MacLeod, A. (2015). Constructivism: learning theories and approaches to research. In J. D. Cleland, Researching medical education (pp. 51-65). Chichester: Wiley-Blackwell.

Marcelo, C. (2009). Professional development of teachers: past and future. Educational Sciences Journal, 8, 5-20.

Markert, R.J. (2001). What makes a good teacher? Lessons from teaching medical students. Acad Med., 76:809 –810.

Marshall, B. (2004). Learning from the Academy: From peer observation of teaching to peer enhancement of learning and teaching and learning. The journal of adult theological education, 1(2), 185-204.

Martenson, K. Roxa, T. Olsen, T. (2011). Developing a quality culture through the Scholarship of Teaching and Learning. Higher Education Research and Development, 30(1), 51–62.

Martensson, K. Roxa, T. Stensaker, B. (2012). From quality assurance to quality practices: an investigation of strong microcultures in teaching and learning. Studies in Higher Education, 1-12, iFirst Article.

Martin, E. Prosser, M. Trigwell, K. Ramsden, P. Benjamin, J. (2000). What university teachers teach and how they teach it. Instructional Science, 28:387-412.

Martin, E. Ramsden, P. (1994). Effectiveness and efficiency of courses in teaching methods for newly appointed academic staff. Canberra: AGPS.

Martin, G. Double, J. (1998). Developing higher education teaching skills through peer observation and collaborative reflection. Innovations in Teaching and Training International, 35(2), 161-170.

Marton, F. Dall'Alba, G. Beaty, E. (1993). Conceptions of learning. International Journal of Educational Research, 19: 277–300.

Martsolf, DS. Dieckman, BC. Cartechine, KA. Starr, PJ. Wolf, LE. Anaya, E.R. (1999). Peer review of teaching: instituting a program in a college of nursing. Journal of nursing education, 38(7), 326-332.

Mason, J. (1996). Qualitative Researching. London: Sag .

Mathison, S. (2004). Encyclopedia of evaluation. Thousand Oaks, CA: Sage Publications.

Mauthner, N. Doucet, A. (2003). Reflexive accounts and accounts of reflexivity in qualitative data analysis. Sociology, 37(3), 413-431.

McArthur, J. Earl, S. Edwards, V. (2004). Impact of Courses for University Teachers. Australian Association for Reasearch in Higher Education. Melbourne.

McDonald, J. S. (2010). Identifying, building and sustaining leadership capacity for communities of practice in higher education. Milperra: Australian Learning and Teaching Council.

McLeod, P.J. Brawer, J. Steinert, Y. Chalk, C. McLeod, A.(2008). A pilot study designed to acquaint medical educators with basic pedagogic principles. Medical Teacher, 30:92-93.

McMahon, T. B. (2007). Using observation of teaching to improve quality: Finding your way through the muddle of competing conceptions, confusion of practice and mutually exclusive intentions. Teaching in Higher Education, 12(4), 499-511.

McMillan, W. (2015). Theory in healthcare education research: the importance of worldview. In J. D. Cleland, Researching medical education (p. 19). Chichester: Wiley-Blackwell.

Meadows, L. D. (1999). Data management and interpretation: using computers to assist. In B. M. Crabtree, Doing qualitative research 2nd ed. (pp. 195-218). Thousand Oaks, California: Sage.

Meyer, M. Johnson, D. Ethington, C. (1997). Contrasting Attributes of Preventive Health Innovations. Journal of Communication, 47:112–31.

Mezirow, J. (1990). Preface. In J. Mezirow, Fostering critical reflection in adulthood: a guide to transformative and emancipatory learning. San Francisco: Jossey-Bass.

Miles, Matthew B. & Huberman, Michael A. (1994). Qualitative Data Analysis: An Expanded Sourcebook (2nd edition). California: Sage.

Miller, K. McAdam, M. McAdam, R. (2014). The changing university business model: a stakeholder perspective. Research and Development Journal, 44(3) 265-287.

Monti, E. Tingen, M. (1992). Multiple paradigms of nursing science. Advances in nursing science, 21, 64-80.

Moon, J. (1999). Reflecting in learning and professional development. London: Kogan Pge.

Murphy Tighe, S. Bradshaw, C. (2013). Peer-supported review of teaching: making the grade in midwifery and nursing education. Nurse Education Today, 33(11), 1347-51.

Myres, M. (2008). Qualitative research in business and management. London: Sage.

Newman, LR. Lown, BA. Jones, RN. Johnansson, A. Schwartzstein, RM. (2009). Developing a peer assessment of lecturing instructment: lessons learned. Academic medicine, 84(8), 1104-1110.

Northwest, Centre for Public Health Practice. (2017). Steps for programme evaluation. www.nwcphp.org: University of Washington.

O'Sullivan, P. S., & Irby, D. M. (2011). Reframing research on faculty development. . Academic Medicine , 86(4), 421–428.

Orland- Barak, L. (2005). Cracks in the iceberg: surfacing the tensions of constructivist pedagogy in the context of mentoring . Teachers and Teaching: Theory and Practice, 11(13), 293-313.

Orlander, J.D. Gupta, M. Fincke, B.G. Manning, M.E. Hershman, W. (2000). Co-teaching: a faculty development strategy. Medical Education, 34:257-65.

Palmer, P. (1998). The courage to teach: exploring the inner landscape of a teacher's life. San Francisco: Jossey-Bass.

Palmer, V. (1928). Field studies in sociology; a student's manual. Chicago: University of Chicago Press.

Parliament., UK. (2017). Higher Education and Research Act. legislation.gov.uk.

Parsons, D. Hill, I. Holland, J. Willis, D. (2012). Impact of teaching development programmes in higher education. York: Higher Education Academy.

Partington, P. Brown, G. (1997). Quality assessment, staff development and cultural change. Quality assurance and education, 5(4), 208-217.

Patton, M. Q. (1987). How to use qualitative methods in evaluation. . Newbury Park, CA: Sage Publications.

Peel, D. (2005). Peer observation as transformatory tool? Teaching in Higher Education, 10(4), 489-504.

Piaget, J. (1929). The child's concept of the world. New York: Harcourt, Brace Jovanovich.

Piggot-Irvine, E. (2003). Appraisal training focused on what really matters. The International Journal of Educational Management, 17(6):254-261.

Pinsky, L. E. Monson, D. Irby, D. M. (1998). How excellent teachers are made: Reflecting on success to improve teaching. . Advances in Health Sciences Education, 3(3), 207–215.

Pinsky, L. Irby, D. (1997). ‘‘If at first you don’t succeed’’: Using failure to improve teaching. . Academic Medicine, 72, 973–976.

Pleschova, G. Simon, E. Quinlan, KM. Murphy, J. Roxa, T. Szabo, M. (2010). The professionalisation of academics as teachers in higher education. European Science Foundation (SCSS). Bratislava.

Plsek, P. (2003). Complexity and the Adoption of Innovation in Health Care. Washington, D.C: National Institute for Healthcare Management Foundation and National Committee for Quality in Health Care.

Postareff, L. (2007). Teaching in Higher Education From Content-focused to Learning-focused approaches to teaching. Helsinki: Research Report 214, University of Helsinki.

Postareff, L. Nevgi, A.(2015). Development paths of university teachers during a pedagogical development course. Educar: 51 (1).

P Powell, R. R. Connaway, L. S. (2004). Basic research methods for librarians (4th ed.). Westport, CN: Libraries Unlimited.

ProDAIT. (2011). Peer observation of teaching. Professional development for academics involved in teaching. www.prodait.org. Last accessed Jan 2012.

Prosser, M. Trigwell, K. (1999). Understanding learning and teaching. The experience in higher education. Buckingham: Open University Press.

Purvis, A. Crutchley, D. Flint, A. (2009). Beyond peer observation of teaching. In D. M. Gosling, Beyond peer observation of teaching (pp. 23-28). London.

Quinlan, K. Alerlind, G. (2000). Factors affecting departmental peer collaboration for faculty development: Two cases in context. Higher Education, 40, 23-52.

Race, P. (2001). The lecturers tool lit (2nd ed). London: Kogan-Page.

Ranmuthugala, G. Plumb, J. Cunningham, F. Georgiou, A. Westbrook,J. Braithwaite, J. (2011). How and why are communities of practice established in the healthcare sector? A systematic review of the literature. BMC Health Service Research, 11, 273-273.

Ratner, C. (2008). Subjectivism. In L. Given, The sage encyclopaedia of qualitative research methods (pp. 840-844). London: Sage.

Review, B. (2010). Securing a sustainable future for higher education: an independent review of higher education funding and student finance. http://www.gov.uk/government/publications/the-browne-report. Last accessed Jan 2012.

Richards, L. Richards, T. (1991). The transformation of qualitative methods: computational paradigms and research processes. In N. R. Fielding, Using computers in qualitative research (pp. 38-53). London: Sage.

Rienties, B. Kinchin, I. (2014). Understanding (in)formal learning in an academic development programme ; A social networl perspective. Teaching and Teacher Education: 39, 123-135.

Ritchie J, Lewis J. (2003). Qualitative research practice: a guide for social science students and researchers. London: Sage.

Ritchie J, Spencer L. (2002). Qualitative data analysis for applied policy research. London: Sage.

Roethlisberger, F.J. and Dickson, W.J. (1939). Management and the Worker: An Account of a Research Program Conducted by the Western Electric Company, Hawthorne Works. Chicago: Harvard University Press.

Romano, J.L. Hoesing, R. O'Donovan, K. Weinsheimer, J. (2004). Faculty at Mid-Career: A program to enhance teaching and learning. Innovative Higher Education, 29(1), 21-48.

Rosaldo, R. (1989). Culture and truth: the remaking of social analysis. Sage.

Rossi, P. H. Lipsey, M. W. Freeman, H. E. (2004). Evaluation: A systematic approach (7th ed.) Thousand Oaks, CA: Sage Publications.

Rowland, S. (2001). Surface learning about teaching in higher education: the need for more critical conversations. International journal for academic development, 6(2), 162-167.

Roxå, T. Martensson, K. (2009). Significant conversations and significant networks- exploring the backstage of the teaching arena. Studies in Higher Education, 34,547-559.

Rutz, C. Condon, w. Iverson, E.R. Manduca, C. Willett, G. (2012). Faculty Professional Development and Student Learning. What is the relationship? Change:44(3), 40-47.

Salerno, S.M. O'Malley, P.G. Pangaro, L.N. Wheeler, G.A. Moores, L.K. Jackson, J.L. (2002). Faculty development seminars based on the one-minute preceptor improve feedback in the ambulatory setting. J Gen Intern Med. 17: 779-787.

Sandars, J. (2009). The use of reflection in medical education. AMEE Guide No 44 Medical Teacher: 31, 685-695.

Schindler-Raiman, E. (1960). Telling is not teaching. J Am Diet Assoc., 37:118 –120.

Schön, D. (1987). Educating the reflective practitioner. San Francisco: Jossey-Bass.

Schuck, S. Aubusson, P. Buchannan, J. (2008). Enhancing teacher education practice through professional learning conversations. European Journal of Teacher Education, 31(2), 215-227.

Schultz, KK. Latif, D. (2006). The planning and implementation of a faculty peer review teaching project. American journal of pharmaceutical education, 70:2, 32.

Scotland, Universities. (2016). Universities Scotland's position on the Teaching Excellence Framework- Briefing and Evidence. Found at www.universities-scotland.ac.uk/briefing-evidence/universities-scotlands-position-teaching-excellence-framework/.

Scott, M. Tucker, G. Unsworth, J. Burgum, S. (2017). Peer review of teaching: a raid appraisal. Higher Education Academy.

Seale, C. (1999). The quality of qualitative research. London: Routledge.

Shortland, S. (2004). Peer observational tool for staff development or compliance. Journal of further and higher education, 28(2), 219-228.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. . Harvard Educational Review, 57(1), 1-23.

Silverman, D. (1993). Qualitative Data: Methods for Analysing Talk, Text and Interaction. London: Sage.

Smith, B. Hesse-Biber, S. (1996). Users' experiences with qualitative data analysis software: neither Frankenstein's Monster nor Muse. Social science computer review, 14(4)423-432.

Smith, C. Boyd, P. (2012). Becoming an academic: The reconstruction of identity by recently appointed lecturers in nursing, midwifery and the allied health professions. Innovations in Education and Teaching International, 49(1), 63-72.

Smith, M. Lennon, MA. Robinson, PG. (2010). Students' clinical experience on outreach placements. European journal of dental education, 14: 7-11.

Some practical lessons on evaluation.(2000) Snapshots: Research Highlights from the Non-profit Sector Research Fund, No. 9.

Song, M. Parker, D. (1995). Commonality, difference and the dynamics of disclosure in in-depth interviewing. Sociology, 29(2): 241-256.

Spencer, J. (2003). The clinical teaching context: A cause for concern. . Medical Education, 37(3), 182–183.

Spradley, J. (1979). Asking descriptive questions. New York: Holt, Rinehart and Winston.

Steinert, Y. (2011). Developing medical educators: A journey, not a destination. In I. T. (Ed.), Understanding medical education (pp. Vol. 1, p. 464). London: Wiley.

Steinert, Y. (2012). Faculty development: On becoming a medical educator. Medical Teacher, 34(1), 74–76.

Steinert, Y. (2014). Learning from experience: from workplace learning to communities of practice. In Y. Steinert, Faculty development in the health professions: a focus on research and practice (pp. 141-158). New York: Springer.

Steinert, Y. Mann, K. Centeno, A. Dolmans, D. Spencer, J. Gelula, M. Prideaux, D. (2006). A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No 8. Medical Teacher, 28(6), 497-526.

Steinert, Y. McLeod, P. J. Boillat, M. Meterissian, S. Elizov, M. Macdonald, M. E. (2009). . Faculty development: A ‘‘field of dreams’’? Medical Education, 43(1), 42–49.

Stes, A. Min-Leliveld, M. Gijbels, D. Van Petegem, P. (2010a). The impact of instructional development in higher education: The state-of-the-art of the research. Educational Research Review, 5(1), 25-49.

Stes, A. Coertjens, L. Van Petegem, P. (2010b). Instructional development for teachers in higher education: impact on teaching approach. Higher Education, 60(2), 187-204.

Stes, A. Coertjens, L. Van Petegem, P. (2013a). Instructional development for teachers in higher education: impact on teachers’ teaching behaviour as perceived by students. Instructional Science; 41(6), 1103-1126.

Stewart, CJ. Moloney, EJ. Kinirons, MJ. (2010). Clinical experiences of undergraduate dental students in paediatric dentistry at Cork University Dental School. Journal of dental education, 74(3) 325-330.

Strauss, A. L. (1987). Qualitative Analysis for Social Scientists. Cambridge: Cambridge University Press.

Sutkin, G. Wagner E. Harris,I. Schiffer,R. (2008). Clinical Education What Makes a Good Clinical Teacher in Medicine? A Review of the Literature. Academic Medicine, 83(5) 452-466.

Swanwick, T. McKimm, J. (2010). Professional development of medical educators. . British Journal of Hospital Medicine (London), 71(3), 164–168. .

Swinglehurst, D. Russell, T. Greenhaugh, T. (2008). Peer observation of teaching in the online environment: an action research approach. Journal of computer assisted learning, 24(5), 383-393.

Tavakol, M. Zeinaloo, A. (2004). Medical research paradigms: positivistic inquiry paradigm versus naturalistic inquiry paradigm. Journal of medical education, 5, 75-80.

Tesch, R. (1989). Computer software and qualitative analysis: a reassessment. In J. B. McCartney, New technology in sociology: practical applications in research and work (pp. 141-54). New Brunswick, New Jersey: Transaction.

Thorpe, M. (2000). Encouraging students to reflect as part of the assignment process: student responses and tutor feedback. Active learning in higher education, 1(1), 79-92.

Tracy, S. J. (2013). Qualitative research methods- collecting evidence, crafting analysis, communicating impact. Wiley-Blackwell.

Tremlett, R. (1992). Peer support for improved teaching. New Academic, Summer 16-17.

Trigwell, K. (2001). Judging university teaching. International journal for academic development, 6(1), 65-73.

Trigwell, K. (2012). Evaluating the impact of university teaching development schemes. In E. P. Simon, Teacher Development in Higher Education (pp. 257-273). London: Routledge.

Trochim, W. (2006). Research methods knowledge base. www.socialresearchmethods.

Trowler, P. K. (2000). Coming to know in higher education: Theorising faculty entry to new work contexts. Higher Education Research & Development, 19(1), 27-42.

Wallace, D. P. Van Fleet, C. (2001). Library evaluation: A casebook and can-do guide. Englewood, CO: Libraries Unlimited.

Wankat, PC. Oreovicz, FS. (1993). Teaching engineering. New York: McGraw- Hill.

Ward DJ, Fuber C, Tierney S, Swallow V. (2013). Using framework analysis in nursing research: a worked example. Journal Advanced Nursing, 69, 2423-31.

Warren C, Karner T. (2005). The interview. In K. T. Warren C, Discovering qualitative methods: field research, interviews and analysis (pp. 115-135). Los Angeles: Roxbury.

Weiss, C. H.(1998). Evaluation: Methods for studying programs and policies (2nd ed.) Upper Saddle River, NJ: Prentice Hall.

Weller, S. (2009). What does 'peer' mean in teaching observation for professional development of higher education lecturers? International Journal of Teaching and Learning in Higher Education, 21(1), 25-35.

Welsh, E. (2002). Dealing with data; using NVivo in the qualitative data analysis process. Forum: qualitative social research, Vol 3 No 2.

Wenger, E. (1998). Communities of practice: learning meaning, and identity. Cambridge: Cambridge University Press.

Wenger, E. McDermott, R. Synder, W. (2002). Cultivating communities of practice. Boston: Harvard Business School Press.

Whitlock, W. Rumpus, A. (2004). Peer observation: collaborative teaching quality enhancement. Educational Initiative Centre, University of Westminster.

Wubbles, T. Korthagen, FAJ. (1990).The effects of a pre-service teacher education program for the preparation pf reflective teachers. Journal of Education for Teaching, 16(1), 29-43.

Yetton, P. Sharma, R. Southon, G. (1999). Successful IS Innovation: The Contingent Contributions of Innovation Characteristics and Implementation Process. Journal of Information Technology, 14(1):53–68.

Yiend, J., Weller, S. & Kitchin, I. (2012). Peer observation of teaching: the interaction between peer review and developmental models of practice. Journal of Further and Higher Education, http://www.tandfonline.com/doi/abs/10.1080/0309877X. Last accessed Jan 2012.

Appendices

Appendix I

Guidance for your Peer Observation

Arrange to “pair” with a colleague- this can be anyone from any department in-house or outreach who also has clinical teaching sessions of any year of dental students.

You and your paired colleague must first arrange your “pre-observation meeting” this is best carried out face-to face but can be conducted online or via telephone. The purpose of this discussion is to set some ground rules for the observation so that you are both aware of what you will be doing. Some teachers may already have concerns over how well they teach certain aspects and may ask for this to be observed.

The next stage is the observation itself. One member of the pair will be freed from normal duties in order to attend a teaching session run by their colleague. During this session the observer should maintain a “fly-on-the-wall” status. Patients and students should be informed why there is an extra person in the room.

The person being observed should conduct their teaching session in the usual manner. The observer should make note of areas of good practice (appendix I), areas that perhaps need clarification as to why the tutor chooses to teach in that way and areas to be discussed where suggestions for development or improvement may be made. As an observer these elements should be kept as a time log (appendix II).

Following this a “post observation meeting” should be arranged. This should be carried out as soon as possible post observation bearing in mind that the observer may need some time to collect their thoughts.

The process will then be repeated with roles switched (please keep in mind that pre and post observation meetings can be combined and both observation events discussed in turn).

The process is complete once participants are given time to reflect on their teaching practice and perhaps try out new or developed elements of practice.

Please guidance below regarding elements you may wish to look at during the process.

Kind regards, Ali

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Guidance for Observation and Post- Observation Discussion

(Please note this is for guidance only- just to get you thinking/talking!).

- Were the learning goals for the student clearly set out at the start of each patient interaction?
- Do you think the student understood what they were supposed to do? If not, were they given an opportunity to ask prior to sitting down with the patient?
- Did the teacher actively interact with the student or did the student have to ask for assistance every time it was required?
- Did the tutor fully allow the student to communicate with the patient//parent or did the tutor take over?
- Was appropriate feedback given to the students at the end of the session?
- Did the tutor miss giving feedback that could have been helpful to a student?
- Did the tutor try to find something that the student had done well prior to giving constructive criticism of their work/conduct?
- Did the tutor give feedback that was not constructive?
- Did the tutor give the student ample time to explain their actions?
- Did the tutor encourage the student to reflect on both what went well and what did not go so well during the session?
- Did the tutor help the student to identify future learning needs and how these might be met?
- Did the tutor help to test or expand the student's knowledge with appropriate questioning?
- Did the tutor fully expand on concepts for which the student did not know the answer to or direct them to appropriate learning resources?

Appendix II

University of Glasgow | Learning & Teaching Centre

Contents

Introduction

This resource is intended to offer guidance to individuals and to Schools on how to facilitate peer observation of teaching (POT). POT is a formative process where a colleague (or peer group) observes another individual's teaching and offers structured feedback on this teaching. The aim is to enhance learning through critical reflection upon teaching practice by the person observed as well as by the peer observer, and ultimately to enhance the quality of teaching and student learning.

At the University of Glasgow, there are some Schools and Colleges whose staff regularly undertake POT. These include participants on the Postgraduate Certificate in Academic Practice (PGCAP) at the Learning & Teaching Centre, and some staff in other areas. These guidelines aim to provide clear information on POT in order for staff and Schools within the university to decide upon whether POT is appropriate, and if so, what kind of peer observation is most appropriate and how peer observation could be undertaken within their own specific disciplinary contexts. It is intended that within the University of Glasgow, the POT process and outcomes will be collegial and constructive. This document includes: rationales for why POT is considered to be valuable; principles of POT; stages of the peer observation process; some examples of forms which could be used for undertaking POT feedback and discussion; and guidance on different ways in which Schools might wish to engage in POT in practice. There are also additional resources listed for those who wish to examine POT further.

Benefits of peer observation

Most teaching staff acknowledge the importance of continuing professional development in their subject area as well as in their teaching. POT is intended to contribute to enhancing the quality of teaching within the university and to supporting staff personally in developing their teaching practice. POT can help to bring discussion of teaching – which is often a hidden practice – into the public domain (Blackwell & McClean, 1996), and can contribute to enhancing the value of teaching (Gosling, 2005). This discussion of teaching can help staff to learn about their own teaching practices, but also to learn about and from colleagues' teaching. The POT process can enhance the sharing of good practice and more personally can enable staff to receive positive feedback on what they do well (Whitlock & Rumpus, 2004). POT can

reassure some staff that their teaching is seen positively by their peers, whilst also being useful in helping to reveal hidden behaviour that individuals may not be aware of within their own practice (Blackwell & McClean, 1996). Indeed, the opportunity for shared critical reflection within POT can lead to the challenging of assumptions about teaching (Peel, 2005). The opportunity to discuss teaching with peers is also an opportunity to deal with known problems (Blackwell & McClean, 1996). Other benefits include finding out what students are learning in colleagues' teaching sessions. The documentation completed can provide useful materials for portfolios of practice or other continuing professional development records. Hammersley-Fletcher & Orsmond (2004) argue that all of these processes have the potential to enhance the quality of teaching within higher education institutions.

Purposes of undertaking peer observation

Colleagues need to be committed to taking a critical look at their own practice. Staff concerns about POT are often linked to more formal assessment of practice and promotion (Shultz & Latif, 2006). It is crucial to be clear about the reasons why you are undertaking POT, whether individually or as a School. Where Schools are considering adopting a programme of POT, it would be wise to discuss this with staff and clarify purposes and concerns. Where staff question the value of POT, this may lead to instrumental approaches where staff simply go through the motions but don't really engage meaningfully with the POT process. Peel (2005) argues that an instrumental approach to POT is not likely to be effective. Gosling (2005) suggests there are three main motivations for POT: evaluation, development or collaboration. An evaluation model, "…is characterised by judgements being made on the quality of teaching in order to serve a management purpose for internal quality assurance purposes, to prepare for external audit or to make judgements about individual teachers for probation, promotion of investigating underperformance. "A developmental model" focuses on assisting staff to improve their teaching can be explicitly staff-led with no predetermined agenda may be used with inexperienced lecturers to assist them achieve standards of competency, for example on Postgraduate Certificates "A collaborative model" is part of a broader project to establish a culture that nurtures the improvement of teaching within a department. Collaborative peer review of teaching is about finding ways of creating and sustaining conversations about teaching which are constructive and purposeful and which open problems in teaching to public debate and discussion" (Gosling, 2005:118). Whichever approach to POT you choose to pursue, the overarching principles of POT are outlined below.

Principles of peer observation

In exploring peer observation of teaching, a number of key principles emerge from the literature: Confidentiality (Gosling, 2005; Carter & Clark, 2003) Separation of POT from other university processes such as underperformance or promotion (Gosling, 2005; Carter & Clark, 2003) Inclusivity – involving all staff with teaching responsibilities irrespective of grade or status (Gosling, 2005; Carter & Clark, 2003) Reciprocity with a focus on mutual benefit to observer and observed (Gosling, 2005) Development focus rather than judgement (Carter & Clark, 2003). The second and fifth principles illustrate contestation of the evaluation model of POT, present in the literature. There is substantial discussion as to whether POT should be an optional or compulsory process. Where the process is optional, staff will engage through choice and are likely to demonstrate greater commitment. However, optional POT leads to piecemeal adoption of the process and makes it difficult for POT to be used as a School-wide development tool. Compulsory programmes of POT risk staff being or becoming resistant to the process.

Identifying peers

Some of the concerns that staff might have with adopting POT may be alleviated through sensitive ways in which peer pairs or groups are decided. POT can take place

within a peer group, but often involves peer pairs, and it is this latter arrangement which is focused on here. If an individual is allowed to select their own peer, this can have many benefits. As colleagues at the University of Western Australia point out, the aim is to receive "formative feedback provided by a trusted colleague" (UWA, 2008). Both parties need to have mutual respect and trust and be comfortable giving and receiving feedback. One way of achieving this formative and supportive emphasis is for the person being observed to be the person in control of choosing who will observe them, what aspects of their teaching they would like feedback on and how they will follow up on this feedback. However, making changes to peer observation pairings over time can be a constructive way of making sure that the POT process stays critical and that new perspectives on teaching practices can be considered.
A peer can be selected from the individual's own School, from another School or from a central academic development unit (Gosling, 2005). It may be useful to have feedback from someone in the same School who can comment on the teaching of specific subjects, but it may also be useful to have feedback from others who are likely to focus more on the teaching process. Peers can be at varying stages or levels of experience as long as both parties are comfortable with the arrangement, but care may be needed where there is the possibility that differences in status or experience lead to issues of power getting in the way of genuine mutual support. Where a School wishes to adopt a POT process, consideration will need to be given as to how peers will be identified. Some suggestions are listed here: Individuals could identify their own peer observer Peer pairings could be allocated by the Head of School. Use could be made of an existing mentoring system – although consideration would need to be given about whether this was a reciprocal pairing where a mentor would also receive feedback from a mentee. A circular system could operate where peers observers are allocated to observe the person next to them alphabetically or randomly i.e. A would observe B would observe C, would observe A. Whichever system is used, opportunities will need to be created for broader discussion of POT processes and outcomes at School wide level.

Peer observation of teaching stages

The process of peer observation usually involves three stages that can be of varying lengths and types: 1) the briefing meeting or pre-observation stage, 2) the observation of teaching, and 3) a post-observation meeting. Each of these is described here.

1) The briefing meeting

The first stage of peer observation should be a briefing or pre-observation meeting. This meeting is an opportunity for the two colleagues to meet and discuss how the observation will be organised and what kind of feedback is being sought. There are a number of issues which will need to be clarified at this stage including: where and when the observation will take place; who the learners are – what level and how well the tutor knows the group; and the aims and intended learning outcomes for the session. In addition, consider and agree on how the observer will be introduced to the students. The tutor under observation should use this meeting to outline to the peer observer which areas of their teaching practice they would like specific feedback on. Many POT schemes suggest consideration of some of the following areas as a useful starting point to identifying specific areas for feedback: Organisation, Structure, Methods/approach, Content, Enthusiasm, Clarity, Interaction, Voice, Body language, Use of visual aids, Delivery and pace, Student participation, Use of resources, Use of environment / accommodation, Teaching style, Suggestions for more specific questions about learning and teaching might include some of those listed here: Are the intended learning outcomes for the session clear? How well does the teaching match the intended learning outcomes? Is the material sufficiently research-informed and up-to-date? How does the teacher support students to take responsibility for their own learning? How engaged were the students in the session? Were students invited to participate? In what ways? How was this facilitated? Do the students receive

feedback? What kind of feedback? To what extent has the teacher included all the students? Is the teacher supporting the students' individual personal development? Does the teacher support students' critical reflection on their own learning?
As a bare minimum, peer feedback should include some positive comments about the teaching and identify any particular strengths of the teaching approach taken. It is also important for the observer to take a critical, yet supportive stance in suggesting areas for development. Colleagues are likely to benefit from limiting the number of areas or questions being addressed at any one time in order to avoid overload on either the observer or observed. This also creates opportunities for discussion to achieve more depth in those areas of particular interest. It can be helpful for the tutor being observed to decide whether they would prefer open comments and/ or to be rated on a likert scale and to make this clear to the observer beforehand.

2) The observation

The observer should arrive early and place themselves as unobtrusively as possible. The observer usually does not take part in the class but the reason for their presence should be explained to the students so that they understand that their performance is not being observed. The students should be given the option to refuse to allow the observation to take place. The teacher then undertakes the teaching session trying as much as possible to behave as they would do when not observed. The observer should focus on the process of the facilitation of learning rather than the content of the session unless the teacher has asked for specific comments on the subject and content. The observer may find it helpful to take detailed notes or to complete an appropriate form to aid giving feedback later on. (For examples of forms see the later section on examples of forms for peer observation.)

3) Post-observation meeting

Colleagues often arrange to meet for 30 minutes to an hour directly after the teaching session. Some observers prefer to write up their notes before having this meeting. However, it is good practice to arrange the post-observation meeting as soon after the observation as possible. This enhances recall of the details of the session and thereby facilitates reflection by the observer and observed. If the meeting does not take place immediately after the session, it is important for the teacher to reflect on the session and note what seemed to work well, what did not seem to work so well, and any particular areas of interest or concern. The observer should write up a summary of the key points from their observation – particularly in those areas where feedback was sought - to be able to give this to the teacher at the meeting.

Giving Feedback

The observer should aim to give constructive feedback i.e. pointing out what worked well but also what perhaps went less well and where appropriate make suggestions for improvement. Giving critical feedback can be difficult but it is essential if the teacher is to benefit from the POT process. Observing someone else's teaching is a very subjective experience but the observers' thoughts on what they observe can be highly illuminating for the teacher. If during the meeting the observer and teacher agree that there are any errors in the report these can be noted and the report amended.
The University Teaching Development Centre at the Victoria University of Wellington outline four essential elements for ensuring feedback is constructive: *positive phrasing* – feedback messages need to affirm and acknowledge effort and achievements; *concreteness* – comments are grounded in specific, observable behaviour; *actionorientation* – suggesting to the individual a specific plan of action to follow; and *focus* –offering feedback on behaviour that the individual can change (UTDC, 2004).

Reflecting on the process

Once the post-observation meeting has taken place and the report has been received, the teacher should continue to reflect on the process and, in particular, reflect on the comments that the observer has made in their report. The post-observation meeting

may have involved devising a brief plan of action on the basis of the areas discussed, but if not, it is worth the teacher taking time to consider how they might adapt their teaching practice in the light of the POT process and outcomes. The observer may also wish to reflect on the process of observing; in particular, consider what they have learned from the observation experience. It can be useful for colleagues to continue meeting in order to further develop critical reflection on the teaching session and outcomes.

Examples of forms for peer observation

Forms for recording peer observation are generally split into the three main stages of observation: pre-observation forms to support the person being observed to clarify which areas of their teaching they would like feedback on; peer observation forms which the observer completes as the basis of giving formative feedback; and post observation forms which facilitate dialogue between the observer and the observed and enable the person observed to be able to identify areas for development and related action points.

Example Form (1): Pre-observation form
Name of teacher:
Name of observer:
Date, time and venue of teaching session to be observed:
Number and level of students:
Course title and topic:
Relevant background context, *e.g. has the teacher met the students previously? Where does this session fit into the rest of the course?*
Aims and intended learning outcomes for teaching session:
Is there anything you would like the observer to give specific feedback on?
Consider how the observer will be introduced to the students

Example form (2): Teaching observation form
Name of teacher:
Name of observer:
Date, time and venue of teaching session to be observed:
Number and level of students:
Course title and topic:
Things the tutor has done well *(e.g. structure, clarity, pace, organisation, interaction, body language, visual aids, enthusiasm etc.):*
Areas for reflection and possible improvement *(e.g. structure, clarity, pace, organisation, interaction, body language, visual aids, enthusiasm etc.):*
Comments on specific areas of focus identified prior to observation:

Example form (3): Post-observation form
Prior to completing this form, the observer should send a copy of the teaching observation form to the teacher. The teacher should reflect on the contents of the teaching observation form and also on their own views of how the teaching session went. If they have gathered any student feedback from the session, this should be explored alongside the other accounts of the teaching session.
1. Were there any differences or similarities between the views of the observer / teacher / students?
2. Were there any surprises for the teacher in the feedback from the observer?
3. Can you identify together any areas of good practice from the teaching session?
4. What areas of development can you identify from the feedback and how do you intend to address these?
Other example forms
Other examples of pro-forma for peer observation can be found at the links below. Many universities combine forms for the three stages of peer observation, others present them separately. Please note that some of these universities run mandatory

peer observation schemes and therefore some of the forms have a more summative focus.
University of the Arts London
http://www.arts.ac.uk/media/oldreddotassets/docs/Learning_Teaching_Obs_2005.doc
University of Birmingham (Wide range of forms including check list style, open categories, chronological recording sheets and ethnographic style forms)
http://www.as.bham.ac.uk/legislation/peerobservation.shtml
University of Exeter
http://newton.ex.ac.uk/handbook/forms/ClassObsRecord.pdf
University of Nottingham
http://www.nottingham.ac.uk/sedu/forms/peerobs.doc
University of Sheffield (PRE-Observation form)
http://www.peerobs.group.shef.ac.uk/Word_docs/FormB.doc
University of Sheffield (ACTUAL Observation form)
http://www.peerobs.group.shef.ac.uk/Word_docs/FormC-1%20%202008.doc
University of Sheffield (POST Observation form)
http://www.peerobs.group.shef.ac.uk/Word_docs/FormD.doc
University of St Andrews
http://www.standrews.
ac.uk/staff/academic/Peerobservationofteaching/Formsandchecklists/
University of Sussex
http://www.sussex.ac.uk/tldu/ideas/profdev/pot
University of Wales Institute, Cardiff
http://www.uwic.ac.uk/ltsu/documents/peer%20observation%201.pdf

How can Schools engage meaningfully in peer observation?

If a School is considering adopting a POT process, there are several key questions which will need to be considered. The motivation for the POT process in terms of evaluation, development or collaboration has already been mentioned. In addition, Schools will need to consider the following:
Will the POT process be mandatory?
If the process is to be mandatory, how will this be managed? What kind of impacts will voluntary or mandatory POT have on the process? Will staff be consulted about POT proposals? How would any resistance to the scheme be treated?
How can Schools ensure that peer feedback is constructive?
It is extremely difficult to guarantee that feedback will be constructive, but discussing the meaning of constructive feedback before launching a School-wide scheme would be highly advisable. It may be possible to offer a staff development course in this area. Peers should be aware of the need for positive as well as developmental feedback. Another possibility might be to increase awareness of some simple but useful feedback models, see for example, Pendleton's feedback technique from general practice (Pendleton et al, 2003). Pendleton's technique includes four steps, adapted here to peer observation: 1) asking the teacher what they think they have done well; 2) the peer observer offering what they think the teacher has done well; 3) the teacher suggesting what they think they could improve, develop or change; and 4) the peer observer offering their views of what the teacher could improve, develop or change.
How often will staff be expected to be observed or observe colleagues?

If POT is carried out continuously, staff may become worn out by the process and may become more resistant. It may be worth having a particular time of year when POT takes place so all staff are aware it is happening and it then does not take over all teaching. Schools might also consider concentrating on certain aspects of teaching each year or every other year as part of a POT developmental programme. If POT is carried out too frequently staff are more likely to adopt instrumental rather than meaningful attitudes.
How flexible will the POT scheme be?
Will there be standard forms and guidelines for POT within the School?

Will individuals be able to modify the process to suit their particular needs?
How long should the observed session be?
Should the teaching sessions observed be of a particular duration? Staff may find it easier to feedback on a session that is 1-2 hours long rather than a longer course. It can be difficult for an observer to maintain a focus on feedback areas for a whole day or for other long sessions and these are tiring for both the teacher and observer. However, the sessions don't need to be of any particular standard length.
Where can I find out more about POT?
As well as the resources outlined in these guidelines, there are many useful websites and articles relating to POT. However, one of the most valuable sources of information comes from those who are actively using POT schemes. It can be valuable to ask colleagues from your own subject are, or from other disciplines, about their experiences of taking part in POT.

References

Blackwell, R. & McLean, M. (1996) Peer observation of teaching and staff development.
Higher Education Quarterly 50 (2) 156-171.
Carter, M. & Clark, A. (2003) *Peer observation: a training pack*. University of Wales Institute, Cardiff. Online:
http://www.uwic.ac.uk/ltsu/documents/peer%20observation%201.pdf
Accessed: 25/07/2011
Gosling, D. (2005) *Peer observation of teaching. Implementing a peer observation of teaching scheme with five case studies*. Staff and Educational Development Association
Paper 118. London: SEDA.
Hammersley-Fletcher, L. and Orsmond, P. (2004) Evaluating our peers: is peer observation a meaningful process? *Studies in Higher Education.* 29 (4) 213-224.
Myers, J. (2006) *Video-taping: A tool for teachers*. Derek Bok Center for Teaching and Learning, Harvard University. Online:
http://isites.harvard.edu/fs/html/icb.topic58474/videotaping.html
Accessed: 25/07/2011
Peel, D. (2005) Peer observation as a transformatory tool? *Teaching in Higher Education*. 10 (4) 489-504.
Pendleton, D., Schofield, T., Tate, P., and Havelock P. (2003) *Learning and teaching about the consultation*. In: Pendleton, D., Schofield, T., Tate, P., and Havelock P. (eds) 13 *The New Consultation: Developing Doctor–Patient Communication*. Oxford: Oxford University Press.
ProDAIT (2006) *What is peer observation of teaching?* Professional Development for Academics Involved in Teaching website. Online:
http://www.prodait.org/approaches/observation/what.php
Accessed: 25/07/2011
Schultz, K.K. and Latif, D. (2006) The Planning and Implementation of a Faculty Peer Review Teaching Project. *American Journal of Pharmaceutical Education*. 70 (2) Article 32.
UTDC (2004) Peer observation of teaching. University Teaching Development Centre, Victoria University of Wellington. Online:
http://www.utdc.vuw.ac.nz/resources/guidelines/PeerObservation.pdf
Accessed: 25/07/2011
UWA (2008) *Peer observation of Teaching.* Faculty of Medicine, Dentistry and Health Sciences webpage, University of Western Australia. Online:
http://www.meddent.uwa.edu.au/staff/teaching/observation
Accessed: 25/07/2011
Whitlock, W. & Rumpus, A. (2004) *Peer observation: collaborative teaching quality enhancement*. Educational Initiative Centre, University of Westminster. Online:
http://www.wmin.ac.uk/pdf/Peer%20Ob%20collaborative%20QE.pdf
Accessed: 25/07/2011

Additional Resources

ProDAIT resources on Peer observation. Professional Development for Academics Involved in Teaching website.
http://www.prodait.org/approaches/observation/index.php

Swain, H. (2008) Peer observation of teaching. *Times Higher Education* March 18th. Online:
http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=401083&c =2

University of Birmingham Guidelines on Peer observation of teaching
http://www.as.bham.ac.uk/legislation/peerobservation.shtml

University of Nottingham Peer observation of teaching webpages
http://www.nottingham.ac.uk/sedu/forms/peerobs.doc

University of St Andrews Peer observation of teaching webpages
http://www.st-andrews.ac.uk/staff/academic/Peerobservationofteaching/

University of Western Australia, Centre for the Advancement of Learning and Teaching
Peer Feedback on Teaching resource
http://www.catl.uwa.edu.au/etu/peer

Appendix III

Time Log Sheet

This system will help you to remember specific events throughout the observation. It will help identify if some behaviours are consistently repeated whether they be favourable or not.

Example of time log

Time	Observation	Comment
2.15pm	Miss X told the student that the filling was not acceptable but did not explain why.	I wonder if she will discuss this later after the patient has gone?
2.30pm	Miss X was very complementary with regards to the student's rapport with the patient and asked the child patient what score out of 10 they would give their dentist today.	Does she always do that or only when she knows the patient will give a good score? This really boosted the student's confidence.

Please find a blank time log sheet overleaf for your use.

Appendix IV

Cairns, A.M., Bissell, V., and Bovill, C. (2013) Evaluation of a pilot peer observation of teaching scheme for chair-side tutors at Glasgow University dental school. British Dental Journal, 214 (11). pp. 573-576. ISSN 0007-0610

Evaluation of a Pilot Peer Observation of Teaching Scheme for Chair-side Tutors at Glasgow University Dental School

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Abstract
Aim To introduce and examine a pilot peer observation of teaching (POT) scheme within the Department of Paediatric Dentistry at Glasgow Dental School and its associated outreach centres.
Methods All tutors teaching paediatric dentistry were invited to be involved in evaluation of the POT scheme. Participants were randomly paired with a peer, who then observed their teaching and provided constructive feedback. For those consenting to be involved in the evaluation of the scheme, semi-structured, one-to-one interviews were carried out by the principal investigator.
Results POT was found by all participants to be a beneficial process, reassuring those of their teaching styles and giving them ideas to adapt their teaching.
Conclusion POT is an effective method for engaging chair-side tutors in the reflection and development of their teaching practice via observations and scholarly discussion.

Introduction

Peer Observation of Teaching is a reciprocal process whereby one peer observes another's teaching and provides supportive and constructive feedback. Its underlying rationale is to encourage professional development in teaching and learning through critical reflection, by both the observer and the observed.[1] The POT process focuses on assisting staff to improve their teaching skills. It can be explicitly staff-led with no predetermined agenda and can be used with inexperienced teaching staff helping them to achieve standards of competency. [2] The intention is that teachers will learn something of importance about teaching and learning during the POT process and associated discussions. Following the POT process teachers should take steps to incorporate any good practice observed into their teaching and eliminate any poor practice identified, this will develop both their teaching and their concept of themselves as a teacher. [3,4] Ideally, POT should be a non-judgmental process and any power imbalance between participants should not be viewed as a barrier to providing constructive feedback on teaching practice where the mutual aim is to enhance learning and teaching. This does however raise questions about who may or may not be considered as a peer.[5] The main aims of any POT scheme are to enhance and disseminate good teaching practice and support the development of teaching skills, to enable personal development through a process of reflective practice which will in turn improve the quality of teaching experienced by the students.[6] Working through this process holds

benefits for both the observer and the observed and the focus is always on constructive development, rather than negative criticism. [7] Reflective practice has been advocated as a means of professional development both for new and experienced academic staff. [8,9] Some evidence, however, would suggest that a reflective approach does not suit all teachers. Some may see their teaching as largely "common sense" and drawn from experience, [10] however, as Kugel[11] observed, teachers progress through a series of distinct developmental stages where they increasingly focus upon the importance of the student experience. We were keen to see how POT could contribute to supporting our participants in their development as teachers.

Institutionally, POT is consistent with the University of Glasgow's aim to promote excellence in teaching and previous schemes have been shown to help enhance the profile and value of teaching and scholarship within institutions. [2] POT has also been shown to be worthwhile for development of teaching in a variety of disciplines.[12,13,14,15] In addition to the potential benefits to the individual already described, POT can be viewed as a collaborative project to establish a culture that nurtures the improvement of teaching within a department or wider institution. Collaborative peer observation of teaching is about finding ways of creating and sustaining conversations about teaching which are constructive and purposeful and which open problems in teaching to debate and discussion. [2] Some studies have shown that scholarly discussion between teachers are more significant when they take place between small networks of teachers in a supportive environment rather than within larger networks, [16,17] and the POT process facilitates this. The POT process should remain confidential and should not be used by line managers as a process to address underperformance or for promotion. [2,7]

Despite the numerous POT schemes reported within higher education, there are no reports of its use in the teaching of chair-side clinical dentistry; this area remains distinct from medicine and nursing, with dental students carrying out multiple invasive procedures at any given clinical session. Tutors in dental outreach clinics, who are often NHS employees, may have limited access to support for teaching as clinical responsibilities and their location, which is remote from the Dental School or University Campus, hamper their availability to attend development events. Potentially, POT can compensate for these limitations by providing feedback, support, scholarly discussion and encouraging reflection. The process overall has the potential to maximise quality assurance and enhancement of clinical teaching as well as contributing to standardization of teaching across an institution [18].

Aims

The aims of this study were:

1. To introduce a POT scheme amongst the current clinical chairside teaching staff within the Department of Paediatric Dentistry at Glasgow Dental School and its associated outreach centres.

2. To determine if the POT scheme was an effective and acceptable vehicle to encourage scholarly discussion, reflection and development of teaching practice.

3. To examine the outcomes from this pilot study and consider if a POT scheme would be a useful tool for teachers in other areas of chair side teaching within Glasgow Dental School.

Methods

The methodology underpinning this project is that of evaluation research. Evaluation research has successfully been used in the past to study programmes and initiatives [19] and is commonly used in studies with qualitative data. Evaluation research is often carried out to determine how well a programme or initiative works in real-world settings and to show how it might be improved. Evaluation specifically involves determining the worth, merit, or quality of an evaluation object or subject, such as a POT scheme. [20,21, 22]

Ethical approval for this evaluation research was sought and granted by the University of Glasgow's College of Social Sciences Ethics Committee. All tutors teaching paediatric dentistry (14) were invited to be involved in evaluation of the POT scheme and attended a training session where the potential benefits of POT were explored. This two-hour training session took place as part of a wider study day and consisted of a PowerPoint presentation, workshop and discussion. The training session was led by one of the authors who is a Senior Academic with the Learning and Teaching Centre at the University and author of the University's guidance on POT. Written information about the scheme and its evaluation was disseminated to potential participants, who were invited to provide written consent. Participants were randomly paired with a peer by placing names in a hat, and then given the opportunity, confidentially, to raise objections to their chosen pairing should this have been an issue. In conjunction with the University of Glasgow's written guidance on POT [23] the first meeting (pre-observation) of the pairing functioned to discuss how the observations would run and negotiate agreed criteria, these meetings took place face-to-face, over the telephone or via email. Guidance was supplied to those participants who preferred to be given some structure for their observations (fig.1). Participants were assured that this guidance was non-prescriptive, it was not intended to be a list of what might be considered as good teaching and that there may be perfectly acceptable reasons why a teacher may veer away from any of these criteria. Again for those wishing to have some form of structure for their observations, the concept of a "timelog" was introduced and its use explained [24]. Participants were informed that if they felt more comfortable using global criteria in their critique then this was also perfectly acceptable. Observers were encouraged to remain impartial throughout the observation, maintaining a "fly-on-the-wall" status. Face-to-face post -observation meetings took place as soon as possible following both observations. Discussions between the pair of dental tutors (or observer and the observed) remained confidential.

For those consenting to be involved in the evaluation of the scheme, semi-structured, one-to-one interviews were carried out by the principal investigator. These interviews were conducted in private as soon as was practical following the post-observation discussions. The interviews were digitally recorded using a mobile phone application. Digital audio recordings were transcribed and entered into NVivo 10 (a computer programme facilitating qualitative analysis) to assist in coding of themes and categories.

Results

Eleven tutors took part resulting in 12 observations (the principal investigator joined a pairing in order to make up numbers but did not contribute to the analysed material). This occurred because one of the consenting participants

was off work on prolonged sick leave. Ten observations took place in an outreach setting and two were conducted within the Department of Paediatric Dentistry in Glasgow Dental School.

Participants included two consultants in paediatric dentistry, one Senior Community Dental Officer and nine Community Dental Officers, the range of time since graduation was between twenty and five years, the range of time teaching was between nine and one year. No participants objected to their assigned pairing.

All clinics observed were of chair side teaching, staff to student ratios varied from 1:2 to 1:4. Some of the observations also included tutorials which naturally formed part of the session. Session duration varied from 2.5 to 3.5 hours. Interviews were conducted at a time and place suitable to the participant and ranged in duration from 17 to 31 minutes. Initial interview analysis attempted to code the emerging/common themes (see fig. 1)

Interview analysis revealed that participants reflected on their teaching prior to being observed. The majority of participants took the decision not to change anything in their current practice while being observed in the hope of receiving a more meaningful critique. All participants admitted some trepidation prior to being observed and some actually described this as “anxiety”. A major benefit of the scheme was its ability to reassure participants that their practice was similar to that of their peer.

…”my anxieties started to reduce when I realized that we really do similar things, it was very reassuring.”

“What I did learn is that other people have the same problems when teaching, it’s not specific to me and that’s a good thing, very reassuring.”

Many of them were able to witness new approaches to teaching which they liked and often adopted or adapted for use in their own teaching practice.

…”so what I have really taken from observing her (peer) is a lesson on how to handle the student, when to stand back and let them get on with it and when to intervene. There were tips that I couldn’t wait to incorporate into my teaching.”

Some picked up coping strategies to deal with being overly busy on student clinics. Although the main focus of the scheme was to enhance teaching skills, participants also picked up some valued clinical tips which they were able to utilise in their own student teaching. As a result of being observed many participants had, previously unrecognised, exemplary aspects of their teaching style acknowledged. Common pitfalls were identified and discussed, such as the tendency to take over or not give the student ownership of the patient’s care.

…”It was pointed out that I have a bit of a tendency to take over rather than letting the students be a bit more hands-on.”

The scheme also enabled observers to point out to the observed where they had perhaps missed ideal opportunities to emphasise specific learning points. Participants found it relatively simple to separate the teaching style and methods from the dental content, although, in the course of one observation an inaccuracy in clinical knowledge was pointed out.

The majority of participants found the role of observer to have been the most beneficial.

“I preferred observing someone else. When you are busy yourself sometimes you forget to notice things, watching someone else was a real luxury, having time to think about how things were progressing.”

All participants found the post observation discussions with their peer to have been helpful, honest and open. All participants reflected on their experience

following involvement in the scheme and discussion with their peer helped to facilitate some of this.
…"just the fact that it (the scheme) makes you think about teaching rather than just going on doing what you do."
Most participants felt relatively comfortable giving and receiving their critique, although one participant felt that they had too many comments to make.
During the interview participants were asked to think about other appropriate ways in which their teaching could be improved, and while they did mention attending courses and teaching qualifications, none could identify another method which would be more authentic or accessible as POT. All participants found involvement in the scheme to be an influential educational experience and felt that long term participation in the scheme would enhance their teaching practice and ultimately help standardise teaching practice throughout the Dental School. Participants were pleased that a need for training had been identified and valued the time which was granted for involvement in the scheme.

Discussion

All participants went through a period of reflection prior to being observed; as you would expect, the thought of having their teaching professionally observed made them think about what they currently do and if it could be improved. One participant did change the way they normally teach prior to being observed in order to incorporate some new teaching methods they had observed from their peer the week before.
All participants admitted some trepidation prior to being observed and some actually described this as "anxiety", but in all cases the apprehension disappeared as they fell into their regular teaching role and in many cases the observer was completely forgotten about as the business of a busy teaching session took hold.
In other POT schemes observations have been carried out by educationalists who are expert in the critique of teaching practice. For this study the employment of an educationalist to carry out all observations was seen as unrealistic and unsustainable. A specialist educationalist peer would also lack an outlook which was more specifically dental in nature.
Reassurance that participants' teaching practice was similar to that of their peers was a major outcome of this study. The reason for this may be even more pertinent among this group as many of them teach in relative isolation in community outreach centre's. These teachers have between two and four students each in clinics where chair side teaching and occasionally tutorials are the only activities. The majority of the participants had never participated in courses in teaching and learning, such as a Postgraduate Certificate in Learning and Teaching, and some of them were also relatively new to teaching. Whilst all participants could be described as "keen" teachers, in a small number of cases the choice to become a teacher was not completely without coercion. However, to touch on an earlier comment, none of the teachers were of the opinion that teaching was largely "common sense", and all felt that input and training was something necessary to improve teaching skills.
In one case inaccurate clinical knowledge was given to students; the knowledge itself was not inaccurate per se but rather a pragmatic alternative which was deemed inappropriate for students to learn and that might have led to a student scoring badly in examinations. This scenario was discussed at a follow up meeting and a clinical update on the subject has been arranged. Without POT this matter may never have been highlighted.

Separating teaching style and methods from dental information was relatively simple for the participants, maintaining a “fly-on-the-wall” status meant that they were unable to fully appreciate the entire clinical picture. Although some did express the view that they would have planned the treatment for a patient differently; as professionals they were all aware that multiple treatment plans may have been appropriate.

Teachers were given a great confidence boost when aspects of their teaching were acknowledged as exemplary. This encouraged further discussion at subsequent meetings where teachers were happy to openly share the details of such accolades to the wider audience of outreach tutors. This has all added to scholarly discussion and development of teaching practice within the group as a whole.

In this study the majority of participants found the role of observer to have been the most beneficial. They seemed to value the uncommon opportunity to observe a colleague undertaking teaching and clinical practice. As the scheme progresses it is possible that this view may change, especially if teachers start to identify aspects of their teaching which they would like to work on and ask their observer to pay particular thought and attention to. Many appreciated the opportunity to focus solely on teaching methods and style without having to simultaneously interact with students and patients. Participants appreciated the time they were given to do this and how it helped with their own personal reflection on clinical teaching and practice. Many were aware that personal reflection could help to modify and improve teaching but that this was greatly facilitated by input from other sources; POT was a non-judgmental and non-threatening way to receive this input.

Most participants felt relatively comfortable giving and receiving their critique and reported transferring the methods they currently used to facilitate this type of discussion with students. One participant admitted, however, that they would have found it impossible to say anything negative to their peer. In this instance, it may have been down to the inexperience of this particular teacher and the dynamics of the pairing and this emphasises the importance of considering how “peers” should be selected in any extension of the scheme and indeed who a “peer” is considered to be. Another participant felt that they had too many comments to make so decided just to focus on the three most relevant items rather than bombarding their observee with information. This seems a wise strategy for such circumstances and will be incorporated into future participant guidance information. Due to time pressures faced by the tutors, POT was seen as an effective and authentic way of enhancing teaching skills. Although they did have to set aside time for discussions and to observe their peer this was seen as a good use of time which was fortunately supported by the Associate Medical Director for Greater Glasgow and Clyde Health Board. It is estimated that the time burden for each participant was around 6 hours of which 3 hours was lost clinical time, participants tended to hold pre and post observation discussions during their lunchtimes. Training took up around one hour and had been incorporated into a previously organised study/update day. Obviously this scheme does have a financial burden with the loss of one clinical session per participant the cost of which varies with the grade of the participant. As previously stated the Associate Medical Director was aware of the demands on time/lost clinical activity but the benefits to staff, and ultimately to students, were deemed to be worthy of participation in the scheme.

Conclusions

A peer observation of teaching scheme was successfully set up and administered for paediatric dentistry chairside teachers at Glasgow Dental School. The scheme was well received by all participants who felt it was a very authentic method for effectively engaging them in reflection and development of their teaching practice via observations and scholarly discussion. Identification of items for future training events was also seen as a successful outcome of the scheme. Staff were eager to repeat this process on a yearly basis and were pleased that introduction of this scheme acknowledged their need for ongoing teaching and learning support. Following the success of this pilot scheme the authors plan to implement POT for all clinical chairside teachers in the Dental School.

References

1. Lubin J. A guide to peer review of teaching. University of Tasmania. 2002.
2. Gosling D. Peer observation of teaching. Implementing a peer observation of teaching scheme with five case studies. Staff and educational development association paper 118. London:SEDA. 2005.
3. Entwistle N, Walker P. Strategic alertness and expanded awareness within sophisticated conceptions of teaching. *Instructional Science* 2000, 28: 335–361.
4. Marton F, Dall'Alba G, Beaty E. Conceptions of learning. *International Journal of Educational Research* 1993, 19: 277–300.
5. Weller S. What does "peer" mean in observation for the professional development of higher education lecturers? *International Journal of Teaching and Learning in Higher Education* 2009, 21:25-35.
6. ProDAIT. Peer observation of teaching. Professional development for academics involved in teaching. www.prodait.org. 2011.
7. Carter M, Clark A. Peer observation: a training pack. University of Wales Institute, Cardiff. 2003.
8. Schon D. *Educating the reflective practitioner* (San Francisco, Jossey-Bass). 1987.
9. Brew A. Directions in staff development. Milton Keynes, SRHE/Open University Press.1995.
10.Handal G, Lauvas P. *Promoting reflective teaching:supervision in action*. Milton Keynes, SRHE/Open University Press.1987.
11.Kugel P. How professors develop as teachers. *Studies in Higher Education*. 1993, 18:3, 315-328.
12.Bell M. Supported reflective practice a programme of peer observation and feedback for academic teaching development. *The international journal of academic development*, 2001, 6:1, 29- 39.
13.Blackwell R, McLean M. Peer observation of teaching and staff development. *Higher education quarterly*,1996, 50:2, 156-171.
14.Schultz KK, Latif D. The planning and implementation of a faculty peer review teaching project. *American journal of pharmaceutical education*.2006, 70:2, 32.
15.Newman LR, Lown BA, Jones RN, Johnansson A, Schwartzstein RM. Developing a peer assessment of lecturing instructment: lessons learned. *Academic medicine*, 2009, 84:8, 1104-1110.
16.Roxa T, Martensson K. Significant converstions and significant networks-exploring the backstage of the teaching arena. *Studies in Higher Education* 2009, 34:547-559.

17.Martensson K, Roxa T, Stensaker B. From quality assurance to quality practices: an investigation of strong microcultures in teaching and learning. *Studies in Higher Education*, 2012, 1-12, iFirst Article.
18.Whitlock W, Rumpus A. Peer observation: collaborative teaching quality enhancement. Educational Initiative Centre, University of Westminster. 2004.
19.Cousins G. *Researching learning in higher education: an introduction to contemporary methods and approaches*. Routledge, New York and London. 2009.
20.Guba EG, Lincoln YS. *Effective evaluation*. San Francisco: Jossey-Bass. 1981.
21.Scriven M. The methodology of evaluation. *In R.E. Stake (Eds), curriculum evaluation*. Chicago: Rand McNally. 1967.
22.Worthen BR, Sanders JR, Fitzpatrick JL. *Program evaluation*. New York: Longman. 1997
23.Bovill C. Peer observation of teaching guidelines. University of Glasgow Academic Development Unit. 2010.
24.MacKinnon M. Using observational feedback to promote academic development. *International Journal for Academic Development*. 2001, 6:1, 21-

Appendix V

Conference Presentation, International Conference on Medical Education 2013

Cairns A, Bissell V, Bovill C. Evaluation of a pilot peer observation of teaching scheme for chair-side tutors at Glasgow University Dental School. Journal of Islamic International Medical College, International Conference on Medical Education, 2013, 61.

Alison Cairns, Vince Bissell, Catherine Bovill

Introduction: POT is a reciprocal process whereby one peer observes another's teaching and provides supportive and constructive feedback. Its underlying rationale is to encourage professional development in teaching and learning through critical reflection, by both observer and observed (Lubin 2002). Despite many POT schemes within higher education, there are no reports of its use in chair-side clinical teaching.
Aims: To establish and evaluate a POT scheme for chair-side clinical tutors at Glasgow University Dental School and outreach clinics.
Method: All paediatric dentistry tutors (14) were invited to take part. Participants were paired, each pair had pre and post observation discussions and attended 2 clinical teaching sessions where they were alternately observer and observed. A semi-structured interview was carried out. Audio recordings were transcribed and analysed.
Results: 12 observations took place. The scheme encouraged reflection on teaching practice both before and after observations and all participants found involvement in the scheme to have been an influential educational experience. Participants felt reassured that their teaching approach was similar to others. Some participants adopted new approaches to teaching following their POT experience. Peers were instrumental in encouraging their pair to cultivate exemplary aspects of their current practice. Participants agreed that POT was an appropriate method for developing teaching skills and standardising teaching.
Conclusions: The scheme was well received and effective. Participants were eager to repeat the POT process.

Appendix VI

Conference Presentation, University of Glasgow Teaching Conference 2013

Cairns, A. M., Bissell, V., Bovill, C. (2013) Evaluation of a Pilot Peer Observation of Teaching Scheme for Chair-side Tutors at Glasgow University Dental School. University of Glasgow Teaching Conference April 2013.

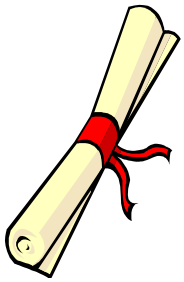
Title: Evaluation of a Pilot Peer Observation of Teaching Scheme for Chair-side Tutors at Glasgow University Dental School

Introduction: POT is a reciprocal process whereby one peer observes another's teaching and provides supportive and constructive feedback. Its underlying rationale is to encourage professional development in teaching and learning through critical reflection, by both observer and observed (Lubin 2002). Institutionally, POT is consistent with the University of Glasgow's aim to promote excellence in teaching. Despite many POT schemes within higher education, there are no reports of its use in chair-side clinical teaching. Dental outreach tutors have limited access to support for teaching as clinical responsibilities hamper their availability to attend development events. POT can potentially fulfil this feedback and support role.
Aims: To establish and evaluate a POT scheme for chair-side clinical tutors at Glasgow University Dental School and outreach clinics.
Method: Ethical approval was granted. All paediatric dentistry tutors (14) were invited to be involved. Participants were paired, each pair had pre and post observation discussions and attended 2 clinical teaching sessions where they were alternately observer and observed. A semi-structured interview was carried out. Audio recordings were transcribed and analysed.
Results: 12 observations took place. 10 occurred in an outreach setting and 2 were conducted within Glasgow Dental School. The scheme encouraged reflection on teaching practice both before and after observations and all participants found involvement in the scheme to have been an influential educational experience. Participants felt reassured that their teaching approach was similar to others. Some participants adopted new approaches to teaching following their POT experience. Peers were instrumental in encouraging their pair to cultivate exemplary aspects of their current practice. Others learnt from having missed teaching opportunities pointed out to them. The participants all agreed that POT was an appropriate and "real" method of developing teaching skills which could help standardise teaching.
Conclusions: The scheme was well received and participants are eager to repeat the POT process. Tutors are encouraged that introduction of this scheme acknowledges their need for ongoing teaching and learning support. There are plans to widen the scheme.

Appendix VII

Peer Observation of Teaching Program

Academic Year 2015-2016



This is to certify that

Participated in the Peer Observation of Teaching scheme. This activity represents continued professional development and quality assurance with regard to teaching practice.

Signature_____

Peer pair for POT sessions

Appendix VIII

Interview Questions

Pilot Questions

1. Have you learned anything from having your teaching observed? If so, what did you learn?

2. Would you consider your involvement in P.O.T to have been an influential educational experience, if so why?

3. Describe how you felt about being observed by your peer and whether this changed the way you normally teach during the observation.

4. Did your peer's comments on your teaching influence you to make any changes to your teaching practice?

5. Did you learn anything from observing your colleague? If so, what did you learn?

6. Were you able to draw comparisons to your own teaching when you observed a colleague?

7. Were you able to separate the "dentistry" content from the "teaching" processes in order to truly observe the teaching styles and techniques being used?

8. Which role was do you think was most helpful to you- observing someone else or being observed?

9. How familiar were you with your peer pair-? Would the process have been easier with someone you were less acquainted with?

10. Would you be happy to repeat this process on a yearly basis? Please explain your answer.

11. What would you change about this P.O.T process to improve it?

12. Did you have any fears with regard to the confidentiality of your discussions?

13. Did you feel vulnerable in way being observed or observing? Please explain.

14. Did you find it difficult to give or receive criticism?

15. Do you think this process would have been easier or more valuable to you if you were less familiar with your pairing?

16. With regard to timing of this scheme- has this been the best time or could you identify a better time throughout the course of the academic year?

17. Did you undergo a process of reflection prior to being observed? Did you consider change or actually alter the way you normally teach?

18. Do you think you need training to be able to give this kind of feedback?

19. Would you consider this type of evaluation to be threatening or disempowering?

20. Do you believe this scheme will help you to gain insight into your role as a teacher?

21. Do you believe this scheme will strengthen professional relationships and enhance mutual trust and respect? "Critical friends"

Second/Third Round Questions

1. Have you learned anything from having your teaching observed this time? If so, what did you learn?

2. Did you learn anything from observing your colleague? If so, what did you learn?

3. Were you able to draw comparisons to your own teaching when you observed a colleague?

4. How did this observation differ from the last?

5. Which role do you think was most helpful this time?

6. Did you undergo a process of reflection prior to being observed? Did you consider change or actually alter the way you normally teach?

7. Did your peer's comments on your teaching influence you to make any changes to your teaching practice?

8. Did this process make you aware of something (good or bad) that you had not noticed before? Did you do anything about it, if so how did discussion with your peer help with that?

9. Describe how you felt about being observed by your peer this time and whether this changed the way you normally teach during the observation.

10. Do you believe involvement in this scheme is helping you to become a better teacher?

11. Did you find it difficult to give or receive criticism? Did this differ from your last experience.

12. Can you see any ways to improve this process?

13. How important is it that you trust your observer?

14. Is there anyone that you would regularly talk to about teaching in an informal way?

15. Who do you actually consider to be a peer?

16. Is there anything else you got out of the process this time that you didn't get last time and possible reasons for this.

Appendix IX

Peer Observation of Teaching in the Undergraduate Dental Clinic

Alison Cairns
9237841
Research Proposal
Version- Feb 2012

Contents

1.Introduction

1.1 Statement of Research Topic

The purpose of this research is to introduce and evaluate a peer observation of teaching (P.O.T) scheme among clinical tutors providing chair-side teaching on the undergraduate dental clinics of the University of Glasgow's dental school and associated outreach facilities.

1.2. Summary of Prior Literature

P.O.T can be described in the context of development of the individual tutors involved in the scheme:

> "…reciprocal process whereby one peer observes another's teaching and provides supportive and constructive feedback. Its underlying rationale is to

encourage professional development in teaching and learning through critical reflection, by both observer and "observee".

Lubin, 2002.

"…focuses on assisting staff to improve their teaching…can be explicitly staff-led with no predetermined agenda…may be used with inexperienced lecturers to assist them to achieve standards of competency"

Gosling 2005

It can also be described through a collaborative model:

"…is part of a broader project to establish a culture that nurtures the improvement of teaching within a department. Collaborative peer review of teaching is about finding ways of creating and sustaining conversations about teaching which are constructive and purposeful and which open problems in teaching to public debate and discussion".

Gosling 2005

P.O.T should not be a judgmental process and should not involve an unequal power balance. The main aims of any P.O.T scheme are to enhance and disseminate good teaching practice and develop teaching skills, to allow personal development through a process of reflective practice and to improve the quality of teaching experienced by the students (ProDAIT, 2011). P.O.T schemes have also been shown to help enhance the profile and value of teaching within institutions (Gosling, 2005). Working through this process holds benefits for both the observer and the observed and the focus is always on constructive development and should never be negative (Carter and Clark, 2003). This process should also be confidential and not used by line managers as a process to address underperformance or for promotion (Gossling, 2005; Carter and Clark, 2003).

Reflective practice has been advocated as a means of professional development both for new and experienced academic staff (Schon 1987, Brew 1995). Unfortunately many academics are unreflective about their teaching which is sometimes seen as largely "common sense" and drawn from experience (Handal and Lauvas 1987). P.O.T has been shown to be worthwhile for development of teaching across disciplines (Bell 2001, Blackwell and McLean 1996, Schultz and Latif 2008, Newman et al 2009) and for increasing the institutional role of the scholarship of teaching and learning.

Examples of POT used in a clinical setting have been described in the literature but none in a dental setting which remains distinct from medicine or nursing with the students carrying out so many invasive procedures.

1.3. The Purpose of the Study

Clinical tutors are highly skilled dentists but the majority have little or no training with regard to teaching. They receive little feedback with regard to the quality of their teaching methods and hence it is difficult to develop their current practice.

Tutors working on busy, large open clinics may have some informal opportunities to observe how others teach. Unfortunately for tutors with small clinical groups and for those working in some of the smaller outreach environments this is not possible.

Introduction of a peer observation scheme will encourage tutors to reflect upon and develop their teaching practice via observing and being observed by peers in a non confrontational, highly supportive system.

As an institution the University demands that we provide the best possible standard of teaching, introduction of a P.O.T scheme will increase the profile and value of teaching across the dental school, promote and propagate quality teaching and hopefully in turn lead to better learning experiences for the students.

The main aims of the study are:

- To establish a pilot P.O.T scheme for clinical tutors in paediatric dentistry within Glasgow University Dental School and its associated outreach clinics.

- To analyse this scheme and following determination of best practice to roll the scheme out to the rest of the clinical teachers in the school and associated outreach clinics.
- To determine the opinion of clinical teachers with regard to the P.O.T scheme as a method of personal development in teaching skills.
- To show that tutors currently providing chair-side teaching benefit from feedback regarding their teaching practice and that P.O.T is an appropriate way to achieve this.
- To show that the tutors benefit from providing constructive analysis and entering into scholarly discussion and reflection with regard to the teaching practices of their peers.
- To enhance the overall quality of teaching for undergraduate dental students throughout the school.
- To enhance job satisfaction for clinical tutors via support and feedback.

1.4. Anticipated Problems

Logistics and time

Individuals who find it hard to engage

Individuals who do not engage

2. The Evaluation Questions

The question that pertains to the individual:

Does P.O.T work for clinical chairside teaching at Glasgow Dental School? What do I mean by “work”- does the scheme encourage teachers to reflect on their teaching practice i.e. does it encourage teachers to think about and seek out ways to improve their teaching and help them to translate this process into actual better teaching?

Does P.O.T enhance teaching practice for individual tutors teaching clinical skills to undergraduate dental students at Glasgow Dental School? (Enhancement is a measure of improved teaching via reflection on current teaching practice and scholarly discussion about it)

Do teachers like the P.O.T scheme as a means of facilitating reflection on their current teaching practice?

(Might also be interesting to ask the tutors how they came about to be teaching- did they choose it- if so why, were they coerced?)

See appendix I for questions to be used in structured interviews which map to these overall evaluation questions.

The question that pertains to the institution:

- Does the presence of a peer observation scheme enhance the overall quality of clinical teaching?

? Ask students: you may be aware that the dental school staff have been undergoing a process of peer observation of teaching- the purpose of this is to improve the standard of teaching you receive- have you noticed any significant differences in the way you have been taught? Have any initial differences been ongoing?

Proposal is- some very short student interviews at start followed by student focus group at the end? Could use current 3rd year who would have interviews before the end of this academic year and have their focus group at end of final year which would be June 2014 and match in with the data collection years. They will have spent the vast majority of BDS3 receiving pre-P.O.T chairside teaching.

What about a focus group asking senior students if they are aware of a difference in the level of teaching received from academic members of staff compared to NHS tutors. Obviously a few problems with this- do they know the difference? Have all these academic members of staff actually had any formal training with regard to teaching? Could have another focus group after the scheme running to see if there is a difference (note- will be different individual students- is this a problem?)

3. Methodology

I intend to base my methodology in evaluation research, this has successfully been used in the past to study programs and initiatives (Cousins 2009) and is commonly used in studies with qualitative data. Evaluation research is often carried out to determine how well a program or initiative works in real-world settings and to show how they might be improved. Evaluation specifically involves determining the worth, merit, or quality, of an evaluation object, such as a P.O.T scheme (Guba and Lincoln, 1981: Scriven, 1967: Wothen Sanaders and Fitzpatrick, 1997).

Formative evaluation will be used in the first instance to support the development of the P.O.T Scheme amongst the teachers in Paediatric Dentistry, this will form the pilot stage of the project and lead to judgments about how the new scheme can be modified and improved. Following the pilot scheme summative evaluation of the wider scheme will take place to analyses whether or not the scheme is effective and whether it should be continued.

The collection of qualitative data in evaluation studies is common. Evaluation data is often associated with specific approaches or traditions such as grounded theory (Strauss and Corbin, 1998), phenomenology (van Manen, 1990), discourse analysis (Potter and Wetherall, 1994) and narrative analysis (Leiblich, 1998). My overall approach to this research will be less rigidly structured in comparison to these methods and will use an approach that combines both general inductive and deductive evaluation analysis. Unlike grounded theory I will be using some prior assumptions and loose hypothesis on which to base my research, it is from here that I will tease out themes and catagroise data with interm data analysis from the pilot being used to inform the next stages of my research.

Inductive Analysis

This strategy is evident in much qualitative data analysis (Bryman and Burgess 1994, Dey 1993) but is often unlabelled as a strategy or referred to as a “general inductive approach”. Many examples of this approach exist especially in health and social science research and evaluation (Jain and Ogden 1999, Marshall 1999, Elliot and Gillie 1998). This approach may not be as robust as some other analytic strategies but it does provide a straightforward method to derive findings in the context of focused evaluation questions such as those in this study. In its

most true sense inductive analysis should be a method which allows theory to emerge from the data (Strauss and Corbin, 1998), in this case however we do have some loose hypothesis/prior assumptions and hence this is a mixed inductive/deductive approach.

Key features evident in general inductive approach:

- Systematic procedure for analyzing qualitative data
- Analysis guided by specific evaluation objectives (research questions)
- Raw data will be used to derive frequent, dominant or significant themes, as interpreted by the researcher (theory will emerge from the data which will agree or disagree with prior assumptions, see deductive analysis)

Deductive analysis

Analysis of the data will set out to test prior assumptions (the assumption is that the P.O.T scheme will enhance current teaching practices through encouragement of reflection and scholarly discussion) but with inductive analysis in mind this approach will also aim not to obscure key themes just because they do not help prove or disprove the prior assumptions. Identification and analysis of unexpected events will be an important part of the analysis.

In order for data analysis to be reliable and defendable a consistency check will be carried out and this is described in the methods section.

4. Method

4.1 Background

Formative evaluation will be used in the first instance to support the development of the P.O.T Scheme amongst the teachers in Paediatric Dentistry, this will form the pilot stage of the project. From this pilot I will be able to provisionally analyze the effectiveness of the meetings and observations as activities which support the P.O.T Scheme. Following this pilot changes may be instigated before rolling the project out further to the other clinical teaching staff. At the end of both the pilot and first two cycles of the scheme some summative evaluation will be possible. It is important that

I am able to evaluate not just the final outcomes from the P.O.T scheme but be able to look at the process overall and take into account any unexpected outcomes (Stake 1981,Deepwell 2002).

4.2 How will data be analyzed?

- Transcripts will be made of tape recorded interviews and focus group discussions- these will be read several times by the researcher.
- A coding framework will be devised in order to categorize the themes which emerge, if over time new codes are added all transcripts will be re-read applying the added code. At this stage it is anticipated that the Nvivo software package will be able to assist in management of the data.
- A consistency check will be carried out (prior to finalization of the codes). To perform this check one interview with a fair spread of codes will be selected. This will then be presented in its un-coded form to both project supervisors who will independently code the interview. The resulting three sets of codes will then be compared and analyzed for consistency of common themes and categories.
- Overall theory will be derived from the analysis.
- Data will then be condensed, displayed and conclusions drawn.

4.3 Setting and Sample

The pilot scheme will take place in paediatric dentistry in-house and outreach clinical dentistry settings. All teachers currently involved in teaching clinical skills to undergraduates in years 3, 4 and 5 will be included unless they choose to opt out of the scheme (n=14). These teachers are sourced mainly from the salaried primary care sector and are NHS employees (n=12), none of these people have specialist paediatric dentistry qualifications although some do hold senior roles within the primary care service. The rest of this group will be made up by Senior Academic and ACTD funded Consultant in Paediatric Dentistry (n=2) and an NHS Associate Specialist (n=1). The field work for the pilot study will be conducted from March to June 2012 (year 1 data).

The full study will include all staff employed by the University or NHS with a specified role in the teaching of undergraduate dental students.

Oral Med-2, Oral surgery- 2+, restorative outreach-?, restorative in house. The field work for this part of the study will be conducted in 2 cycles during the academic terms 2012-2013 and 2013-2014 (years 2 and 3 data).

Information about the scheme and its evaluation will be disseminated to potential participants (appendix II). To run the P.O.T scheme teachers will be randomly paired (observer and observe). Participants will have an opportunity to, confidentially, raise objections to their chosen pairing and a new pairing will be formed. In conjunction with previously written guidance (Bovill 2010) the first meeting (pre-observation) of the pairing will discuss how the observation will unfold with agreed criteria for what is to be observed and discussed at the post observation meeting. It is important that the observation and feedback does have some structure and as well as the pairing deciding upon parameters for scrutiny, some guidance for observers has been developed which will prompt attention to particular areas of good teaching practice (appendix III). Observers will be encouraged to record their observations via the use of a time-log (appendix IV and V). Observers will also be reminded that they must remain impartial throughout the observation, that they are to add nothing to the lesson and should maintain a “fly-on-the-wall” status throughout. The post-observation meeting should take place in the week following the observation, meeting face to face is not essential and could be conducted online should it be impractical to meet in person. Discussions between the pairing will remain confidential but a post observation semi-structured interview will hope to gather information with regard to opinion of the scheme and its possible worth. The interviews will consist of ? questions which have been mapped to the overall evaluation questions The interviews will be audio recorded and later transcribed to text to aid analysis. Themes which develop from analysis of the interviews will be used to inform a peer focus group meeting which will convene to discuss experience of the scheme and suggest further development of both the scheme and its evaluation.

Following full analysis of this pilot scheme and after taking into consideration any alterations required the scheme will be rolled out across clinical dentistry teaching and become a yearly event.

4.4 Research Stages

- Outline plan and ethical approval.
- Initial pilot scheme Mar-June 2012 (semi-structured interviews)
- Analysis of pilot interviews and focus group discussion (Jun-Sept 2012)
- Student questionnaire looking at their opinion of the quality of clinical teaching, Sept 2012.
- Role out scheme Sept 2012-Mar 2013 (interviews)
- Analysis of full scheme interviews Mar- Aug 2013 followed by focus group Aug 2013.
- Repeat for 2013-2014 academic year.
- Repeat student satisfaction questionnaire for one measure of possible improvement, June 2014.
- Overall analysis.
- Write up and submit by Spring 2016.

5. References

Lubin, J. 2002. A guide to peer review of teaching. University of Tasmania. Available at www.utas.edu.au/tl/improving/peerreview/.

ProDAIT.2011. Peer observation of teaching. Professional development for academics involved in teaching. www.prodait.org.

Gosling, D. 2005. Peer observation of teaching. Implementing a peer observation of teaching scheme with five case studies. Staff and educational development association paper 118. London:SEDA.

Carter, M. and Clark, A. 2003. Peer observation: a training pack. University of Wales Institute, Cardiff. http://www.Uwic.ac.uk/itsu/documents/peer%20observation%201.pdf

Schon, D. 1987. Educating the reflective practitioner (San Francisco, Jossey-Bass)

Brew, A. 1995. Directions in staff development. Milton Keynes, SRHE/Open University Press.

Handal, G., AND Lauvas, p. 1987. Promoting reflective teaching:supervision in action. Milton Keynes, SRHE/Open University Press.

Bell, M. 2001. Supported reflective practice a programme of peer observation and feedback for academic teaching development. The international journal of academic development, 6:1, 29- 39.

Blackwell, R. and McLean, M. 1996. Peer observation of teaching and staff development. Higher education quarterly, 50:2, 156-171.

Schultz, K.K. and Latif, D. 2008. The planning and implementation of a faculty peer review teaching project. American journal of pharmaceutical education. 70:2, article 32.

Newman, L.R., Lown, B.A., Jones, R.N., Johnansson, A., AND Schwartzstein, R.M. 2009. Developing a peer assessment of lecturing instrucment: lessons learned. Academic medicine, 84:8, 1104-1110.

Strauss, A. and Corbin, J. 1998. Basics of qualitative research (2nd ed.). Newbury Park, CA:Sage.

Van Manen, M. 1990. Researching lived experience: Human science for an action sensitive pedagogy. London, Canada:Althouse.

Potter, J. and Wetherell, M. 1994. Analyzing discourse. In A.Bryman and R.Burgess (Eds.) Analyzing qualitative data (pp.47-68). London:Routledge.

Leiblich, A. 1998. Narrative research: Reading, analysis and interpretation. Thousand oaks, CA:Sage.

Cousins, G. 2009. Researching learning in higher education: an introduction to contemporary methods and approaches. Routledge, New York and London.

Guba, E.G., and Lincoln, Y.S. 1981. Effective evaluation. San Francisco: Jossey-Bass.

Scriven, M. 1967. The methodology of evaluation. In R.E. Stake (Eds), curriculum evaluation. Chicago: Rand McNally.

Worthen, B.R., Sanders, J.R., AND Fitzpatrick, J.L. 1997. Program evaluation. New York: Longman.

Bryman, A., and Burgess, R.G (Eds). 1994. Analyzing qualitative data. London: Routledge.

Dey, I. 1993. Qualitative data analysis: a user-friendly guide for social scientists. London: Routledge.

Jain,A., and Ogden, J. 1999. General practitioners' experiences of patients' complaints: qualitative study. BMJ, 318:1596-1599.

Marshall, M.N. 1999. Improving quality in general practice: qualitative case study of barriers faced by health authorities. BMJ, 319:164-167.

Elliot, S.J., and Gillie, J.1998. Moving experiernces: a qualitative analysis of health and migration. Health and Place, 4(4), 327-339.

Stake, R. AND Pearsol, J.A. 1981. evaluating responsively. In R.S. Brant (Ed.), Applied strategies for curriculum evaluation, Alexandria, V.A:ASCD.

Deepwell, F. 2002. Towards capturing complexity:An interactive framework for institutional evaluation. Technology and society, 5(3), 83-90.

Bovill, C. 2010. Peer observation of teaching guidelines. University of Glasgow Academic Development Unit.

Appendix X

University of Glasgow | School of Education

Consent Form

Title of Project: Evaluation of a Peer Observation of Teaching Scheme for Chairside Teaching at Glasgow Dental School

Name of Researcher: Alison Cairns

1. I confirm that I have read and understand the Plain Language Statement for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I consent to interviews and focus group discussions being audio-recorded. Participants will remain anonymous in any publications arising from the research. Participation or non-participation in the research will have no effect on employment

4. I agree / do not agree (delete as applicable) to take part in the above study.

_____ _____ _____

Name of Participant Date Signature

_____ _____ _____

Researcher Date Signature

Appendix XI

University of Glasgow | Faculty of Education

The University of Glasgow, charity number SC004401

Plain Language Statement

An evaluation of a peer observation of teaching scheme in the Undergraduate Dental Clinic, Glasgow University Dental School

Researcher:
Alison Cairns, Senior Clinical UniversityTeacher/Honorary Consultant
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Supervisors:
Dr C Bovill, cathrine.bovill@glasgow.ac.uk
Prof V Bissell, vincent.bissell@glasgow.ac.uk

Independent:

Prof RR Welbury, Richard.welbury@glasgow.ac.uk

You are being invited to take part in an evaluative research study. Before you decide whether to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

I am carrying out this evaluation because a peer observation of teaching scheme is new to the dental school including its affiliated outreach clinics and therefore it is important that we explore the outcomes of the scheme as to whether it is beneficial for the dental school to continue this peer observation scheme in future. As far as I believe no other dental school is undertaking a similar scheme and I would like to use our evaluation data as the basis of a PhD thesis with associated journal articles and/or conference papers to explore peer observation of teaching among academic staff in more depth.

I plan to include all members of teaching staff involved in chairside teaching. However, taking part in the scheme and in the evaluation research is entirely voluntary. If you decide you do not want to take part in either the peer observation scheme or the evaluation research you are free to withdraw at any time.

The peer observation scheme will involve every member of this staff group observing one other colleague and then being observed once in the academic sessions 2012-2013 and 2013-2014. Students present on these sessions should be made aware that they are not being observed. Following the peer observations I will come to your place of work or contact you via telephone to conduct an interview in order to find out what you think about the scheme. Following our

conversation your responses will be coded and held anonymously for the purpose of data collection and publication.

Information obtained from these interviews will be used to inform questions for a focus group which I will hold after all interviews are complete. Some participants will be invited to come to this focus group to discuss their thoughts with peers who also took part in the scheme. If all members of the focus group consent, I intend to audio record the discussions at this meeting and transcribe this recording. If anyone does not consent to this audio recording, I will ask for consent to take some notes of this meeting.

I would ensure that no colleagues are identifiable within any papers arising from this work. I would share with all colleagues a draft of any paper I intend to publish based on this work, to enable comments or suggested editing.

This project has been reviewed by the CoSS Ethics Committee.

Contact for Further Information

If you have any concerns regarding the conduct of this research project, please contact the Faculty of Education Ethics Officer by contacting Dr Valentina Bold at valentine.bold@glasgow.ac.uk

Thank you for taking part in this evaluation.

Alison Cairns
2nd Feb 2012

Appendix XII

Abstract ICED 2014

Peer observation of teaching as a form of strategic academic development

Bovill, C. and Cairns, A.M
University of Glasgow, Scotland, UK.

Abstract
This paper reports the findings from an evaluation study to investigate participants' experiences and views of three different forms of peer observation within a Postgraduate Certificate in Academic Practice – observations from 1) an academic developer from the Academic Development Unit, 2) a class peer, and 3) a colleague from their own Subject or School. We explore how peer observation can be used strategically for developing and enhancing teaching at individual and institutional levels.

Introduction
Peer observation of Teaching (POT) is a reciprocal process involving one peer observing another's teaching and providing supportive and constructive feedback. POT schemes have been shown to lead to a range of benefits including: more public discussion and sharing of good practice in teaching (Blackwell & McClean, 1996; Whitlock & Rumpus, 2004); opportunities for positive feedback as well as dealing with problems within teaching practice (Blackwell & McClean, 1996); enhanced awareness of the content and processes of others' teaching and areas where further professional development support are needed (Cairns et al, 2013); and stimulation for the development of critical reflection on teaching practice (Bell 2001; Hammersley-Fletcher and Orsmond 2005). There are also claims that POT can enhance the value of teaching (Gosling, 2005) and can enhance the quality of teaching across higher education institutions (Hammersley-Fletcher & Orsmond, 2004). Several models using POT in more strategic ways have been described (Gosling 2005), but one of the most common forms that we see is the extensive use of POT within early career academic development programmes including Postgraduate Certificates in Learning and Teaching in Higher Education.
Gosling (2009) claims that many staff need further training or preparation to be able to effectively evaluate and provide feedback on others' teaching. This may need to be considered carefully by those running development programmes with relatively inexperienced staff. A method previously used to counteract this lack of training or experience has been to employ a hybrid model as suggested by Atkinson and Bolt (2010) where different types of peer are involved in multiple observations in order to engender an overall culture of reflection on teaching practice. At the University of Glasgow, the Postgraduate Certificate in Academic Practice (PGCAP) has been a compulsory requirement for approximately ten years for new academic staff who have limited teaching experience. A POT approach that draws on Gosling's developmental and reciprocal models has been incorporated into the programme, and this includes the requirement for participants to

complete three teaching observations during the two years of the programme: an observation by a PGCAP tutor/academic developer from the Academic Development Unit (developmental model), an observation by a PGCAP class peer from a different discipline (reciprocal model); and an observation by a colleague from the participants' own subject area/department (developmental model). This paper reports the findings from an evaluation study to investigate participants' experiences and views of these different teaching observations within the PGCAP. Our current study also aims to look at the participants' perceptions of where the most valued observations come from and address the question of who they consider to be a "peer".

Method

We designed a questionnaire containing 24 question items including closed questions (yes/no and likert scales) and open ended questions. We used the computer software 'Survey Monkey' and piloted the questionnaire with a participant from a similar online Postgraduate Certificate programme at the University of Glasgow. We then emailed the survey link to all participants who had completed the PGCAP since 2008 and who were still located at the University (n=107). We received responses from 42 participants representing a 39% response rate from our online survey. We collated the responses using Survey Monkey and excel programmes, and then analysed the data using descriptive statistics and thematic analysis of the qualitative responses.

Findings

The majority of respondents (96% n=40) considered the feedback they received from their PGCAP tutor as either useful or very useful. The feedback they received from their class peer and departmental peer was rated as 85% and 82% respectively. A higher proportion considered the feedback from their PGCAP tutor as "very useful" and indicated that this was due to a perception that these observers were "more professional" or "expert". Respondents agreed that the most important factor, regardless of which peer was observing, was the quality of feedback they received and again the PGCAP tutor scored most highly in terms of the quality of feedback given, followed by the departmental peer then the class peer. The lowest ratings were given to observations where no suggestions for improvement were given. The observations had been introduced to participants as "Peer Observations of Teaching", so we asked them whether they considered each of the observers to be a peer.

Most respondents considered their PGCAP class observer to be a peer (91%) and their departmental colleague observer to be a peer (86%), whilst many were less sure they regarded their PGCAP tutor as a peer (43%). The following quote from a respondent helps illustrate that the PGCAP tutors tended to be perceived as more expert in relation to learning and teaching:

"I felt that my class colleague and my discipline colleague were amateurs like
myself - whereas I perceived my...tutor to be a seasoned professional."

The nature of the observation had an effect on participants' pre-observation reflection and preparation, with many reporting anxieties about being observed by someone more senior than themselves. Some respondents reported undergoing deeper reflection on what they were teaching, not just how they were teaching, due to the fact that they were being observed by a subject specialist within their department. Overall 94% of respondents were satisfied with the usefulness of the teaching observations within the programme, rating them as either useful or very useful. This was reinforced by five respondents who argued that the POT experiences were the most useful part of the PGCAP, as the following quote illustrates

"This was probably the single most useful thing in the course."

Some of the key themes that arose from the open ended questions were consistent with previous research on POT, such as the value that participants placed not just on being observed but also from being an observer (Cairns et al, 2013; Gusic et al, 2013) as this respondent explains:

"Having to observe as well as being observed is useful it makes you think more
about how you teach and observing others lets you see how other people teach
in comparison to yourself."

Others started to identify the more strategic value of the POT process as part of universities' commitment to maintaining standards in teaching:

"I would like this kind of thing to happen more often if I'm honest (as part of
normal practice) to make sure the quality of teaching sessions remains high."

...and in ensuring the ongoing development of teachers:

"It is one of the core elements to developing teaching practice and to maintaining a dialogic relationship between colleagues on good teaching practice."

Discussion

It has been postulated by Yiend et al (2012) that peer observation of teaching sessions carried out without any prior development in the delivery of critical feedback can lead to an inability to provide critical feedback to the observed and they acknowledge that "the potential for using peer observation to foster reflection on teaching practice is inherently limited if the process fails to generate critical comments" (2012: 11). In our study this failure to criticise and provide suggestions for development was the leading cause of dissatisfaction in any of the observations. Our results suggest that expertise in learning and teaching is valued in the POT process and that this expertise is predominantly considered to be found with the PGCAP

tutors/academic development staff. Although our respondents didn't necessarily consider PGCAP tutors to be their peers, they indicate that the more expert and professional learning and teaching feedback offered by an academic developer is highly valued.

So should we interpret our findings to suggest that all staff across the University should have a teaching observation carried out by an academic developer? In many cases this is just not feasible where the size of academic development units would be too small to offer POT to all the academic staff within an institution. Also POT is only a tiny part (although we and our respondents consider it an essential part) of the work of academic developers and they might be left with little time for anything else. Where it is not feasible for academic developers to carry out POT for all academic staff, the high level of POT within PGCAP type programmes appears to be one way that institutions have prioritised POT as a highly valuable approach to support the development of new academic staff. Another advantage seen in the integration of POT into early teachers' development programmes is that POT is often a requirement of the programme and therefore there are less issues of non-compliance or lack of motivation to complete observations. Another alternative suggested by our study is that we could make greater use of senior academics and expert teachers from the disciplines within POT schemes.

They were considered by some of our respondents as expert teachers whose opinions and feedback was valued. In the University of Glasgow several subject areas have engaged in running their own POT schemes, including the recent significant implementation of POT in the Dental School clinical settings, which has so far been viewed positively by many teachers involved (Cairns, et al, 2013). However, in many disciplines, Yiend et al (2013) and Gosling (2005) raise concerns that peers tend to focus on reproducing traditional teaching practices and focus on feeding back on practical and observable elements of teaching. They contrast this with the potential of the expert observer to be able to raise higher level elements of learning and teaching related to assumptions and values underpinning pedagogy. Another disadvantage to the disciplinary level POT scheme is that local politics can interfere with the pairings of observers and those being observed, something which can sometimes be avoided if academic developers or 'outsiders' are carrying out observations. It seems that the nature of the peer or tutor undertaking the observation and how they are perceived is a crucial element in the success or otherwise of POT.

Practical implications for academic developers

Observing others' teaching, even where no formal feedback mechanism is in place, seems to be valuable to many of the participants, and perhaps encouraging our colleagues to observe other people teaching in their own and other disciplines on a regular basis can be a strategic way of exposing people to different approaches to teaching, even in settings where setting up a POT scheme appears to be difficult for a variety of reasons. However, observation without a discussion of the feedback, misses a key opportunity for discussing learning and teaching.

Roxå & Mårtensson, (2009) emphasise the importance of developing a culture that promotes conversations about learning and teaching in order to

enhance educational outcomes at departmental level. So, missing out the feedback discussions from POT may weaken the strategic impact that POT can have. Currently there are many academics (including academic developers) who are not taking part in POT schemes. The outcomes of our study and other studies suggest a range of benefits to teachers and universities in terms of developing and enhancing teaching practice. We suggest that not only are PGCAP style programmes a good opportunity to maximise the opportunities for POT but that as academic developers we should be considering how we can support wider opportunities for POT across our institutions.

References

Atkinson,D., & Bolt.S. (2010). Using teaching observations to reflect upon and improve teaching practice in higher education. *Journal of the Scholarship of Teaching and Learning, 10*(3) 1–19.

Bell,M. (2001). Supported reflective practice. A programme of peer observation and feedback for academic teaching development. *International Journal for Academic Development, 6*(1) 29–39.

Blackwell,R. & McLean,M. (1996). Peer observation of teaching and staff development. *Higher Education Quarterly, 50*(2) 156-171.

Bovill,C. (2011). *Peer observation of teaching guidelines*. University of Glasgow Academic Development Unit. Retrieved from: http://www.gla.ac.uk/services/learningteaching/goodpracticeresources/peerobservationofteaching last accessed Jan 2012

Cairns,A., Bissell,V. & Bovill,C. (2013). Evaluation of a pilot peer observation of teaching scheme for chair-side tutors at Glasgow University Dental School. *British Dental Journal, 214*(11) 573-576.

Gosling,D. (2005). *Peer observation of teaching. Implementing a peer observation of teaching scheme with five case studies*. Staff and Educational Development Association Paper 118. London: SEDA.

Gosling,D. (2009). A new approach to peer review of teaching. In D. Gosling & K. Mason O'Connor (Eds) Beyond the Peer Observation of Teaching, 7–15. SEDA Paper 124. London: Staff and Educational Development Association Ltd.

Gusic,M., Hagerman,H. & Zenni,E. (2013). Peer review: a tool to enhance clinical teaching. *The Clinical Teacher, 10*(5) 287-290.

Hammersley-Fletcher,L. & Orsmond,P. (2004). Evaluating our peers: is peer observation a meaningful process? *Studies in Higher Education, 29* (4) 213-224.

Hammersley-Fletcher,L., & Orsmond.P. (2005). Reflecting on reflective practices within peer observation. *Studies in Higher Education, 30*(2) 213–24.

Lubin,J. (2002). *A guide to peer review of teaching.* University of Tasmania. Retrieved from: http://www.teaching-learning.utas.edu.au/professional-development/self-peer-assessment last accessed Jan 2012

Peel,D. (2005). Peer observation as a transformatory tool? *Teaching in Higher Education, 10*(4) 489-504.

Roxå, T. & Mårtensson, K. (2009). Significant conversations and significant networks – exploring the backstage of the teaching arena. *Studies in Higher Education* 34(5): 547-559

Whitlock,W. & Rumpus,A. (2004) *Peer observation: collaborative teaching quality enhancement*. Educational Initiative Centre, University of Westminster. Retrieved from: http://www.wmin.ac.uk/pdf/Peer%20Ob%20collaborative%20QE.pdf last accessed Jan 2012

Yiend,J., Weller,S. & Kitchin,I (2012). Peer observation of teaching: the interaction between peer review and developmental models of practice. *Journal of Further and Higher Education*, Retrieved online: http://www.tandfonline.com/doi/abs/10.1080/0309877X.2012 last accessed Jan 2012