Clinical Educator Programme

Centre for Medical Education

University of Edinburgh

Reflective Portfolio Assignment

My New Vision of Ophthalmology Teaching

Submission date

Word count

My New Vision of Ophthalmology Teaching – Anne Sinclair

Plan

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1. Introduction

Had I known that within a few weeks I would be "observed" while teaching a group of junior ophthalmologists, I would never have attended the first Clinical Educator Programme (CEP) tutorial. Having reached a stage of my career when even the junior doctors (never mind the medical students) are younger than my own offspring, I was aware that teaching methods had changed drastically since my own medical school days. Days of long boring lectures followed by hours in the library trying to decipher notes from an A4 student pad for regurgitation at the next exam. To loosely quote Mark Twain "Medical school was a place where a professor's lecture notes went straight to my lecture notes without passing through the brains of either".

My confidence as a teacher was very shaky. But there was a desire to learn and to improve; by the time I had understood learning outcomes, how to insert clicker slides into my well-worn "Low Vision" talk and been nervously observed presenting it to new trainees during their induction week, I was a happy convert to the CEP. It then became obvious to me that our departmental teaching of medical students could benefit from some new ideas, which I was assimilating through attendance at CEP sessions. I took more interest in the student teaching and three years on, am now sharing responsibility for the teaching with one of my consultant colleagues.

2. How I teach and support the learning of students and colleagues

My involvement in student teaching has largely been with small groups of 4-6 Dundee year 4 medical students, who come to our department in Fife for 7 working days. A new group arrives on a monthly basis and each clinician takes it in turn to take them through the course over the 7-day period. The fact that all clinical work may be cancelled during that block makes it relatively easy to give full attention to the students. Until embarking on the CEP, I obediently followed the well-worn plan of teaching which included around 8 PowerPoint presentations interspersed with visits to clinical areas to examine patients while they attended clinics.

I was aware that students tended to glaze over during the more tedious PowerPoint talks and tried to lighten the atmosphere by asking questions between sections, but still seemed to lose all but the keenest. It seemed that I needed more imaginative and innovative ways of teaching students, and this was partly why I joined the Clinical Educator Programme. I have tried to put my learning into practice, and have chosen some examples to illustrate this.

Example 1 Low Vision teaching for students and trainees

When our department was first asked to teach Dundee medical students, I offered to set up a session on low vision teaching. It is a special interest of mine and I feel that every doctor should have awareness of the issues faced by people with sight loss.

In planning the teaching, the key objectives seemed to be the delivery of information in a relevant and engaging way, individual participation in using the types of aids needed by visually impaired people, exposure to someone with sight loss who could tell their story effectively, and a lesson on how to guide a blind person. The intention was to provide structure and linkage from the theoretical to the practical, involving an enthusiastic visually impaired person to make it a memorable event in their training. My plan was to run a 2-hour session made up of 4 half hour slots, at the local Blind Society headquarters.

a) I made a PowerPoint presentation outlining the epidemiological facts about low vision, the types of assistance available and the professionals who can provide the support, and the process of registration as blind or partially sighted. I also wanted to get interaction from the students and had an open question with a scenario that they were suddenly in an accident and woke up to find they had lost most of their vision – what would they miss? This encouraged empathic thinking made the teaching more interactive. I wrote a script to accompany the PowerPoint so that other teachers could also use it.

b) However, this presentation was still quite didactic. It later benefited from an individual session through the CEP when Debbie Aitken helped me improve the talk by the use of "Clickers" and scenarios for discussion. We used the anonymity of clickers to ask direct questions on low vision knowledge, and also more personal questions such as "have you been to any clinic appointment as a patient in the last year?" A following question was put as a scenario that an elderly lady attends an eye clinic expecting to be offered a cataract operation, but is told she has untreatable macular degeneration. The question "What could be done to make this unpleasant "bad news" event easier for her?" was then asked. The students were asked to discuss this in twos or threes before reporting back to the main group. A definite time was given and also a reminder just before the time period was up.

c) The next part involved a workshop where 12 stations were set up around a large room and students were asked to make their way around all of the exhibits and try out the equipment etc as directed on accompanying laminated instruction sheets. There were "simulation spectacles" provided so that they could experience the type of vision loss expected in retinitis pigmentosa (tunnel vision), hemianopias from stroke, hazy vision from cataracts or central loss from macular degeneration. The display also included magnifiers and distance telescopes with newspapers, crosswords, recipes and timetables to be viewed. A rehabilitation worker from the blind society was on hand to answer any questions.

d) Someone with severe sight loss (a member of staff or volunteer from the blind society with well-established vision loss) was then introduced to the students, and told them their story. This often included the feelings of loss or disappointment at lack of treatments available. The students were invited to ask any questions. As Sir William Ostler once said "...the best teaching is that taught by the patient themselves".

e) Finally, a rehabilitation worker taught the students how to guide a blind person and they guided each other, blindfolded, finishing by climbing and descending a flight of stairs.

Student feedback from this interactive teaching has always been very positive, and it is also used for induction of new ophthalmology trainees. Debbie observed me delivering the power point part of this teaching to new trainees. Her main comments are in the "reflection on feedback" document.

Example 2 Teaching for eye department on sleep disorders and vision

Each of the doctors in our department takes turns at teaching the others for 30 minutes each week. The format is usually an interesting case followed by some didactic teaching

on that topic. I wanted to be innovative, as people sometimes look bored, eat their lunch and do not engage with the speaker.

a) As people were gathering I played a video-clip of a large man asleep, snoring loudly, but also having attacks of apnoea, when he stopped breathing for considerable periods. This definitely attracted attention! I had not given away the topic of my presentation at this stage. Unfortunately the man in the film resembled one of our trainees, and this had to be denied. It usefully stimulated discussion at the start.

b) I had made a PowerPoint about the two main eye conditions associated with sleep apnoea (glaucoma and floppy eyelid syndrome), and demonstrated the research findings which support this relatively new association.

c) To keep up audience engagement, I gave each person an Epworth scale form, for diagnosing sleep apnoea, to complete for themselves; the questions relate to how easily we fall asleep during daytime activities.

d) Lastly I presented the case of a man who recently had attended for review at the glaucoma clinic. I had not realised he suffered from sleep apnoea and also floppy eyelid syndrome until I had studied the subject and made a point of checking in the notes of glaucoma patients, so was able to show from my own experience that this was not just a rare research finding. I could honestly deliver the message that we should be aware of the co-existence of these conditions. Asleep apnoea can have fatal consequences, it was important that ophthalmologists were aware of the connection with general health.

e) I asked for feedback forms to be completed in the remaining few minutes. This was all very encouraging and positive. One colleague commented that I relied too much on the PowerPoint and could have spoken more without the slides to better effect. I will bear this in mind and perhaps in future, line up the room differently so that I can glance at the slides on the laptop (which is usually behind the speaker) as an aide memoir.

3. How I develop effective learning environments and offer support and guidance to students and colleagues

I have tried to alter the way we teach ophthalmology in practical situations by relying less on clinic visits. During students' visits to eye clinics, it was clear that the environment was far from ideal for teaching. These sessions could be uncomfortable for patients, students and myself when I had to ask permission for each of the students in turn to try to get a view of the patient's retina with an ophthalmoscope.

By nature I am quite empathic, and enjoyed the role of clinical supervisor for our GP trainee position for many years. I enjoy the stimulus of seeing my specialty through enthusiastic new junior doctors and in return enjoy supporting their learning.

My own memories of medical school teaching in small groups are not particularly happy. I was shy and lacking confidence in my abilities. The easy questions seemed to be answered by the more confident students and when they had spoken, the shy students were turned on with the more difficult questions. Or so it seemed to me. Tactics were even humiliating and bullying by today's standards. I have always felt sympathetic to the quieter students and am very aware that reticence does not necessarily mean lack of ability or knowledge. I am always keen to bring out the best in students and try to be encouraging when answers are given, even if they are not absolutely correct. This was noted in my feedback from Debbie after observing small group teaching.

Example 1 Glaucoma teaching

Our large glaucoma clinics were quite unsatisfactory for teaching as there was often standing room only in the waiting room, and the arrival of students could elicit groans from nursing and medical staff, as a room would have to be set up for teaching –contributing to the general lack of space. Also, the patients attending might have recently had surgery, so examination by students was not advisable, or they might be in receipt of bad news concerning tests and not wish to have students in the room.

The CEP tutorial on "Small Group Teaching" helped me to re-design the teaching of glaucoma to students. This was achieved as follows -

a) Instead of using the clinic time, I invited 2 patients with chronic, stable glaucoma and obvious signs of glaucoma for students to see on ophthalmoscopy, to attend on the day prior to their usual appointment. I promised they would have the same examination as usual with me, but in quieter surroundings. It would also involve the instillation of eye-

drops to dilate their pupils so that up to 5 medical students could examine the back of their eyes. It was not difficult to recruit the patients and they came to the cataract unit where there was plenty space and a quiet waiting area on the morning session chosen.

b) I had arranged the purchase of a set of 6 basic ophthalmology textbooks, suitable for medical students, and these are given on loan to each student on the first day of their attachment with us. Previously only the keen students benefited from a textbook (the one available in the library) or wealthier students bought their own copy. The students were told on the previous day that they should read up on glaucoma from their textbooks for the session and that we would have a discussion on the topic.

c) I had made buzz cards with glaucoma questions, 3 parts to the question on each card, which I designed using the syllabus and learning outcomes. They mainly cover the subjects of acute glaucoma, chronic glaucoma and the eye-drops used in treatment. (The cards have been made especially by our medical illustration department and are laminated ready for future groups to use).

d) When the students arrived I gave them the cards in groups of 2 or 3 and asked them to work on the answers to the questions for 15 minutes. This gave me time to speak to each of the patients in a nearby room, to carry out their usual examination and to instil the dilating drops, which take 20 minutes to act.

e) Back with the students, I asked them to tell me their answers and we discussed the topics. I felt that this approach made it easier for me to draw out the quieter members of the group, as they had already voiced their opinions with colleagues before speaking to the whole group, giving the group answer rather than just their own. It also let me have some control over the most confident student who could not hold the floor as I was directly asking questions of the others. I then showed them the patients' case notes, highlighting the main points in the patients' stories, relevant to our prior discussion.

f) I introduced the students to the 2 patients, who were in separate examination rooms. The students were then able to ask the patients questions about their eye problem and examine their eyes with an ophthalmoscope. They then changed rooms to examine the other patient. They were very good at talking to the patients and putting them at ease. I felt that removing the teaching from the busy clinic let me facilitate a better learning experience for the students and enabled a better connection between the patients and the students. The patients were able, in the relaxed atmosphere, to teach the students about glaucoma in a "real world" way, telling them about how they remembered to use their eye-drops, and about their feelings when the condition was first diagnosed.

g) I felt that everyone concerned enjoyed the experience. The patients said they would be happy to assist in this way in the future. The students found the session informative, we were able to cover the syllabus more effectively and meet learning outcomes convincingly, all in a relaxed learning environment.

h) Back in the tutorial room, I asked each of the students to tell me one new thing they had learned that morning, and also if there was any aspect of glaucoma they were still finding hard to understand. I used this information to select a few slides from the original PowerPoint presentation to go over those problem areas again before ending the session.

Example 2 –mentoring optometrists in glaucoma clinic

Two experienced optometrists have recently come to work in our glaucoma clinic and they come to me to discuss the management of patients they have seen. I try to make them feel I have plenty time to be interrupted and would never want them to feel they were a nuisance or a burden. It is important at this stage in their learning that they have access to a senior opinion and never feel under pressure to make decisions beyond their current level of expertise. I review their diagnosis and management plan and go with them to re-examine the patient if appropriate. However, if this seems unnecessary I do not "check up " on their findings and show confidence in them as much as possible within the bounds of patient safety.

Example 3 Diabetic Retinopathy Screening (DRS) Service teaching

Since the introduction of the Fife DRS in 2006, I have trained seven level 1 and 2 screener/graders (with no prior medical or nursing experience) to assess photographic images of the retina for signs of diabetic retinopathy and other coincidentally detected diseases. They have all now passed their diploma in DRS but ongoing training is needed to keep developing their skills. The technique I now use most commonly is to give weekly feedback by email concerning the images they have graded on screen. When I am grading, they are seldom in the room with me, hence the reason for electronic feedback. They can then check the patient reference and review the images. Although this is time-consuming I feel it is the best method of ongoing training and feedback because it is personal and relevant feedback. For example if I disagree with their findings, I explain my thinking and the rationale for either referring the patient to ophthalmology or not. This will help their own maturity in decision-making. And it is given confidentially one-to-one and not as criticism in front of other colleagues.

a) It gives opportunity for encouragement. I try to congratulate them on picking up unusual pathology and let them know when the patient will be attending for laser treatment or has been referred for other therapy to prevent sight loss. Their day-to-day work is quite repetitive and it is important that they are reminded of the good they do for individual patients.

b) I point out features that they may have missed and give further clues that helped me detect what they had not identified. So far they have all shown much appreciation for this aspect of ongoing training. I feel that his is a worthwhile way to improve performance and achievement in a non-critical and non-judgemental way.

3. My philosophy of clinical education

a) *Respect for individual learners and diverse learning communities*

In recent decades, the student composition of medical schools has changed with regards to the age, ethnicity and gender of students. There is also a greater emphasis on inclusion regarding socio-economic background, sexual orientation, trans issues, disability and religion or belief.

Our students from Dundee include a significant proportion of students from overseas, particularly from Malaysia. I am increasingly aware that we need to be interested in each student and find out if they have any particular needs related to any of the diversity issues listed above. For instance, Muslim students may wish to observe prayer times and make visits to the Mosque. Mature students may have commitments to small children, especially at times of illness. Students may have disabilities which are not immediately evident and may require special assistance. I was unaware of the difficulties facing certain groups until I met students with particular needs.

Our system of having one main tutor helps foster a caring attitude towards our students where any issues of equality and diversity can be identified and if appropriate addressed without any inconvenience or distress to the learners. It is also important that any tensions within the group are noted and if there is a suspicion of inappropriate behavior towards a student from a minority group of any kind, that is it openly addressed and appropriately handled, whether it has originated from a member of staff, another student or from a patient.

b) *A commitment to promoting participation in higher education, acknowledging diversity and promoting equality of opportunity for learners*

No two students in any group will have exactly the same intellectual ability, people skills, interest in ophthalmology or ability to express themselves confidently. However, I do feel strongly that every student should be given the best opportunity possible to benefit from the teaching we provide. This was part of the reasoning behind purchasing a set of relevant ophthalmology textbooks so that no one could have any advantage from being first to access the library copy or the financial means to buy their own. I also try to make timetables and learning opportunities very clear so that no one misses out through not being “one of the in crowd” who tend to

discover any extra learning opportunities available. The organisational elements of the teaching must be well ordered to avoid misunderstanding and non-attendances.

As already stated in the previous section concerning small group teaching, I try to look out for those who are quiet and possibly unwilling to express the need for further clarification. Asking each student if they have further questions and making it plain that no question is ever a stupid question, helps encourage the less confident to participate.

c) a commitment to using evidence informed approaches

There is an obligation for medical training to be kept up to date and evidence-based. Our basic ophthalmology teaching PowerPoints have been used since the Fife eye department began sharing the teaching of Dundee students with Ninewells Teaching Hospital five years ago and few changes have been made to the talks since then.

Over this summer, I have agreed to update the presentations. There is obvious updating required where treatments have changed, such as anti-VEGF intra-vitreal injection treatments for both age-related macular degeneration and diabetic maculopathy. And very outdated cataract surgical techniques are mentioned in the cataract talk when this is entirely irrelevant nowadays for students. I intend to base them more in accordance with the learning objectives, as they are too long and at times meandering from the core knowledge required.

As well as the PowerPoint presentations, the techniques of teaching have to be revised so that we are using more interactive methods of teaching. The use of technology can be very beneficial providing that they are tried and tested so that glitches do not interfere with the smooth running of the teaching. The teacher should be seen as a guide who facilitates learning rather than a transmitter of knowledge. Social interaction with teachers and other learners should play a fundamental role in the development of understanding[1]. Students need to learn from experiences[2] and this emphasises the need to let students meet and examine patients for themselves, and to reflect on that experience. In Fife we try to make the students feel part of the team for their short stay, inviting them to come to our doctors' teaching meeting and to visit the theatres as well as clinics to be as involved as possible in all areas, in line with the principles of "Communities of Practice"[3] . This

is all in keeping with putting modern, evidence-based educational theory into practice.[1]

Additionally, we must pay heed to the feedback we are given by the students themselves on the methods and content of our teaching and revise them accordingly.

d) *A commitment to CPD (in clinical education AND in your clinical specialty) and evaluation of your practice.*

As stated in the introduction, it has been immensely encouraging to take part in the Clinical Educator Programme. Apart from learning new techniques in teaching, participation has greatly increased my confidence as a teacher and facilitator. I have completed my portfolio and have booked another session in the autumn on "Mindfulness"; I will continue to attend sessions whenever possible.

My CPD record, which is electronically entered on the Royal College of Ophthalmologists (RCOphth) database, has met the recommended target over the past 5 years, and has at times been almost double the required number of hours. I try to attend the annual RCOphth Congress as this gives a major update in all the areas in which I practice, and their annual teaching day for Staff and Associate Specialist ophthalmologists which is always very practical and clinically based teaching. I also attend the Scottish Ophthalmology Club meetings bi-annually and the annual Scottish Glaucoma Symposium. As this uses more than my annual training budget, I supplement my CPD with "freebies" such as on-line Medscape articles with attached test questions, attend weekly Fife eye department teaching and monthly in-service training half-days.

I am committed to clinical audit and am currently looking at the patients with diabetes attending my laser clinics and liaising with the diabetologists concerning the care of the patients' diabetes and other medical conditions. I am also auditing the data of patients who are found to have non-diabetic eye disease detected by the DRS. I participate in External Quality Assurance of all DRS staff throughout Scotland and take seriously the results of my own and the Fife DRS Team's performance every 6 months.

e) *The practical constraints and affordances offered by a research/clinical-intensive setting*

Although we have a primary duty to the well being of our patients, we also have a commitment to teach students in a clinical setting, so that they may experience “real world” medicine and not just simulations on screen. There are constraints in busy clinics, and ways around that problem have been discussed under “glaucoma teaching“. However, not all of our clinical sessions are so busy and crowded, and we make every effort to enable students to encounter and learn from patients. Often the patient is the best teacher as the interaction between patient and student is usually far more memorable than a case scenario described by the teacher.

Patients who are being given bad news concerning their vision, or who are in pain in a casualty setting, cannot usually be examined by students; but if only one student is present with the patient’s permission, it can be a very valuable learning experience. They should benefit by hearing the patient express their feelings and symptoms, and by watching how the clinician deals with difficult situations in a real clinical setting, learning by observation and later reflection and discussion as time permits.

The tension between providing students with real learning experiences and the need to protect patients from undue distress is a constant tension in clinical medicine but can be handled well if sufficient time and planning is given to the situation. Having one clinician freed from all booked clinical commitments and dedicated to teaching the students for their 7-day attachment in ophthalmology is part of our solution to this problem.

Finally, the GMC publication “Good Medical Practice” states, “Teaching, training appraising and assessing doctors and students are important for the care of patients now and in the future. You should be willing to contribute to these activities”. As a duty of being a doctor, we have an obligation to find ways to accommodate our medical students and pass on our knowledge, even when the circumstances are challenging.

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