

Videoconferencing: An innovation in Dental Education – A tribute to Ian Poplett

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Communicating across distances with video and audio in real time is not new, but for the individual, the cost of having a videoconferencing facility has been prohibitive. There is no doubt that videoconferencing has been an invaluable aid to multinational companies saving millions of Euros in travel and time. In healthcare, it has found its specialist applications in remote diagnosis for areas such as teledermatology and teleradiology. In dentistry, one of the main uses has been in dental education and this work was pioneered by the late Ian Poplett who many of you will remember was about to take the helm as Secretary General when he so sadly passed away. Ian pioneered the use of teledentistry in both undergraduate and postgraduate teaching and learning from his practice on the Isle of Wight just off the south coast of the UK.

Videoconferencing equipment usually allows the transmission and reception of video, audio and data between two sites at the same time. It can take a number of forms: one to one meetings, one to many and many to many (multi-point) links of more than two sites. Different hardware is available which can range from desktop computer conferencing with programmes such as Netmeeting™ to studio based systems with zoom cameras, large display monitors and connections for multiple inputs such as other video sources (Figure 1 and 2). The delivery is through three main carriers, ISDN (Integrated Systems Digital Network) Computer Internet Protocol (IP) based systems and satellite systems.

The first ISDN telephone line went into Wooton Bridge Dental Practice in the summer of 1997 to celebrate the opening of the Weston Education Centre (WEC) at King's College London by the Chancellor of London University HRH The Princess Royal. Following this there have been five successive years of undergraduate education receiving regular transmissions introducing them to various aspects of running a dental practice (Figure 3).

This has been both in seminar and lecture format and was evaluated as part of the DUET project (Dental Undergraduate Education by Teleconferencing). Over 600 free comments from questionnaires and interviews were analysed and clearly showed that the

students appreciated the interactivity, ability to view techniques at a distance and sheer enjoyment of taking part in the activity.



Fig 1. HRH The Princess Royal talks to Ian Poplett by video - conference at the opening of the Western Education Centre.

Intraoral cameras allowed transmission of detailed procedures, images from which could be saved for discussion afterwards. In lectures, half the screen was dedicated to the videoconference and the other half to the Powerpoint™ presentation.¹ (Figure 4). A roving microphone was used for students to pose questions to the practice.



Fig 2. Seminar group using a studio -based system

Patients were always willing to take part and benefited from the opportunity of remote diagnosis. Indeed, on one occasion a patient had an attack of

angina and the management was supported by the link that was live at the time.

Students sometimes visited the practice as part of their elective activity and were able to videoconference back to King's to discuss their work. The pastoral use of the facility has been very valuable, enabling access to staff as Guy's, King's and St Thomas's (GKT) Dental Institute is based on three campuses across London.

The Struggle To Extend Remote Training By Videoconferencing

At a postgraduate level Ian fought tirelessly for funding to expand the ability to deliver remote training by videoconferencing and more latterly webcasting (transmission of video and audio over the web).² He took part in the Postgraduate Regional On-line Videoconferencing in Dentistry project (PROVIDENT) and was involved in bridged linked topic discussions and training days³ (Figure 5). He became an expert at the efficient use of cameras and lighting, and gave advice to many new users of the equipment.⁴ His last major videoconference was at the launch of GKT-CPD for the provision of Continuing Professional Development by webcasting (<http://www.gkt.cpd.org>). This is being improved and updated by the support which he gave to an innovative European project that is now evaluating the technical and educational value of such webcasting (<http://www.kcl.ac.uk/eucpd>). This last videoconference was to the Royal Society of Medicine (RSM) in London and Ian is seen conferencing with the Dean of GKT Dental Institute, Professor Nairn Wilson (Figure 3).



Fig 3. Nairn Wilson conferences with Ian Poplett at the RSM

Ian's work has enabled a new generation of undergraduate and postgraduate students to reach into the heart of a practice and it was his wish that

this technology be used to deliver teaching across the depth and breadth of Europe as part of his ICD initiatives. As new wireless technologies emerge, ever better and more speedy connections become established and mobile hand held technology improves, videoconferencing will emerge as something affordable to many more citizens of the world. The ground work done by Ian will be translated to the new media and his legacy will live on.

Recognition and Awards for Ian Poplett's Excellence and Innovations in Teledentistry

He would have been pleased to know that his practice has been chosen for its excellence in innovation using teledentistry as part of the Field Site initiative of the UK's Department of Health's modernisation in Dentistry Programme. Furthermore his work was commended just before he passed away by the British Education and Communication Technology Agency (BECTA) as part of the award to King's College for its innovations in dental education. This is a tribute to the work of a visionary who was dedicated to passing on his skills to the next generation of professionals.

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REFERENCES

Eaton KA, Francis CA, Odell EW, Reynolds PA & Mason RD (2001). Participating dentists' assessment of the Pilot Regional On-line Videoconferencing in Dentistry (PROVIDENT) Project. *British Dental Journal* 2001, 191, (6): 330-335.

Odell, E.W., Francis, C.A., Eaton, K.A., Reynolds, P.A. & Mason R.D. (2001). A study of videoconferencing for postgraduate continuing education in dentistry in the UK - the teachers' view. *European Journal of Dental Education*, 5 (3), 113-119.

Reynolds, P.A. (1999). Dentists do IT digitally, *European Journal of Telemedicine*, January.
Reynolds, P.A. & Mason R.D. (2002). The Use of Videomedia in the Continuing Professional Development of General Dental Surgeons. *Computers and Education* 39 (1) pp 65-98.