THE INTERNET IN DENTISTRY
Bringing World Class Education to your Home
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ABSTRACT
The Internet can provide far greater levels of interactivity and therefore the potential for a greatly improved learning experience when compared with traditional educational media. As an educational medium, interactive streaming video over the Internet has the potential to improve standards of dental health and contribute to the development of more universal standards of dental care around the world. The Virtual Auditorium format uses streaming video, audio and presentation of single PowerPoint or dual projection PowerPoint or 35mm slides to allow users to view an entire lecture presentation on their computer screens. The Virtual Auditorium as an alternative means of seeing keynote speakers from major dental meetings, is gaining in popularity and may soon be a standard facility linked to major international conferences.

INTRODUCTION
The ability to stream video over the Internet is a developing technology already achieving high standards for users with broadband access. As this technology improves, smaller interest groups, such as professional bodies, will be able to take advantage of this new medium by broadcasting content specific to their interests. This medium will be different from conventional media such as television, CD and video, in that it will be accessible by local and distant users alike, and will be able to be accessed on demand.

Using multimedia, the Internet can provide far greater levels of interactivity and has the potential for a greatly improved learning experience when compared with traditional educational media. The Internet already provides a medium for discussion forums and live or delayed "question and answer" sessions via chatrooms, forums and bulletin boards. Additionally, video conferencing, which was once only available to the executives of large corporations, is now a relatively common event on the Internet.

LECTURES IN A VIRTUAL AUDITORIUM
A new developing format on the internet is the virtual auditorium. The virtual auditorium allows the user to view a lecture presentation in the manner in which it was originally presented. Audio and video of the speaker as well as the speaker's slides appear on the computer screen and users are thus able to see the presentation as if they were attending the live lecture. We may soon come to think of these new educational websites as online video journals, and the library of material that they offer is already substantial.

Using the Internet to provide live and interactive educational material may be of only moderate additional value to people with ready access to more traditional forms of education. However, for people who are distantly located from capital cities, or for people who live in countries without ready access to internationally renowned visiting speakers, this new educational medium may well provide the information and dissemination of knowledge that is ultimately responsible for quantum improvements in dental health around the world.

POTENTIAL BENEFITS FOR EDUCATION
Many potential benefits are associated with this new medium for education. Conferences have been a popular way of offering continuing professional education. Conferences foster learning in an easy-to-digest and interactive setting. However attending a conference can be time consuming and expensive. Videos have gained in popularity as an educational medium because they allow presentation of material in a dynamic manner with the use of diagrams, animation and sound. They offer some of the advantages of conferencing, but lack the interactivity.

A Virtual Auditorium on a computer screen is not the same as watching a speaker present material in a live setting, but it can provide an attractive and familiar means of receiving educational material. The medium is readily available and convenient and it can be fully interactive – being limited only by the creativity of the educator using it. An engaging video of the speaker can hold the attention of an otherwise indifferent audience, and the speaker's illustrations or slides are presented in the customary single or dual projection formats. Additional benefits come from the interactivity of the medium and further information on the speaker, materials, or related articles may be only a computer mouse-click away (Fig. 1)

COMPLEMENTING CONFERENCES
It is unlikely that internet-based education will reduce the popularity of dental conferences. On the contrary, it is the author's opinion that this form of education will likely increase the popularity of live conferencing as it exposes more dentists to the speakers and their subject matter. To
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Fig. 1. - The Virtual Auditorium as it appears on the user's computer screen. The talking head engages the user's attention whilst the left and right slides advance with the presentation. A written transcript scrolls along with the presenter's speech and can appear in different languages to allow for easy translation.

support this statement, one could look to the remotely analogous examples of what recorded music (CDs, cassettes) has done for live music concerts and what video has done for the cinema movie experience.

Streaming Internet video may actually supplement organised conferences. In the future, participants unable to attend major dental meetings, may be able to register to participate in such meetings online. Using this new medium, discussion time, which is frequently too short at dental meetings, may be pursued online in forums after the event. These discussions might result in identifying further research needs or clinical trends not yet recognized in the literature.

READY ACCESS TO EDUCATORS

Geography and chronology have often prevented many dentists from seeing some truly great dental educators. The best dental educators may not visit every part of the world, and some may have existed before the present time. Thus, the ability to archive the material of renowned educators in a digital format will make their content readily accessible to users for many years to come. Imagine being able to sit down in your office and view a complete presentation by GV Black or Earl Pound. These new Internet media will allow for such archiving and retrievability and the historical and educational importance of this to the modern dentist is invaluable.

Accessibility to education can sometimes be limited by financial constraints. Internet based education can be very cost-effective due to the scale of the potential user base. A large, global user base should ultimately result in a relatively inexpensive source of information for the end user and the relatively easy application of translation services to internet - based content will also help address language barriers, and once again open the doors to a larger global audience.

MORE TIME

Time is a fundamental problem for the motivated practitioner. Finding the time to maintain a high level of expertise in a field of interest, while still acquiring and maintaining knowledge about related specialties is difficult. The availability of continuing education at home or in the office will help facilitate learning while giving dental professionals more time for life.

NEW PROBLEMS

These new educational delivery systems will arrive with new problems. The ease with which people can access information is already far greater than it was only a few years ago and the quality of educational material available on the Internet will vary. Internet media will be used to provide opinion-based and clinical or scientific material and the educator and his or her material will need to be assessed by a peer review process. Copyright will also be a serious concern for educators as educational material presented in a digital form may make copying or download an intellectual property issue.

CONCLUSION

As an educational medium, the internet has the potential to improve standards of dental health and contribute to the development of more universal standards of dental care around the world. The road ahead will be an interesting one, and not without bumps for everyone watching. However, the ultimate winner will be dental health, as high quality, modern education finds its way directly into the homes and offices of dentists, dental auxiliary personal, and peoples of the world.

ACKNOWLEDGMENTS

The author would like to thank Dr Tony Rotondo for his collaboration in producing this manuscript.

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