Lessons Learned from the First Videoconference in Continuing Veterinary Education

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Abstract

In February 2008, the School of Veterinary Medicine (SVM) conducted its first continuing veterinary education session via videoconference. This session consisted of a lecture, demonstration, and hands-on practical. Onsite participants were in Trinidad; offsite participants were in Barbados and Jamaica. Continuing education courses are crucial for professionals to upgrade their knowledge and in some countries, to maintain their licenses. Timing of and distance from events, cost, and family demands put up barriers to continuing education. Distance education can be used to overcome these barriers, rejuvenate practice and prevent feelings of isolation. This paper reveals participants' reactions to the workshop which could not be disentangled from the technology and medium of delivery. Pedagogical and videography issues were similar for offsite and onsite participants. However, offsite participants commented more on the participation opportunities afforded by the technology. Participants' reactions differed on technical issues and issues associated with practical work. When it came to practical work, videoconferencing was considered second-best to face-to-face. This paper also includes participants' suggestions to improve the videoconferencing experience. Nevertheless, for offsite participants, SVM's first videoconference was a thrilling and historic experience.
Keywords: videoconference, veterinary science, continuing education, evaluation, Caribbean.

INTRODUCTION

To provide continuing education for veterinary doctors in the Caribbean, the School of Veterinary Medicine (SVM) of The University of the West Indies (UWI), Mount Hope campus in Trinidad has initiated continuing veterinary education via videoconferencing. A preliminary evaluation[1] of the first videoconference workshop in Small Animal Dentistry hosted by the SVM is presented here. Onsite participants were located in Trinidad, while offsite participants were in Jamaica and Barbados.

LITERATURE REVIEW

Videoconferencing is a viable alternative for delivering continuing education and is generally well-received by participants (Kaufman & Brock 1998). It is not usually seen as a desirable medium in its own right, but as a substitute for face-to-face delivery (Laurillard 1993). Videoconferencing (or video teleconferencing) allows two or more locations to interact simultaneously via two-way audio and video transmission. Teleconferencing is used to solve the problem of communicating with people who are geographically distributed or in remote areas (Cochrane 1996).

Continuing growth in biomedical knowledge and techniques means that graduation does not signify the end of learning. In the United States, for example, half of the states require veterinarians to attend continuing education courses to maintain their licenses (AVMA 2009). Barriers to continuing veterinary medical education (CVME) include timing of events, distance, cost, solo practice, stage of career and family demands (Moore et al. 2000). Distance education

can often be used to overcome these barriers, rejuvenate practice and prevent feelings of isolation.

METHODS

This study is limited to the first level of evaluation: assessing participant's *reactions* to the event. According to Kirkpatrick (1998), evaluation should always begin at this level, and then move sequentially to assessing learning, transfer of behaviour, and finally results or impacts. Information from each prior level serves as a base for the next level's evaluation. Therefore, it is recommended that if workshops such as these are to form the basis for a regional CVME programme, subsequent evaluations at the prescribed levels should be performed.

Before the first videoconference workshop, survey questionnaires consisting of both open- and closed-ended questions were mailed to the attendees. After the session, all attendees were asked to complete one questionnaire on their overall impressions of the workshop and the facilitator instructor. Offsite attendees were asked to complete an additional questionnaire on their experiences with videoconferencing. Participants in this study comprised veterinary professionals living in Trinidad, Jamaica and Barbados. Descriptive statistics were generated from responses to the closed-ended questions, while participants' responses to the open-ended items were grouped into themes.

RESULTS

Of the possible 60 attendees, 47 (78%) returned the first questionnaire which dealt with participants' general reactions to the workshop. From Trinidad, 24 (77%) questionnaires were returned, 8 (89%) from Barbados and 15 (75%) from Jamaica. The same 23 offsite participants completed the second questionnaire about the videoconference experience resulting in a response rate of 79%.

	Agree/Strongly Agree (%)
Course content was at an appropriate level of difficulty.	89
The instructor stimulated interest in the subject.	89
The instructor effectively used the case material to teach the course.	92
I would take another course with this instructor.	93
I would recommend this workshop to other students.	89

Table 1: Participants' Responses on the Session and Instructor

Participants' overall rating of workshop was 8 out of 10.

	Yes (%)
Have you participated in a videoconference before?	9
The time limit was adequate for the presentation.	100
I could see/hear the TV/monitor well from where I was sitting.	100
I could see/hear the presenter well on the screen.	89
I could see the individual slides well on the screen.	76
Were there any technical problems with the videoconference?	100
Did you have adequate opportunity to ask a question?	100
Did you have enough opportunities for interaction?	100
I was able to interact with the speaker.	100
I was able to interact with the other participants.	100
Would you like to participate in another videoconference?	100

Table 2: Offsite Participants' Responses on the Videoconference

Participants' overall rating of effectiveness of videoconference was 6 out of 10.

Onsite and offsite participants' descriptions of what they liked best and least about the session are presented below. Some issues were common to both groups, while others were different.

Onsite Participants	Offsite Participants
Pedagogical Issues	
Duration too long.	*[Did not like] length of time.*
The lecture presentations were excellent. Information was very well disseminated while stimulating the thought process.	*Lecturer was able to carry across info precisely. Audiovisuals were excellent, very graphic and clear. [I liked] the wealth of experience the speaker brought.*
Several of the cases were applicable to daily activities at the clinic.	*It gave me a good overall view of veterinary dentistry. It was a good experience to see specific procedures done.*
Participation and Interactivity	
	We are all able to interact. Felt as if we were communicating with persons beside us, yet they were miles away. [Technology] enables participation of groups in different locations simultaneously. [I liked] the interactive nature of the medium and real time participation.
Videoconferencing...incorporates more regional input and viewpoints.	*[I liked the] Caribbean flavour - knowing you are participating simultaneously with 2 other countries.*
Issues on the Practical and Groupwork	
[I liked] practical/hands-on practice.	*Not able to perform hands-on practical work to complement the lectures. The obvious inability to interact with any wet lab practice. Hands-on experience is better than observation alone.*
Practical should be done in a larger area with more specimens. Not enough viewing space around practical area.	
Maybe put groups for practical sessions so each participant gets hands on. Instructor was split between two groups and was absent for long periods with live animals.	
Technical & Transmission Issues	
No comments	*Loss of information during transmission; basically transmission problems. Poor video feed happened too often. Technical difficulties-sometimes we were not able to see the slide that was being discussed at a particular point in time. Sometimes couldn't hear discussion.*
Videography Issues	
Cameraman needs to be more steady. Poor quality pictures.	*Camera shake and bad camera angle during wet lab. Lack of focus of camera during practical session.*
Not enough viewing space around practical area.	
We did not get to view images on a large screen. The vet in the wheelchair had a difficult time trying to view the small screen between the crowd.	

How did learning information in this way compare to a more typical face-to-face workshop?

- *A 75% experience.*
- *Just as effective from the lecture standpoint.*
- *Face to face usually better especially in wet labs.*
- *There was a slight feeling of disconnect as one was not actually there.*

- *This way felt too distant, still not part of the action, especially for the wet lab.*
- *When the technology worked everyone could see what was happening without jostling for position. It was also much cheaper than usual conference workshop.*
- *[I like] the fact that I can actually participate in an event such as this without having to pay airfare and other expenses.*

What suggestions do you have for the presenters/organisers to make the videoconference better?

- *Give persons a small brief address prior to the start what it involves and how to effectively communicate. I was surprised how many persons were in the dark re communication by video-conferencing. I was not the only one.*
- *Have models etc available for distance participants so that they can practice techniques.*
- *If there are different procedures going on simultaneously to have a split screen so that participants can see them at the same time and not have the camera go from one procedure to another.*
- *Be mindful of orientation of their bodies. Sometimes it blocks the audience's view. Paying close attention to prevent people from moving in front of the cameras.*
- *Use a tripod to keep the image steady.*

Other Comments:

- *I think the SVM is very progressive in hosting these workshops along with a teleconference. I hope this effort would continue.*
- *The student is at the mercy of technology (at the teleconference) as well as at the mercy of the cameraman.*
- *For the first of its kind I attended (as a student) it was overall a thrilling experience for me!*
- *My first videoconferencing. [We] were excited about this and we took photos of presentation of certificates/handing out ceremony.*

DISCUSSION

Overall, the workshop was considered a success. However it was felt there was room for improvement. Most participants considered the content relevant and the instructor competent. The effectiveness of the videoconference was not as highly rated as the workshop; it scored an average of 6/10. Similarities and differences in the educational experiences of the two groups were reflected in their comments on what they liked most and least about the day's session. Reactions to the workshop could not be disentangled from the technology and medium of delivery.

Both groups of participants appreciated the opportunity to participate and interact with their peers in this first-time event and the regional input and viewpoints their peers offered, although these were appreciated more by the offsite than the onsite participants. Onsite participants appreciated the wet lab/practical more than onsite participants, but claimed there was neither enough space to manoeuvre nor enough tutors and specimens. Benefits of videoconferencing for offsite participants included savings in travel costs and time and having an expanded audience.

Disadvantages arose when the technology was inadequate (for example, poor videography) or it failed to work (loss in transmission). For offsite participants, there were feelings of disconnect from the onsite action and missing out on the practical component, and the perception that the technology could only provide a 75% experience compared with face-to-face especially regarding practical work. This is a common perception in distance learning, that videoconferencing is second-best to the traditional yardstick of face-to-face delivery (Dallat et al. 1992).

Negative feedback from participants was not without recommendations. For both onsite and offsite participants, the videography negatively affected their experiences of the day. There was camera shake during the practical, visibility was poor because the onsite screen was too small and there were people moving in front of the camera and views were limited because only one

camera was used. It was suggested that at least two cameras be used to provide different angles and a large screen onsite would improve visibility. Camera shake would be minimised by using a tripod. The day-long session and the video shown were considered too long. There was a suggestion to break up the content over two days. Learning requires attention and a modular structure with a series of discrete segments was recommended.

Recommendations from participants for improving the workshop and the videoconferencing aspect are echoed in the literature. Before the videoconference, presenter and participants should be oriented to the medium and where possible, the presenter should practice in advance of the session with feedback given. An appropriate seating arrangement is important, sound and lighting must be adequate and visuals should follow best design practice (Bitterman, Schappert & Schaefer 2000). During the videoconference, principles of adult learning and group facilitation should be applied and simultaneous interaction between instructor, participants and content encouraged (Saw et al. 2008). The presenter should cycle systematically across all sites asking questions of and deflecting questions to participants. Participants should be provided with the opportunity to discuss their own cases and to exchange opinions and to receive feedback on their ideas (Smyth 2005). After the videoconference, a well-designed evaluation should be conducted to obtain feedback on the process and content of the session and to solicit suggestions for improvement from participants (Kaufman & Brock, 1998).

CONCLUSION

Videoconferencing is a useful tool for a university to employ to enhance its public image as a provider of continuing veterinary medical education. But as one participant said: “The student is at the mercy of technology…” As educational experiences are filtered through the technology, there are pedagogical and experiential differences posed by distance learning and there are limits to the new media. Nevertheless the new technology is worth exploring and exploiting. In the words of one participant of the School of Veterinary Medicine’s first videoconference: “For the first of its kind I attended (as a student) it was overall a thrilling experience for me!”

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[1] This paper is based on an internal report submitted by the author to the School of Veterinary Medicine.