Video conference teaching at an Open Distance Learning (ODL) university in South Africa: Analysis of benefits and drawbacks

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Abstract
Video conference-based education is the use of communication technology to provide education from a central site to remote distant education sites using live interactive audio-video communication. The purpose of the study was to describe the factors that influenced attendance of the Health Services Management's video conference sessions held at UNISA. A questionnaire containing both closed and open ended questions was posted to students registered for Health Services Management in 2012. Two hundred and sixty (260) questionnaires were returned and the narratives were analyzed using qualitative methods. Students shared both positive and negative views about attending the video conference. The students were happy about the clarity of the course content and feedback on assignments. However, the lecturers were reportedly hasty to finish the content within allocated time. Travelling to these venues was also expensive as some students needed to book accommodation. The majority of students benefited from the information shared during the video conference sessions but felt that compiling the information on a Compact Disk (CD) would be helpful to the students who were not able to attend the sessions. The online teaching strategies need to be revisited as they pose challenges to students.

Keywords: Teaching, open distance learning, video conference, students.

Introduction

The use of distance education technology is growing at a rapid pace in higher education; and tertiary institutions are continuing to report increases in online enrolments (Koening, 2010). Video conference teaching is one of the innovative methods used in distance education to reach students at distance learning centres or who are far away from main site of presentation.

Video conferencing is a powerful business tool, which facilitates a virtual visual meeting environment between two or more participants, located at different sites, by using computer networks to transmit and receive audio and video data (Rajeev, 2012). The use of video teaching demonstrates willingness of the institution and lecturers to keep abreast with technological advancements and new teaching delivery methods. It also allows offering of tutorials at additional

distance campuses without needing more teaching staff. Video conference-based education involves the use of communication technology such as phone lines (Integrated Services Digital Network: ISDN) or the internet (Internet Protocol (IP) to provide education from a central site to remote distant education sites using live interactive audio-video communication (Chipps, Brysiewicz & Mars, 2012).

Methods of video teaching include video lecture, video tutorial or iLecture, which is used to record a lecture at one site for future playback. Video teaching through video conferencing is used so that a lecture can be delivered to multiple sites simultaneously (Gill, Parker & Richardson, 2005; Brade, 2007).

Video conference teaching thus allows an extended reach of the students; and attracts additional enrolments from students in regional areas who can participate in lectures and tutorials via video link (Gillies, 2008). In an Open and Distance Learning (ODL) context, the students may be able to meet the lecturer of the subject matter in person through video conferences.

ODL connects students across geographical boundaries through the support of the Internet and learning management systems like video conference. Students are conveniently learning and communicating on-line. Students participate and interact with peers and educators in discussions not just merely to seek course-related information (Bing & Ping, 2008).

Previously, the University of South Africa (UNISA) had 21 centers for video conferencing across the country, but from 2011, it included another center in Ethiopia. The numbers of students the venues could accommodate range from 7 to 62 per venue.

Health Services Management students are professional nurses who are registered for a post basic degree in Health Services Management at UNISA which is an ODL institution. Most of the students are working in hospitals and clinics, in and outside South Africa. The students are supported by the lecturers by offering them tutorials through video conferences, over and above other ODL tuition methods used. Video conferences create convenience for tuition, for students to meet their lecturers and other students and to address their challenges during their studies irrespective of the barriers imposed by geographic distances (UNISA, 2008).

For Health Services Management tutorials, eight regions in South Africa and one region in Ethiopia are normally connected. For the past three years since 2010 there has been a poor attendance of video conferences for Health Service Management modules in the eight centers that get connected for Health Services Management tutorials. The students were reminded about the video conference

sessions by the lecturers through online discussion forum announcements, emails, SMSes, telephone and tutorial letters, and also encouraged to book to attend the video conferences as scheduled. The 2011 statistics showed that only 14 % (N= 264) of students out of 1907 attended the sessions in the eight regions (HSM report, 2011). The argument in this article is that students will more readily attend video conference tutorials when they realize the advantages of the tutorials.

The purpose of this study was to explore the views of Health Services Management students regarding attending tutorials by video conference teaching. The objective of the study was to describe the factors that influenced attendance of video conference sessions by the Health Services Management students at UNISA, with the aim to encourage more students to attend the video conferences in future.

Methodology

A qualitative and descriptive survey was used. The setting was UNISA, an ODL university in South Africa. The population comprised all 1262 undergraduate nursing students registered for Health Service Management modules in 2012. A roster of the active students registered for second to third year modules in 2012 was accessed from UNISA's online records.

A purposive sample (N=260) of those students who had already attended video conference was included in the study. Specifically, they were those who registered for second and third year modules.

The inclusion criteria were that the students should be registered for Health Services Management in the undergraduate degree in 2012, and the students should have previously attended video conferences for Health Services Management modules, and be willing complete interview guide. Students registered for first year modules in 2012 were excluded as they had not yet attended video conferences during data collection in the first semester of 2012. The participant sample size was not predetermined, but depended on the number of students who completed and returned the questionnaires.

A self-administered interview guide with open ended questions was distributed to all Health Services Management students who were registered for second and third year courses in 2012. An information document and informed consent were attached to the questionnaire. The students were informed about the purpose and the benefits of the study. Participation was voluntary and the students were informed that they would not be penalized if they declined to participate in the research. Also, the research had no effect on the academic performance of the students. Confidentiality was maintained at all times. A stamped and self-

addressed envelope was sent along with the tutorial letter and the participants were requested to post their completed questionnaires.

Ethical considerations were adhered to through the principles of the Belmont report which included respect for persons, beneficence, and freedom from harm and exploitation (Amdur, 2003; Polit & Beck, 2008). Permission to conduct the research was sought from the Chair of Department of Health Studies, and Coordinator of Health Services Management modules. Ethical clearance was obtained from the Higher Degrees Committee of Department of Health Studies, UNISA. The respondents signed a written consent form without mentioning their names in order to maintain anonymity and confidentiality.

Open coding was used and information was organised according to topics as they appeared in the interview guide. Data analysis methods were according to the descriptive analysis method of Tesch (1990 in Creswell 2003) which includes description, analysis and interpretation.

Description was done by reading and rereading the notes from the written narratives in order to gain the necessary background information (Burns & Grove, 2005). Essential features from the questions were identified and grouped together into similar topics and described. Common challenges, benefits, drawbacks, issues of concern, and suggestions to improve video conferences were identified as themes and categories which were grouped together. The researchers held a consensus to agree on the information identified. During interpretation of data they identified and summarised the content of each response in order to reach the consensus. Relevant literature was used to support the conclusions.

Trustworthiness is a factor by which the quality of research can be evaluated and reflects the confidence the practitioners can safely have in the research findings. To ensure trustworthiness, the researchers used Guba's model (1985) was as explained in Polit and Beck (2008) concerning qualitative research.

For credibility of the findings, a pre-test of the interview guide was conducted with a group of ten students whose findings were later included in the study as there were no changes done on the interview guide following the pre-test. Dependability was achieved by the description of the exact methods of data gathering, analysis and interpretation in order to provide information on the repeatability of research. Regarding confirmability, the interview guide dealt with questions on video conferencing only. The data collection instrument was submitted to a panel of experts in research and video conferencing for expert review. The panel consisted of the lecturers of Health Services Management. The findings of this study were therefore limited to the video conferencing and

attendance by students who were registered for Health Services Management course only.

Results

There were 260 completed responses and three themes which emerged from the analysis of the responses were benefits of video conference attendance, drawbacks of video conference attendance and the reasons for not attending video conferences.

Benefits of video conference attendance

Students indicated the benefits of video conference session attendance which included clarity about course content, feedback on assignments and preparation for examination as indicated in the following statements:

"I am very happy about these types of sessions as I get clarification on the subject matter."

"This is the only opportunity to get exact feedback from the lecturer about your assignments and the way forward with your studies."

Students were also motivated to continue studying as the lecturer clearly explained the outline of the module and what is expected during the course of the semester.

"I am excited to be part of this programme as I know exactly what is expected from me from registration till completion."

Video conference sessions offered opportunity to meet fellow students. The findings indicated that the students shared a similar view that being on the video conference allowed them to see other students from other regions. The video sessions allowed the students a chance to share information and assist one another in problem solving, even after the sessions.

"This *is a great chance to share information with other students."*

"I enjoyed discussing problem units with fellow students after class."

Drawback of video conference attendance

The findings from the narratives indicated that there were negative results of attending video conference sessions which included time limits, technical problems and disruptions. Some stated that there was not enough time to

deliberate on the session as only 90 minutes were allocated per session. They also did not have enough time to ask questions as the lecturer was trying to finish the planned content within allocated time. Some of the statements from the students regarding time constraints were as follows:

"I wanted to ask the lecturer some questions but there was no chance as she was very fast."

"The 90 minutes went fast……….so quickly."

Technical problems included poor or no sound transmission and double booking of the venues. The findings indicate that there were times when the students were in the venue but could not hear what the lecturer was saying because sound was not coming through the microphones. The technical officer were available to assist with the problems, however, in some cases, the problem could not be resolved until the end tutorial session.

"We were unfortunate this side as we could see the lecturer talking but there was no sound coming out."

"We wasted 45 minutes as there was no sound coming out of the speakers, the guy from IT tried his best."

The other problem was on the double booking of venues as different students gathered in one venue. Two lecturers could not teach their students leading to the cancellation of one group as the sessions were linked to other sites.

"We study different modules and could not be in one classroom at the same time."

The findings revealed that there were disruptions as one of the videoconference room was near the entrance and lot of noise from other students passing by. Students were also disrupted by lost people who came to the wrong venues or were lost on campus as indicated in the following statements:

"There is too much noise around here."

"We are also disturbed by people coming to wrong venues."

Reasons for not attending video conferences

The logistics mentioned as the obstacles to attending the sessions were difficulty in obtaining leave to attend studies, distance of video session centers and travelling expenses. For students who were employed full time it was difficult to

take annual or study leave during the week especially they worked on weekdays. One of the narratives indicated:

"I *work in a clinic and it's very difficult to get annual leave during the week.*"

Students also indicated personal issues as the reasons for not attending the sessions as the regional offices were far from their place of stay. For students who stayed far from the venues, they felt that it was too expensive to travel to the centers. Others even needed to book accommodation for the night. Students incurred expenses in attending the video conference sessions as many needed accommodation as indicated in the following statements:

"I stay very far as my village is 110 kilometers away from the regional center."

 "Coming here is very expensive as I have to book overnight stay. My house is 200 km away from this venue."

"I stay very far and as much as I like to attend these sessions, travelling to the area and overnight accommodation is very expensive."

There was also miscommunication as the tutorial letter was posted on time, but due to postal delays, the information did not reach the students in advance. Other students did not update their personal details when they changed their cellphones leading to notifications received late, as indicated in the following statements:

"Honestly, *I did not receive any tutorial letter informing me about the video conference.*"

"The post office strike let us down because all our study material was delayed."

Discussion

The innovative use of videoconferencing significantly improved learning outcomes and performance motivation. Teaching and learning engagement should therefore be planned and integrated into videoconference based teaching (Chipps, Brysiewicz & Mars, 2012).
Students indicated that they were happy about the video conference sessions as there was clarity about course content. Similar findings were shared in a systematic review by Chipps, Brysiewicz and Mars (2012) in that the majority of studies reported high levels of satisfaction with the use of video conferencing, with only a few reports of technical problems that were experienced. A clear indication of motivation to continue with studies was evident from the findings. Since the study was conducted in an ODL university, there is minimal chance of the students to meet one another except in sessions like video conferences.

Students mentioned that they were motivated to continue studying as the outline of the module was found to be supportive. Attending video conference gave the students the opportunity to share information with fellow students and assisted one another in problem solving. The findings concur with those of Nilsen (2011) who stated that regular videoconference offer an opportunity to be part of the team and also creates a space for learning.

Time was inadequate for the students to ask the lecturer relevant questions. The feeling was that if the session could be done over two periods then the students would benefit more. The lecturers were also reportedly in a hurry to complete the whole curriculum within a specified time allocation; and questions for clarification could not be attended to sufficiently as time was limited.

Logistic problems such as double booking of venues were evident as different students would gather in the same classroom for different module presentations. Sound was also a deterrent as there were sometimes transmission problems from the main site. The students could only see the lecturer but without audio feed; thus preventing follow up on the discussions. Similar concerns were shared by Chipps and Mars (2010) who reported that the venues in remote areas were very small to accommodate all students. Park and Choi (2009) also agreed that technical glitches were experienced in some remote areas which delayed the transmission of information as the session was conducted simultaneously in many sites.

Personal reasons also affected students' attendance as many had to travel long distances to the video conference centers. Often students had to book overnight accommodation in order to overcome the distance and be in class on time. The travelling and accommodation were reportedly very expensive for the students.

Recommendations

Based on the findings of the study, the following suggestions were made by the students:

- Lecturers need to speak slowly so as to be heard by all students.
- Lecturers need to increase time of session as 90 minutes is inadequate.
- Lectures should repeat the sessions so as to accommodate students who missed the previous ones.
- The presentations should be held on Saturday in order to accommodate students who work during weekdays.
- It would be preferable to send presentation CD to students so that they can repeatedly play it back.

- The facilitators on site should place notice on entrance of the classroom to indicate that a video session is in progress inside the room in order to prevent disruptions.

Limitation

The limitation of the research is that it was done to UNISA students who were registered for Health Services Management module only. Therefore, the findings may not necessarily be applicable to other category of students. The findings should be interpreted with this limitation in view.

Conclusion

As much as attendance of video conference is beneficial, students also indicated that they experienced a series of drawbacks. They also suggested strategies to encourage other students to attend the sessions. The online innovative teaching strategies therefore need to be revisited as they pose challenges to students.

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