

Medical Teachers' Attitude towards Using of Audio-Visual Aids in Lecture Classes

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Abstract

Background: The teaching method to educate medical students has dramatically changed with the introduction of audio-visual aids. Medical teachers' preference for using audio-visual aids in didactic lecture classes has become essential. So, the present study was conducted to evaluate on medical teachers' attitude towards using of audio-visual aids in lecture classes.

Materials and Methods: This questionnaire-based study was conducted among seventy medical teachers in Tripura Medical College & Dr. B.R.A.M. Teaching Hospital, Agartala, West Tripura.

Results: Most of the medical teachers (94.3%) recognized the importance of using audio-visual aids during lecture classes. Regular use of audio-visual aids during lecture classes was observed by 60% of the teachers. Also, 64.3% of the teachers opined to use of appropriate audio-visual aid during your lecture classes and 52.9% of the teachers preferred of using mixed audio-visual aids during lecture classes.

Conclusion: The present study revealed that the most of the medical teachers preferred to use audio-visual aid/s during lecture classes. This had changed the teaching attitudes of medical teachers in a constructive manner where the information can easily be combined and concise.

Keywords: Audio-visual aids, medical teacher, Mixed aids, Over-head projector (OHP), Power point text (PPT).

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Introduction

Lectures had been the most common form of teaching and learning since ancient times from the fifth century BC in Greeks. Students learn from lectures by listening, observing, summarizing and note taking. Lectures can be supplemented with audio-visual aids for better illustrations, clarity and learning.[1] Audio visual aid is an instructional device in which the message can be heard as well as seen. The purposes of audio-visual aids are to supplement and

enrich teachers own teaching to make teaching-learning more concrete. Its instructional role in itself creates interest to make teaching as an effective process. Audio-visual aids helps in effective perceptual and conceptual learning. It motivates learning of students by capturing and arising interest and helps in saving energy and time of both the teachers and students by providing near realistic experience.[2]

Using of audio-visual aids by medical teachers for medical students' education was essential.[3] Audio-visual aids also were powerful techniques to strengthen the lectures and to get a large amount of theoretical information at one time for a large number of learners. The audio-visual aids integrated and organized the information from multiple sources to amplify and explain the key points in a well-organized lecture on complex topics.[4]

The teaching methods to educate medical students, previously was dominated by blackboard and slide projectors.[3] It had dramatically changed with the introduction of other audio-visual aids like over-head projectors, advanced computerised based board, LCD projectors, video clippings etc. The students want the teachers to include audio-visual aids during the lectures.[5] Thus, the optimum use of audio-visual aids is of utmost important for deriving the lectures by the medical teachers.[6] Medical teachers' preference for using audio-visual aids in didactic lecture classes has probably become essential. So, the present study was conducted to evaluate on medical teachers' attitude towards using of audio-visual aids in lecture classes.

Materials and Methods

This pre-structured, pre-tested, pre-coded questionnaire based cross-sectional study was conducted in Tripura Medical College & Dr. B.R.A.M. Teaching Hospital, Hapania, West Tripura for duration of 02 months (November to December, 2016) with the approval of Institutional Ethics Committee. All the Medical Teachers of Tripura Medical College & B.R.A.M. Teaching Hospital who voluntarily were willing to participate in this study were included with an informed consent. The study variables were Socio-Demographic profile and professional information of the medical teachers which included age, sex, designation, year/s of teaching experiences, the speciality of teaching and attendance of any Teachers' Training

Programme. The study variables included for audio-visual aids were black/white board, over-head projector, power point and mixed of aids which were mostly used during the lecture classes. All the medical faculties were encouraged to furnish their unbiased independent opinion to complete the questionnaires regarding the study. Full confidentiality of collected data was maintained and was entered in master chart for statistical analysis by Statistical Package for the Social Science (SPSS) version 20.

Results and observations

In the present study, a total 70 numbers of medical teachers had participated with a mean age of 47.5 ± 14.6 years of age (age range from 28 to 65 years). Among the participants, 60 were males and 10 were females with a mean age of 48.6 ± 14.4 and 41.1 ± 14.6 years respectively (Table 1).

Most of the medical teachers (94.3%) were able to recognize the importance of using audio-visual aids during lecture classes whereas only 2.9% of the medical teachers were not sure about its importance and opined as not important (2.9%). Regular use of audio-visual aids during lecture classes was observed by 60% of the teachers. Very often teachers (21.4%) were using audio-visual aids whereas occasional use was observed by 11.4% of the teachers. Only 7.1% of the teachers were using it rarely.

Majority of the medical teachers (64.3%) had the opinion that appropriate use of audio-visual aids during lecture classes improved teaching-learning skills and at the same time 70% of the teachers opined that use of multiple/mixed audio-visual aids during lecture improved students' performance (Table 2). While preparing lecture 52.9% of the teachers prefer to use mixed audio-visual aids and 54.3% opined that lecture preparation was easier with PPT and difficult with OHP (42.9%).

Table 1: Socio-demographic characteristics of participants (n = 70).

Socio-demographic characteristics		Number	Percentage (%)
Gender	Male	60	85.7
	Female	10	14.3
Designation	Professor	23	32.8
	Associate Professor	14	20
	Assistant Professor	20	28.6
	Senior Resident/Tutor	13	18.6
Teaching Experience	Less than 01 year	2	2.9
	1-5 years	26	37.1
	6-10 years	14	20
	More than 10 years	28	40
Speciality of Teaching	Preclinical	14	20
	Para clinical	21	30
	Clinical	33	47.1
	Allied Health Science	2	2.9
Prior Training in Teachers' Training Programme	Yes	47	67.1
	No	23	32.9

Table 2: Attitude towards audio-visual aids among medical teachers (n = 70)

S no.	Parameters	Always (%)	Not always (%)	Not sure (%)
1.	Opinion on use of appropriate audio-visual aid during your lecture classes to improve teaching-learning skills	45 (64.3)	23 (32.9)	2 (2.9)
2.	Whether use of multiple/mixed audio-visual aids during lectures can improve students' performance	49 (70.0)	17 (24.3)	4 (5.7)

Table 3: Preferences and using of audio-visual aids in lecture classes by medical teachers (n = 70)

Sl no.	Parameters	Black/ white board (%)	OHP (%)	PPT (%)	Mix of Aids (%)
Preparation of lecture					
1.	Preference of visual aid during lecture classes	7 (10.0)	1 (1.4)	25 (35.7)	37 (52.9)
2.	Media easier to prepare for taking lecture classes	12 (17.1)	4 (5.7)	38 (54.3)	16 (22.9)
3.	Media difficult to prepare for lecture classes	8 (11.4)	30 (42.9)	14 (20.0)	18 (25.7)
Delivery of lecture					
4.	Media easier to deliver lectures	6 (8.7)	2 (2.9)	43 (61.4)	19 (27.1)
5.	Media difficult to deliver lectures	24 (34.3)	21 (30)	2 (2.9)	23 (32.9)
6.	Clarity of concepts during lectures can be drawn by	16 (22.9)	1 (1.4)	20 (28.6)	33 (47.1)

Delivery of lectures was easier by 61.4% of the teachers with PPT, whereas, lecture delivery was found to be similarly difficult with black/white board (34.3%), mix of aids (32.9%) and OHP (30%). The teachers (47.1%) were with the opinion that mix of aids gave more clarity of concepts during lectures (Table 3).

Discussion

The audio-visual aids were being increasingly used since these involve both audio (verbal) as well as visual way of teaching to make teaching learning process effective, interesting and impactable. Audio-visual aids also helped to draw attention of the participants. It secured interest in the information being discussed, transmitted information quickly and efficiently to large number of people. Audio-visual aids explained facts, ideas and processes more clearly, illustratively and elaborately and facilitated the learnt information to be retained as memory. The information was presented systematically in an organized way to enhance the confidence level and enthusiasm of the presenter as well the listener.[7]

Medical institutions are advanced in educational technology with the use of audio-visual aids.[8] Medical teachers are being used to educate medical students by different audio-visual aids in a conjunction with a well-structured lecture. Visually presented information has immediate, short- and long-term effect in comparison to the verbally presented lecture information.[9]

Students favour teaching methods employing audio-visual aids over didactic lectures.[10] In the present study 94.3% of the medical teachers were able to recognize this importance of using audio-visual aids. At present, the most common ways of delivering a lecture include the use of PowerPoint (PPT) presentations, transparent sheets and overhead projector (OHP) besides the traditional "chalk and talk" method.[5] The audio-visual aids used in this institution for delivering

lectures were black/white board, over-head projector, PPT and mixed of aids. These audio-visual aids were being used by 60% of the medical teachers on regular basis.

An evaluation by the students can provide the teacher with useful feedback information regarding to choose best teaching aid and teaching method. The students preferred combination of teaching aids rather than individual teaching aid as inherent deficiency of each method is compensated by the other.[11] In the present study, the most preferred audio-visual aids used by the teachers (70%) was multiple/mixed of aids. Combination of using PPT was to improve the intellectual skills and to remove monotony of lectures to create an effective educational environment.[12]

A study conducted in Bangladesh among twenty medical teachers suggested for their preference of using PPT in 65% of them followed by chalk-board/white-board in 25% and OHP were 10%. PPT was used in highest percentage among all the audio visual aids.[1,13] Multimedia was thought to be the most effective teaching tool following traditional black board.[14,15,16] In the present study, medical teachers preferred to use multiple/mixed aids (52.9%) whereas use of PPT was found to be less (35.7%).

Majority of the teachers opined that, using chalk board (48.66%) teaching in lectures were clear and understandable. It stimulates student's interests and participation and easy for note taking and drawing diagrams. Whereas, using of OHP (29.95%) and PPT (21.39%) in lectures was relaxing, easy to convey the notes. Using of chalk board became more effective with the supplement of other audio-visual aids.[13]

The teachers' preferences of the different lecture delivery methods were chalk board (40.74%), PPT (30.64%) and OHP (28.62%).[13] In the present study, preferences of using black/white board were found to be very less (10%) in comparison with the use of chalk board

methodology but using PPT was higher (35.7%) and preference of using OHP was only 1.4%. Similar observation was found by Banerjee et al. [17] The main reason for liking PPT were that it was easier to give notes and diagrams, avoids the issue of dirty blackboard and faulty chalks. It had exclusive advantages including presentation of 3D images, pictures, sequence of images and videos.[13] In our study, 54.3% of the medical teachers opined that, PPT was easier to prepare for lectures and 42.9% of them had opined that OHP was the most difficult audio-visual aid for preparing lectures. Using of multiple/mixed audio-visual aids was observed similar in lectures.

The young generation teachers preferred more of PPT for lecture classes for its ability of self-explaining concept for understanding and for its advanced in technology.[13,14] Teachers that were well familiar with PPT opined that judicious use of animations made the lectures more interesting and had a lasting impact.[14] In the present study, 61.4% of the teachers preferred PPT as easier media for lecture delivery. 34.3% and 32.9% of the teachers found difficulties in lecture delivery with black/white board and multiple/mixed of aids respectively.

Majority of the first, second and final year students had a preference for the use of combination of audio-visual aids during lectures for the best understanding of the topics.[15] They felt that with the use of combination of aids gave clarity and better understanding of the topic.[18] In the present study, medical teachers (47.1%) opined that, with the use of multiple/mixed audio-visual aids the clarity of concept could be drawn.

Conclusion

The present study revealed the attitude towards the use of audio-visual aids and most preferred audio-visual aid/s used by the medical teachers. The audio-visual aids may be preferred depending on different

subjects and the selected topics in lecture classes. This study may be considered as a guide by all medical teachers in different medical institution to improve the use of audio-visual aids. Therefore, it also may contribute in changing the teaching attitudes of medical teachers in a constructive manner where the information can easily be combined and concise.

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