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Research Article

Knowledge and practice regarding the role of media in class room teaching-learning among the faculty of DSMCH, Perambalur, India

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ABSTRACT

Background: Medical schools and institutions try to provide students with better learning environments utilizing a variety of Teaching-Learning media. Previous studies have highlighted many hindrances for the utilization of audiovisual media. Medical teachers must be personally convinced of the benefits and utility of these methodologies to implement the same. The present study explores the knowledge and practice of teaching learning aids among the faculty of Dhanalakshmi Srinivasan Medical College, Perambalur, Tamil Nadu, India.
Methods: A total of 30 teachers participated in the study (15 females and 15 males) after obtaining approval from the institute ethics committee for human studies. The study was conducted in the Medical Education Unit, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India. The participants answered the Media Perception Evaluation Scale (MPES) questionnaire, positive and negative components were noted and a total score of 100 was given based on it. Data for all parameters were collected as per the study protocol and computerized in Microsoft Excel database. All statistical analyses were done at 5% level of significance and $P<0.05$ was considered as statistically significant.
Results: The findings revealed that there was no significant gender difference in the perception of role of media in teaching and learning. When comparing the Associate Professor group with Professor group there was a statistically significant difference ($P=0.048$) but there was no significant difference between other groups. Association between age and duration of teaching with MPES was not statistically significant.
Conclusions: Neither the gender of the teacher nor the duration of his/her teaching experience is a hindering factor for the effective utilization of media. First-hand knowledge of the teacher with regards to the usage of the media goes a long way in helping the teacher to improve his/her teaching.

Keywords: Teaching learning media, Knowledge, Practice, Faculty

INTRODUCTION

Medical schools and institutions try to provide students with better learning environments utilizing a variety of teaching – learning media. Previous studies have highlighted many hindrances for the utilization of audiovisual media. Medical faculty must be personally convinced of the benefits and utility of these methodologies to implement the same.

These efforts have encouraged instructors to use various assisting technologies such as computers and internet in their classrooms especially over the last decade; this process is called integration of Information and Communication Technologies (ICT). A teacher's perception of media is mainly determined by what they feel media could do in teaching-learning processes.[1-4] It must be noted that perception can be influenced by the personality characteristics of a perceiver. It can also be influenced by the features of things/objects perceived. Unfortunately, in any perception study, one is not sure about which of the factors has more control over the others.[5] Understanding teacher's beliefs towards technology plays an important role in the successful incorporation of technology.

Teacher's beliefs towards technology are influenced by their philosophy. Resistance to adapting new technologies stems from teachers' existing teaching beliefs.[6] Successful teachers must be willing to change their roles in the classroom.[7] When technology is used as a tool, the teacher becomes a facilitator and students take a proactive role in learning.

Successful integration of technology into teaching depends on simultaneous transformation of teacher's beliefs and philosophy towards teaching.[8] Research also revealed that before the teachers use technology for instruction they must be personally convinced of the benefits and must see the utility of using a particular technology.[9,10] In view of above background the present study was planned to assess the knowledge and practice of teaching – learning methods among the faculty of Dhanalakshmi Srinivasan Medical College, Perambalur.

METHODS

A total of 30 teachers participated in the study (15 females and 15 males) after obtaining approval from the institute ethics committee for human studies. The study was conducted in the Medical Education Unit, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur. The participants were given instructions to fill up the modified Media Perception Evaluation Scale (MPES) questionnaire which contains a collection of 20 statements and these items were matched with a Likert type scale having five categories of responses ranging from strongly agree to strongly disagree (Annexure I). The positive and negative components were noted and a total score of 100 was given based on it.

Parameters: MPES questionnaire (20 item analysis), age (years), gender (male, female), designation (assistant professor, associate professor, professor), teaching experience (years).

Statistical analysis

Data for all parameters were collected as per the study protocol and computerized in Microsoft excel database. Pearson's correlation was used to study the correlation between the variables and independent student's t-test was used to compare the groups by SPSS version 20. All statistical analyses were done at 5% level of significance and $P<0.05$ was considered as statistical significant.

RESULTS

Average age of the study participants was Male: 43.25 ± 13 & Female: 41.55 ± 11.37. Mean teaching experience of males was 10.56 ± 8.37 & that of female: 8.27 ± 4.62. The findings revealed that there was no significant gender difference in the perceptions of role of media in teaching – learning situation. One way ANOVA with Tukey-Kramer multiple comparisons test analysis showed a statistically significant difference between associate professor group and professor group (P=0.036). There was no significant difference amongst associate professor group and assistant professor group as well as assistant professor group and professor group. Association between duration of teaching experience and age with MPES was not statistically significant. Results of our study are as follows.

Table 1: Baseline characteristics of the study participants such as age, teaching experience and modified perception evaluation scale (MPES) scores.

Parameters	Male (n=15)	Female (n=15)
Age (years)	43.25 ± 13	41.55 ± 11.37
Teaching experience (years)	10.56 ± 8.37	8.27 ± 4.62
MPES (Total=100)	65.67 ± 7.66	64.07 ± 4.83

Values are expressed as Mean ± SD. Analysis done by Student's un-paired t-test.

Table 2: Correlation between age of the participants and teaching experience with modified perception evaluation scale (MPES) score of the study participants.

Parameters	Pearson's correlation co efficient (r)	'P' value (two-tailed)
Age vs. MPES	-0.03	0.89
Teaching experience vs. MPES	+0.07	0.72

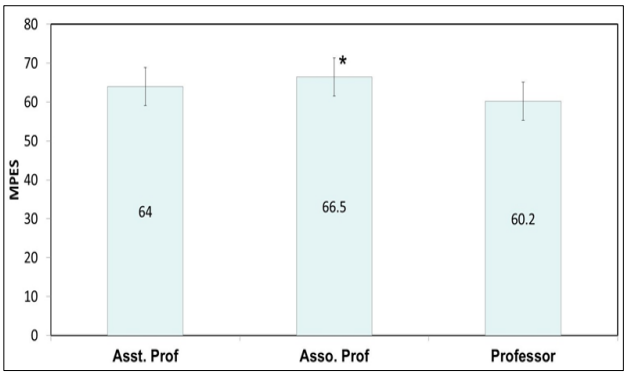

Figure 1: Shows the comparison of media perception evaluation scale (MPES) amongst the groups.

DISCUSSION

If teaching – learning media are used as tools in a proper way, the medical teacher not only becomes a teacher but also a facilitator then students take a proactive role in learning. Niederhauser and Stoddart in 2001, suggested a consistent relationship between teacher's perspectives about the instructional uses of computers and the types of software they used with their students.[11]

It is not surprising that this is the reality with respect to modern role of media, since those who were exposed to instructional technology while at college should better appreciate all the media.

Results of our study indicated that though various external hindering factors present for the effective utilization of media, age was not a hindering factor. Also a teacher's gender was not significant on his/her perceptions about the media options. This corresponds with the findings of Olawepo in 1984.[12] Olawepo reported that gender as a variable did not affect a teacher's perception of social studies orientation.

These findings did not support conclusions from cognitive style studies which have mentioned that female teachers were field-dependent and hesitant to use the modern technology for the application of medical teaching. On the contrary, male teachers being field-independent preferred application of media to instruction.[12,13,15]

Teaching experience of the individual shows no significant association with the Modified Perception Evaluation Scale (MPES). Most teachers were indifferent for the utilization of this because they could not imagine how media could be used without threatening the traditional role, or at best the influence and position of classroom teachers.

The influence of training may have a role in affecting the level of teachers' perception. Previous study by Sunday Taiwo et al. (2009) had mentioned that the effects of pre-service training on the perceptions of teachers were significant for the roles identified for the study.[16] In their study they had reported that trained teachers preferred media as a supplement, whereas, untrained teachers preferred traditional use of media to modern use.

CONCLUSION

The utilization of media in teaching medical students is both innovate and paves way for a better comprehension of the subject. Neither the gender of the teacher nor the duration of his/her teaching experience is a hindering factor for the effective utilization of media. Firsthand knowledge of the teacher with regards to the usage of the media goes a long way in helping the teacher improve his/ her teaching.

Limitations

Sample size was small with only 30 medical teachers. So the research findings could not be generalized. Another limitation has to do with the nature of the role of media. There are critical references which are orthogonal to each other, allowing an individual teacher to be in favor of both (or neither) of the roles.

Implications for practice

Teacher's perception towards the role of media is the key factor for the effective delivery of education to the current medical students.

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Annexure-I

Media Perception Evaluation Scale (MPES)

Media Perception Evaluations Scale (MPES): is a collection of 45 statements developed by the writer about the media role selected for this study the MPES has an introductory section where the following biographical information was demanded from each teacher:

a. Number of year for which instructional technology was offered at college

b. Number of years of teaching experience

c. Gender

The 45 items developed were given to four experts, two in psychology and the other two in Educational technology. These experts were asked to indicate whether they agreed or disagreed with the classification of items under the media emphases. Items with less than 75 per cent agreement among the experts were selected from the list. Thus items were added later due to the advice of the experts.

In other words, 31 items were chosen, distributed as follows

Media as supplement to teachers - 15 items

Media as substitute for teachers - 16 items

These items were matched with a Likert-type scale having five categories of responses ranging from strongly agree 95 to Strongly Disagree (1) (See Appendix A)

Validation of the instrument

The Media Perception Evaluation Scale (MPES) was subjected to face and content validity by four experts – two in psychology and the other two in Educational Technology. Irrelevant items were deleted as a result of their suggestions.

Reliability of the instrument

The Spearman-Brown formula of finding the reliability of an instrument was employed for MPES. The coefficient of the split-half reliability of 0.86 was then obtained, thereby making the instrument good enough for the study.

Method of data collection

The questionnaire (MPES) was filled in complete anonymity so as to avoid teachers presenting artificial behaviors that they would not have displayed in normal situations. The teachers were given a maximum of 20 minutes to fill out the questionnaire. They were assured that the completed questionnaires were confidential. The questionnaires were completed and collected on the spot.

Media Perception Evaluation Scale (MPES)

Part one

1. Total number of years for which you have been teaching.....

2. Gender (Male/Female).....

Part B

The following statements describe the role of media in class-room teaching-learning situation. Please indicate how far you agree or disagree with each statement by circling one of the figure below:

1, 2, 3, 4, 5 where:

5 = Strongly Agree
4 = Agree
3 = Uncertain
2 = Disagree
1 = Strongly Disagree

For example if l circle the number 5. It means l strongly agree with a statement. There are no wrong statements. Also, there can be no wrong answers. Therefore, please give your true views about all the items.

In our study we have utilized the following 20 statements:

Statement

1. I believe l can teach well even when media are not available.....1, 2, 3, 4, 5

2. Students are dehumanised when media alone are used in instruction.....1, 2, 3, 4, 5

3. Media should be considered by the teachers as a solution to problem of teachers shortage..... 1, 2, 3, 4, 5

4. In any teaching-learning situation teacher is all in all, he needs no help from any source.....1, 2, 3, 4, 5

5. Television adds interest but teaches little.....1, 2, 3, 4, 5

6. The use of media per se makes teacher redundant.....1, 2, 3, 4, 5

7. Media should be considered by the teacher as a device which saves teacher preparation.....1, 2, 3, 4, 5

8. Media like Television, Radio, Video cassette, etc. are manufactured not for learning but for relaxation..... 1, 2, 3, 4, 5

9. It is against the interests of our children education as a matter of experiment.....

10. Courses of instruction taught by programmed texts are bad because they displace teacher from his traditional role.....1, 2, 3, 4, 5.

11. The use of media per se does not make better use of teacher's time and sooner or later the teacher may be declared unwanted.....1, 2, 3, 4, 5

12. Media dictates to the teacher, and thus limits his freedom.....1, 2, 3, 4, 5

13. Course of instruction taught by Radio, Tapes and Records are bad because they do not specify what the role of teacher will be.....1, 2, 3, 4, 5

14. Computer-assisted instruction is ineffective because it does not make better use of teacher's time.....1, 2, 3, 4, 5

15. The use of media per se should be discouraged because it threatens the position of teachers.....1, 2, 3, 4, 5

16. Whether we like it or not, at least, in the foreseeable future, teacher will still dominate the classroom because it is meant only for him.....1, 2, 3, 4, 5

17. The major use of media is to assist the teacher by enhancing his effectiveness in the classroom.....1, 2, 3, 4, 5

18. Students learn best when media are used with teacher because the teacher in the classroom maintains discipline than is possible when media alone are used.....1, 2, 3, 4, 5

19. The use of media should be encouraged in school because they enhance the work of teachers.....1, 2, 3, 4, 5

20. Teachers use media because they see them as partner in progress.....1, 2, 3, 4, 5

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