

The use of cartoons as a teaching tool to enhance student learning in Medical Jurisprudence

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Abstract

Background - Cartoons have been used effectively as a teaching tool in other settings and were considered as a potentially useful teaching aid. Medical Jurisprudence is one area which needs paramount attention in the present era of Consumer Protection Act and growing litigations against Medical Practitioners. This study examines the impact of cartoons in improving healthcare professional's knowledge with regards to Medical Jurisprudence as desired by Medical Council of India, thereby addressing the equally important affection domain, in addition to cognitive and psychomotor domains.

A very high percentage of students agreed that medical cartoons help in clarity of concept (99%), memory processing (98%), retention & learning (99%), in reproduction (86%), in generation of interest (100%), in focus (98%), in interaction (95%) and as an effective teaching tool (100%).

Conclusion – Study suggested that students are interested in power point lectures with academic cartoons since they are effective teaching tool which helps in understanding the topic in a better way and facilitates the clarity of the concept, generates interest, helps in retention and learning.

Keywords: medical jurisprudence; academic cartoons; didactic lectures.

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Introduction

Excellent and effective teaching demands a host of devices, techniques & strategies to achieve cross critical outcomes. There is little doubt that humor, both in pictorial & verbal forms, is used as advice for gaining & maintaining attention & interest. Humor serves to illustrate, reinforce & make more comprehensible the material being taught (Powell and Anderson 1985).

One teaching instrument which perhaps seldom used is the cartoon. It is suggested that cartoons (a term used to include standalone illustrations, captioned or non-captioned, and short comic strip formats) have a potentially valuable contribution to make. Visually the impact is immediate & all students, irrespective of age or background are able to respond in some way to the educational

point being made. It is for these reasons that cartoons offer a better alternative (1).

Modern educational theory highlights the importance of interactivity, the involvement of the audience who should be stimulated to think and to learn & whose reactions should affect the conduct of the teaching (2). Cartoons, by their very nature, usually exaggerate a particular facet that can help focus on a suitable teaching/learning point. As a neutral resource, students are able to respond, joke about possible interpretations & react to the exaggerations alone, in pairs, small groups and eventually in large lecture classes. In interacting with the cartoons stimuli, they are refining their own learning & understanding while at the same time be encouraged to develop critical higher order cognitive skills. A good collection of suitable

cartoons is necessary & this can be built up over time

The Purpose of Study

1. This study investigates the use of cartoons, as a teaching tool to enhance student learning in Medical Jurisprudence.
2. To get suggestions from students for their preferences regarding teaching-learning methods in Medical jurisprudence.

Material and methods

The present study was carried out on 93 2nd year M.B.B.S. students of People's College of Medical Sciences, Bhopal. All students were in age group of 18-23 years. None of them was suffering from any major or psychiatric illness. Students were briefed about the purpose of study and questionnaire. Informed written consent was obtained from all participating students. 29 cartons on the topic of Medical jurisprudence and medical ethics were shown to the students and then the students were briefed about the questionnaire and asked to respond freely and fearlessly. They were informed that the information given by them is for the research and evaluation purpose only and will be confidential.

Data Collection and Analysis

Data was collected on the topic of "medical jurisprudence" was finished so that they can give a comprehensive opinion regarding the study. Data thus collected was analyzed and put to statistical scrutiny. It was also presented in form of chart; pie & bar diagrams for easy observation & discussion, the preferences provided by students were subjected to percentages technique.

Results

Out of 95 participating 2nd-year medical students, the mean age was found to be 20.8 years. Out of this, in gender distribution female students (59%) were higher than male students (41%).

Out of 95 students, 64% students (61) preferred didactic lectures over power point lectures (36%, 34 students). Further, it was found that the percentage was further higher in preference between didactic lectures (20%, 19 students) and power point academic cartoons (80%, 76 students), whopping students prefer powerpoint academic cartoons over didactic lectures.

As reflected in Table no. 1 as well as pie & bar diagram the use of cartoons as a teaching tool to teach medical jurisprudence clearly demonstrated a very high percentage in clarity of concept (99%),

Table 1: Opinion of students

	Male		Female		Total	
	Agreed	Not Agreed	Agreed	Not Agreed	Agreed	Not Agreed
Understanding the topic in better way	38(40%)	1(1%)	56(59%)	0	94(99%)	1(1%)
Clarity of concept	39(41%)	0	55(58%)	1(1%)	94(99%)	1(1%)
Memorizing process	39(41%)	0	54(56.9%)	2(2.1%)	93(97.9%)	2(2.1%)
Retention & learning	39(41%)	0	55(58%)	1 (1%)	94(99%)	1(1%)
Writing answers during examinations	35(36.8%)	4(4.2%)	47(49.5%)	9(9.5%)	82(86.3)	13(13.7)
Generating interest in topic	39(41%)	0	56(59%)	0	95(100%)	0
Attention/ focus	39(41%)	0	54(56.9%)	2(2.1%)	93(97.9%)	2(2.1%)
Interactivity	36(37.9%)	3(3.1%)	55(58%)	1(1%)	91(95.9%)	4(4.2%)
Teaching tool	39(41%)	0	56(59%)	0	95(100%)	0
Teaching tool to teach other topics/ Medical subjects	39(41%)	0	56(59%)	0	95(100%)	0

94 students), memory processing (98%, 93 students), retention & learning (99%, 94 students), in reproduction (86%, 82 students), in generation of interest (100%, 95 students), in focus (98%, 93 students), in interaction (95%, 91 students) and as an effective teaching tool (100%, 95 students).

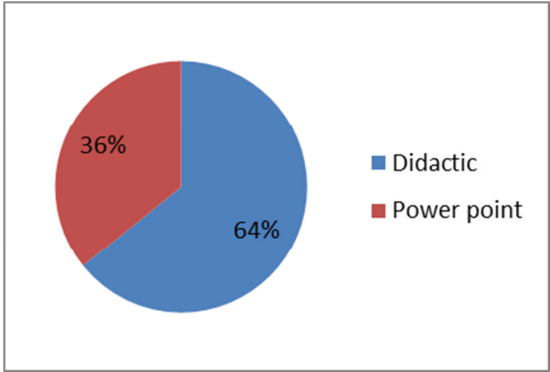


Fig 1. Preference of didactic lectures over PowerPoint lectures

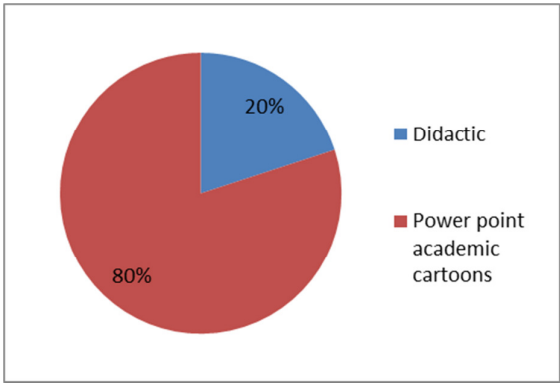


Fig 2. Preference of PowerPoint academic cartoons over didactic lectures

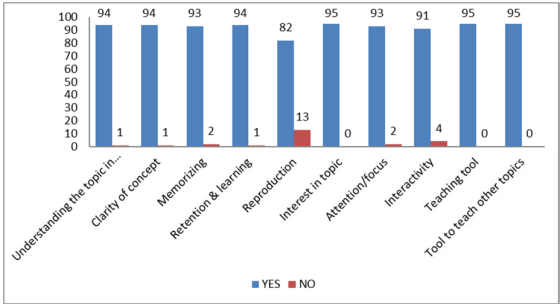


Fig 3. %age of various factors



Fig 4. Samples of cartoons used in this study

Almost all the participant students agreed and suggested to use academic cartoons as a teaching tool to teach other topics related to Forensic Medicine and also other medical subjects as well.

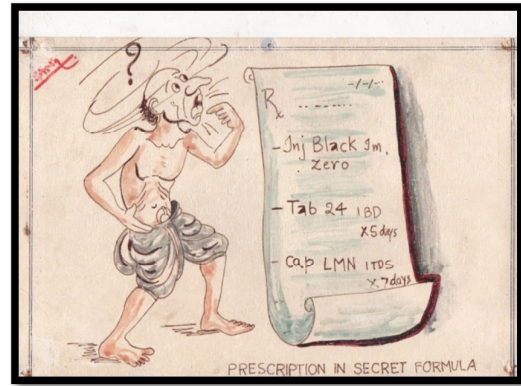


Fig 6. Samples of cartoons used in this study

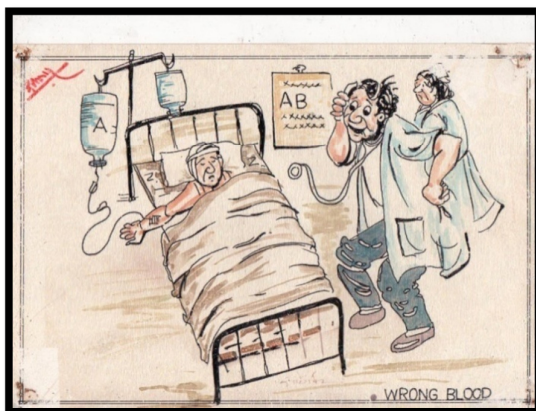


Fig 5. Samples of cartoons used in this study

Discussion

Extensive changes have taken place globally to improve the standards of education. The concept of medical education has changed as knowledge is no longer restricted to textbooks and lectures.

Nowadays access to the internet, electronic journals, educational videos, social networking, and conferences are the newer concepts of teaching.

A medical curriculum develops in response to the requirement of students, institution, and communities. Student's feedback about the new tools in teaching is a useful basis for modifying and improving medical education. Through the feedback we can identify areas of strength and/or weakness of teaching methodology used so that steps can be taken to rectify deficiencies and to evolve the curriculum and achieve the intended goal.

In the present study, it is very well reflected that academic cartoons are a very useful tool to enhance learning in medical jurisprudence and can also be used to teach other topics/subjects as well (3). Also as suggested by the participating students this can be further augmented by social networking.

As per a study was done by Kharkar et al, medical students of I, II, III year preferred combination of old teaching methods and computer-assisted learning method (PowerPoint, videos, images, cartoons etc) (4). The findings of this study also go in parallel with above observation.

Another study done by Khalid *et al* showed that more than 70% of the respondents have positive views on the impact of cartoons on teaching and learning. Teachers view that teaching and learning using cartoons can create a positive learning environment for the students and able to stimulate students' imagination and creativity (5). Similar to this study, in the present study also it was very well demonstrated that the use of academic cartoons for teaching helps in clarity of concept, memorizing process, retention & learning, in generation of interest, in focus, interaction, effective teaching tool and to teach other medical topics as well with strong agreement (more than 90%).

Elizabeth M Norris reported that images can promote observation skills when linked with learning outcomes, careful structured use of images improve attention, cognition, reflection and possibly memory retention (6). The findings of the present study also endorse the same views. The findings of the present study also endorse the same views.

Conclusion

In the study, it was found that students are interested in power point lectures with academic cartoons since they are effective teaching tool which helps in understanding the topic in a better

way, facilitates the clarity of the concept, generates interest and helps in retention and learning.

These findings will not only add to the current body of literature which suggests that cartoons are an effective teaching aid, but also provides a novel educational method that will offer increased knowledge about Medical Jurisprudence amongst healthcare professionals.

Thus all the three key aspects of teaching and learning i.e. Knowledge, Skill, and Attitude are taken care of in the truest of sense.

Conflict of interest - none

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