

Importance of Quiz Competitions in Teaching and Learning

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I. Introduction

Medical studies press unprecedented demands on the young students. Unlike the school curriculum, medical curriculum requires greater involvement of students in organized learning activities. Instead of traditional ways of teaching, new methods of teaching, learning and evaluation may inspire the students desire for learning and once the students mind is set on fire, it will find its way to provide its own fuel. Thus, the ultimate goal of self teaching and learning could be achieved. With this view in mind, we thought of conducting quiz competitions as Quiz [1] [2] is one of the various methods [3] [4] described in the literature. Studies have shown that quiz games promote active learning and provide motivational impetus. They also enhance meaningful knowledge retention by igniting interest and placing theoretical subjects in a real-world perspective. Thus, game styled quiz competitions based on curricular subjects can be an effective tool to increase interest and motivation and enhance learning is established beyond doubt.[5]

Many of such quizzes are confined to one subject. [6] [7] This obviously has the advantage of providing a fair level ground for all participants. The main objective of this active learning approach was to increase students interest in base science subject and to enhance student participation in acquiring the knowledge in the core and applied aspects of physiology. Such Quiz competitions are usually conducted as part of extracurricular activities that constitute college week festivities or annual celebrations and become a regular fixture in most cases. [8] They are appreciated by both students and teachers as fun and a novel way to reconnect with curricular material and are viewed favorably by administrator and policy makers as didactic tools in the guise of entertainment with this view in mind, we thought of conducting quiz competitions as a tool of teaching and learning methods.

II. Aims & Objectives

- 2.1 To assess students views regarding quiz competitions as a tool of teaching and learning.
- 2.2 To enhance academic knowledge among students regarding the subject of physiology.
- 2.3 To foster interaction between students and faculty in the dept of physiology.
- 2.4 To assess purpose of attending the quiz programmes by the students.

III. Material And Methods

The quiz competition were conducted in the Auditorium of Dr. V.M. Govt. Medical College, Solapur. The students of I MBBS were divided into 5 batches A,B,C,D & E and three students from each batch represented their team. Out of 3 students, 2 volunteered and 1 was selected by the staff members. The student selected by the staff members was the one whose performance was poor in the examination. One student was allowed to participate in one quiz only and such 6 quiz competitions were conducted one on each system in physiology every two months. Out of 150 students, 90 students actively participated in various quiz competitions.

Quiz Conduction:

- 3.1 Each team was named after a scientist related to that particular system.
- 3.2 Before the participants of each team introduced themselves to the audience the achievements and contributions of these scientists and ideas in the history of medicine were told to the audience.
- 3.3 Designing Quiz Questions: This was the most essential part of competition and the questions were designed such that concepts or understanding of physiology was tested also, questions with concise answers were selected so that it was easier for judges to evaluate the performance of teams. Questions in each session during each round of the quiz were selected which had equivalent difficulty for a fair competition. Questions covering all the topics in each system in physiology were selected.

Round 1 : Passing Round : Each team was asked 7 questions by turn. Correct answer within 30 sec was awarded +8 marks. The unanswered question was passed to the second team which was given +6 marks for correct answer and -2 marks for wrong answer, if answered within 10 sec. for the third team, +4 marks were awarded for correct answer in 5 sec. and -4 marks for wrong answer.

Round 2 : Buzzer Round : One after another 15 questions were asked. Team hitting the buzzer first and answered correctly was given +8 marks. For delay or wrong answer -4 marks were given.

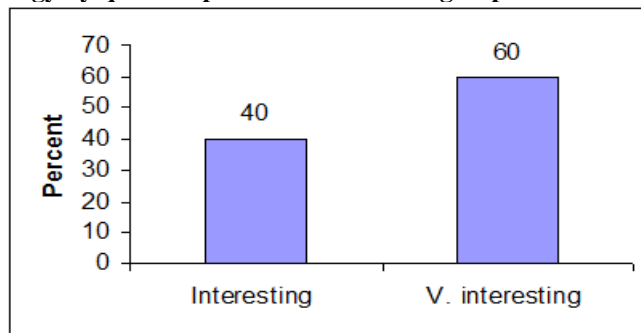
Round 3 : Common Round: All the teams were asked to write the answers to 12 compulsory Questions on a paper in 5 minutes. After evaluation + 8 marks for correct answer & -4 marks for wrong answer were given.

Round 4 : Audience Round: Nine Questions were asked to the audience. The marks were added to the respective teams score.

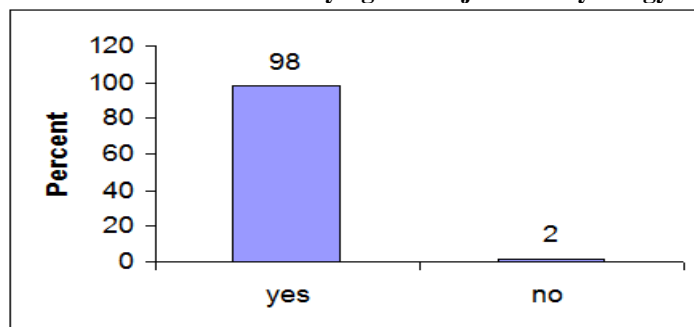
Round 5 : Rapid Fire: In a span of 2 min the questions were asked in quick succession to each team. Correct answer was given +8 marks and wrong answer was given -4 marks. At the end of each round, answers to all the questions were explained to the students by the staff member who had taught the system. The team scoring maximum marks in all the rounds together was declared winner and awarded with a small gift and certificate. Other participants were given certificate of participation. In all 6 such system wise quiz competitions were conducted throughout the year. At the end of the last quiz competition, the team winning in maximum number of quiz competitions was awarded with a rotating championship trophy. The expenditure for certificates, gifts and trophy was contributed by all the teaching staff members of the department. At the end of quiz competitions feedbacks in the form of questionnaire were taken from the students. The responses were analyzed and results were expressed in percentages.

IV. Observations And Results

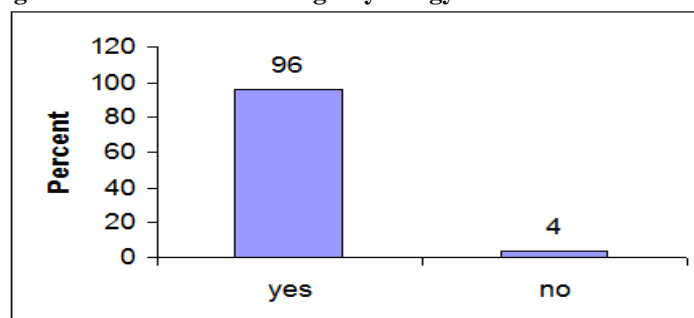
4.1 Was learning Physiology by quiz competition an interesting experience?



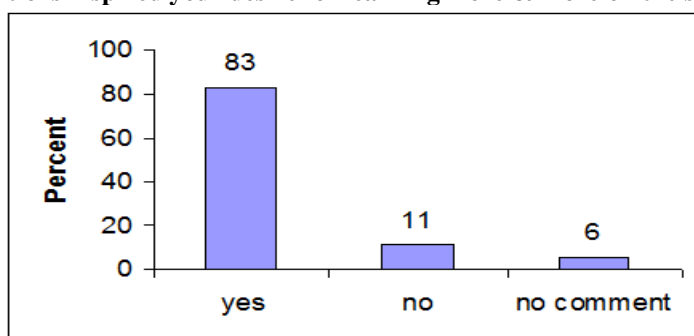
4.2 Did this competition create an interest in studying the subject of Physiology ?



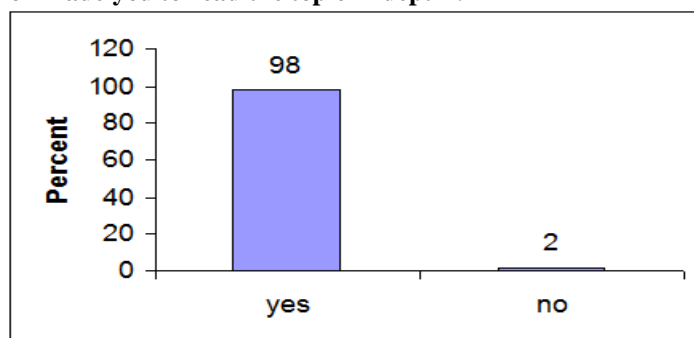
4.3 Did these quiz programmes facilitate learning Physiology?



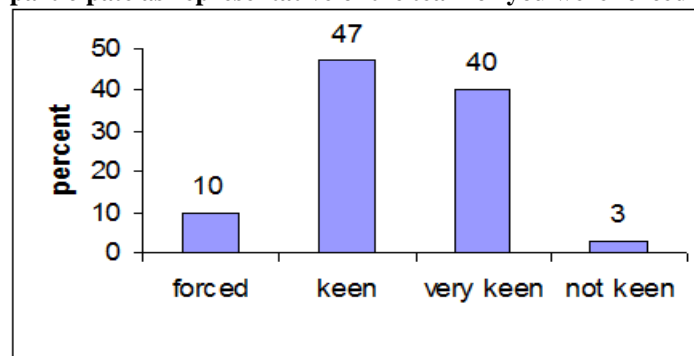
4.4 Did these competitions inspired your desire for learning more & more of the subject?



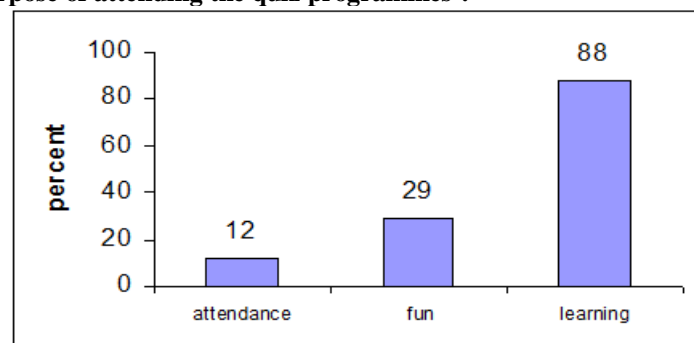
4.5 Did the competition made you to read the topic in depth ?



4.6 Were you keen to participate as representative of the team or you were forced to do so?



4.7 What was the purpose of attending the quiz programmes ?



For all the students the quiz competitions were a very interesting experience (Fig. 4.1). These competitions created interest in studying physiology in 98% of the students 2% students were against this view (Fig. 4.2). 96% students reported that quiz programmes facilitated learning physiology(Fig. 4.3). 83% students said that their desire for learning more and more about the subject was increased due to quiz competitions. 11% students didn't agree with this(Fig. 4.4). 98% students said that they read the topics in depth due to quiz competitions (Fig. 4.5). With respect to participation and involvement of students in quiz we found that 40%

students were very keen and 47% were keen to represent their team whereas 10% were forced to participate in the quiz, only 3% students were not interested in participation (Fig. 4.6) 88% students attended this programmes for learning, 29% for fun and enjoyment while 12% attended them for attendance (Fig. 4.7).

V. Discussion

The undergraduate medical curriculum is vast and spread over several years. A major part of the teaching and learning takes place though the traditional lectures format. Creating innovative educational methods that enhance and supplement the lectures has been a challenge for medical educators. While students are taught material focused upon the functional aspects of the subject, there are many peripheral bits of information that lend colour and sparks interest in the subject. Medical quiz has been used as a method of teaching and learning. Studies have shown that medical Quizzes improve students comprehension and enhance interest levels in the subject Quizzes have been mostly on single subject, delimited by the curriculum and are really a traditional assessment in a new format. [9] In India, a quiz approach ensured greater participation of students in the learning process. The students found the method very useful and interesting. [10] Active learning strategies have been shown to be helpful in improving retention of information and improving students conceptualization of systems and their functioning.[11] Goud et al in a comparative cross sectional study of 96 medical students to evaluate quiz competitions as teaching learning methodology found a statistically significant improvement in their performance. [12] Beylefield et al used a quiz type board game successfully to impact positively on students attitude and interest towards microbiology. They felt that the positive experience during learning enhanced team effort and communication in addition to enhancing recall of factual knowledge. [13] Also in their study, Vasani et al showed that student performance improved and students perceived it as motivational collective team learning that was self directed and fostered peer respect [14]

Thus, the main objective of this innovation learning approach was to increase students interest in basic sciences subject and to enhance student participation in acquiring the knowledge in the use and applied aspects of physiology. These quizzers stimulate self and collaborative learning. They enhance the cognitive level of medical students and also help them to retain academic content.

VI. Conclusions

It is clear from the observations and results of the feedback analysis that the quiz competitions help the students.

- 6.1 In making learning an interesting experience.
- 6.2 In creating interest in the subject.
- 6.3 In developing team spirit.
- 6.4 In developing keenness in participating in the learning process.
- 6.5 To refer more number of textbooks.
- 6.6 To read the topic in depth and to increase desire for learning more and more about the subject.

Such competitions also help in developing MCQ bank and leads to validation of MCQs.

Quiz competitions help the teaching faculty to assess the students performance and also help in getting feedback about teaching methods, students knowledge and help us to improve our teaching. Thus the ultimate goal of promoting self learning could be achieved. Physiology quiz competition is a wonderful academic activity for learning physiology. It provides an excellent opportunity and platform to students and faculty for intersecting with each other, share knowledge and remains updated with advances in physiology and Medicine at large. Looking at the feedback of students, such quiz competitions must be encouraged and supported in all subjects by medical council of India.

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