Correspondence

Crossword puzzle: A novel teaching-learning method

Sir,
I read with interest the article on crossword puzzle (G. Sivagnanam, M. Rajasekaran, C. Jayashree, R. Sreepriya, R. Rajakannu. Crossword puzzle: A novel teaching-learning method. Indian J Pharmacol 2004;36:179-80) and I would like to comment on it:

1. The title is misleading as the knowledge of the student has not been evaluated, so how can one conclude that it is a novel teaching learning method (TLM).
2. The objectives mentioned were to gauge the interest among the students and to test the knowledge of the relevant system in pharmacology. However, nowhere in this article was the knowledge of the students evaluated. What is described in the article is the feedback from the students related to the usefulness of the TLM and the level of difficulty of the questions but how much the students have learnt is not evaluated. In this study the conclusion lacks support i.e. on what basis do the authors conclude that it is a novel TLM?
3. In fact it would be better
   (a) to compare this (crossword puzzle) TLM with other standard TLMs.
   (b) to comparatively evaluate the knowledge of the students gained by the two methods with the help of MCQs or any other equivalent method for objective assessment.
   (c) to clarify whether the crossword puzzle as a method of evaluation can be compared with evaluation by MCQ test.
   (d) to record students' feedback as an additional parameter using a viewpoint questionnaire (grading can be poor, average, good and excellent) so as to make the study meaningful and relevant.

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Reply

Sir,
We thank S.K. Srivastava for his interest in our article and comments. Our explanations to his comments are given here:

1. It is pointed out that the title is misleading "as the knowledge of student has not been evaluated" - As regards the word ‘knowledge’ we have reproduced the Merriam-Webster’s dictionary meaning. We think we need not elaborate further on this point since we can't think of a more apt title. The relevant ‘knowledge’ of the students was assessed only after completion of the concerned topic e.g. General Pharmacology. Novel because, as per our information, such a method has not been tested earlier.

2. The dictionary statement for ‘knowledge’: “the fact or condition of knowing something with familiarity gained through experience or association (2): acquaintance with or understanding of a science, art, or technique b (1): the fact or condition of being aware of something (2): the range of one’s information or understanding c: the circumstance or condition of apprehending truth or fact through reasoning”

3. It would be better “If this (crossword puzzle) TLM was compared with other standard TLMs”. Agreed, but our intention was not to compare our method with standard procedures nor do we claim that ours is the sole or superior TLMs. The fact that it was not compared with a standard procedure doesn’t mean that our method is ‘irrelevant’ or ‘meaningless’. But we agree that such a comparison would have added strength.

4. “Whether the crossword puzzle as a method of evaluation can be compared with evaluation by MCQ test”. A good idea but each method has its own advantages and limitations.

5. Further, we have not claimed it as an ‘Evaluation’ method despite the fact that the TLM involves assessment of knowledge. Our main purpose was to gauge the interest evoked by this method among the students and testing the ‘knowledge’ was secondary.

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Students’ opinion on prevailing teaching methods in pharmacology and changes recommended

Sir,
This is related with the above article (Indian J Pharmacol 2004;36:155-8) published under the category of research paper. On reading this paper, we could not avoid the temptation
to send our comment on such an article as follows.

The basis/mainstay of this study is the questions asked to the students. The idea of work is to improve the teaching but authors failed in their purpose and the paper published does not offer significant contribution to improve the teaching. The majority of the questions asked are bizarre, purposeless and irrelevant except few questions (question no. 8, 9, 14, 18 and 19) with regard to teaching because teaching cannot be modified based on the students’ responses on such questions. For the purpose of comments on the paper, the questions are categorized and pointwise comments on relevance of the questions are mentioned below.

A. Comment on the questionnaire

1. Subject of pharmacology: How can the teaching be modified on the basis of responses to Q. No. 1, 2, 3, 11 and 12? The II M.B.B.S. students are not competent enough to comment on the subject. Moreover, since their opinion is sought just before the examination, this itself will lead to biased answers. For example, how can the students answer whether some of the topics should be taught in final M.B.B.S. (Question 19)?

2. Useful topics: How can the teaching be modified based on Q. No. 4, 5, 6 and 7? For example, if students opine that a particular area (such as ANS or CNS) is not interesting or useful for future practice, do the authors suggest that it may be omitted from the curriculum? A lopsided curriculum would emerge if this proposition were to be followed. Topics are often complementary to each other and all of them are important and useful in varying degrees irrespective of what the students think.

3. Rating of pharmacology as a subject: Q. No. 13, 16, and 17 are in very poor taste. We believe they demean pharmacology as a subject. Had the results been otherwise do the authors propose to stop teaching pharmacology as a subject?

4. Rating of teachers: In our opinion, Q. No. 20, 21, 22 and 23 are also in bad taste. There are both good as well as bad teachers in all subjects. How can the responses of the students be extrapolated to modify the teaching of pharmacology? If a teacher’s rating is below par would that teacher be asked to stop teaching? Also the opinion of the students regarding the head of department would always be biased (as they have to pass the examination).

5. Questions 10, 11, 12: These are related to the sources from which students learn, their pattern of study and their grasping power. How relevant are the questions and the comments by the students?

6. Teaching methods: These are the only questions (Q. No. 8, 9, 14, 18 and 19) which appear to have any relevance to the initial aim of study.

B. Comment on minor mistakes in spelling / grammar / references.

1. In the abstract, the results mention that “only few students have opted for the dosage calculation and drugs used in special situations” while the text of the paper says “most of the students felt that these should be taught”.

2. In question 4 - option (b) both the CVS and the ANS are clubbed as one option.

3. Results: In para 3, lines 2, 3 and 4 are repeated in lines 6, 7 and 8.

4. Q. 15 (e) should be ‘sexual dysfunction’ instead of ‘sexual function’.

5. Reference 3 and 4 are not appropriate, as these references are mentioned with regard to the sentence “Many attempts have been made by various colleges all over India and abroad”. Reference No. 3 deals with the WHO model curriculum and 4 is on MCI regulations on teaching and not related with medical colleges.

6. The year mentioned should be 1999 instead of 1993 for reference no. 8.

Based on the above comments this paper is irrelevant. However, it would have been a good study, if opinion of interns were taken mainly for

(a) Improvement of teaching methodology
(b) Assessing the coverage and depth of certain topics such as general anaesthetics, antidysrrhythmic drugs and anticancer drugs.

The comments thus obtained from interns may be valuable, unbiased and appropriate and serve to make the teaching of pharmacology more interesting and appealing facilitating self-learning.

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Reply

Sir,

It is very heartening to see that our article has been read in great depth and the readers in fact acknowledged that the steps are being taken in the right direction.

At the outset let me clarify again (mentioned in the article also but overlooked by the readers) that the identity of the students were not revealed in the questionnaire thus ruling out the possibility of bias. Who would be better than students themselves to tell us whether they understood the subject and if not then how and what can be done?

Each question of Appendix I was framed with a specific purpose kept in mind, but as predicted, it failed to touch the same strings in all the readers.

Q. no- 1-3 : Since this questionnaire was only for II MBBS students, the opinion of students formed by studying as well as interacting with juniors and seniors before entering, during, and after leaving II MBBS was ascertained. These questions were to evaluate the general impression created by the subject in the mind of the student. The reader should realise that not all questions asked may lead to a conclusion.

Q. no- 4, 5, 6, and 7: Instead of asking students which topics are boring, we asked them which topics they find interesting (Q. no 4 and 5). Based on their responses we expected to know whether low interest level is the reason for students to score less marks. Following up on this, we planned to stress more on these topics to bring the grades up. Another reason was to collect a list of ’not so hot’ topics and plan to conduct