Short Communication

Engaging With Pharmacology: An Experiment Invoking Student Interest

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Abstract

To try to address the disengagement of students with their learning in Pharmacology, it was decided to implement an activity in Pharmacology to see whether it would engage them. This activity was named as "Engaging with Pharmacology." The activity was also to be a pilot experiment of sorts to see its practicality for conducting in a large batch of 250 students. Divided in batches, the students had to make a model, a poster and a five minutes power point presentation on the topic selected. The students' feedback about the activity was overall positive. Majority rated the activity as good to excellent, which invoked interest and should be continued. It is advocated that such activities to be included in the teaching especially of the pre- and para-clinical subjects in medical curriculum.

Keywords: Pharmacology, Teaching, Learning

Students learn most effectively when they are engaged with the learning process and they can see a connection between course goals, course content and evaluation.[1] Despite this being a well known fact, this process is not followed routinely in medical education in India.

Pharmacology as a subject has been perceived as an area which is "difficult" in comparison to other aspects of the MBBS Undergraduate curriculum and may be one reason for low levels of understanding among students.[1,2] The implications of poor Pharmacology knowledge for safe and effective prescribing are profound and have been recognized by both nursing and medical professions.[2,3]

In more recent years a disconnection between the students and the teaching of Pharmacology has been felt. Among reasons for it, could be an increase in student intake, resulting in large batches of students, poor teacher student ratios and curricula that hasn't changed. Traditional teaching methods where the student is a passive learner adds to the woes. More recently with the mushrooming of coaching centers for medical subjects, under the

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garb of training for Post graduate entrance examinations, students are being lured to join them for routine classes also. They are reading books where there is little conceptual understanding and only numerical lists of statements are given for students to rote learn.

To try to address this disengagement of students with their learning, we decided to implement a learning activity in Pharmacology to see whether it would engage them. This activity was named as "Engaging with Pharmacology." The activity was also to be a pilot experiment of sorts to see its practicability for conducting in a large batch of 250 students.

The whole batch (250) of third semester students was divided into fourteen batches depending upon the number of teachers available. They were given topics that had been just taught to them in General Pharmacology and Clinical Pharmacy. Each batch had to make a model, a poster and a five minutes power point presentation on the topic selected. They were given four weeks for the same. The ideas and themes were developed by the students with the batch teachers only facilitating the process.

On the day of the presentation the students were given an alloted table and a board for displaying their projects. Two former, senior pharmacologists, both retired Professors, who have authored undergraduate Pharmacology textbooks, which are used by the students, were invited to be judges for the presentation.

The students stood around their models and answered questions put up to them. They presented their topics using the models, posters in front of the whole class, faculty and judges. All the models, posters and presentations were highly creative and innovative, conveying scientific messages. Some were working models. One group even put up a skit to explain the topic. It was difficult to judge them but three teams were judged as first, second and third. They were all given certificates and bags of chocolates as prizes.

The students' feedback about the activity was overall positive (Table 1). Majority rated the activity as good to excellent, which invoked interest and should be continued. Some reasons given for continuing such activities included that it broke the monotonous teaching schedule (33.1 %), it made learning fun (30.2% %) and easy (15.1%). Some suggestions for improving the activity included i) that it must ensure participation of each and every student (22.6%); this was a group activity, where there are always some participants who remain silent, ii) there should be more active participation of teachers (15.1% %), iii) the activity should not disturb routine studies (30.1%); it would be better if there was teaching of a topic instead of making posters and charts (11.3 %).

The reasons given by the students for their overall positive experience are similar to those reported by other authors advocating active learning globally. It has been acknowledged that learning where students are active participants, helped define content, had time to wonder and to find a particular direction that interested them, engaged them intellectually.[4,5]

Activities which increase students' engagement emotionally and cognitively, positively affect student learning and achievement. Research has shown that if students do not consider a learning activity worthy of their time and effort, they might not engage in a useful way or may even disengage in response.[4] Such activities foster a sense of competence. Providing autonomous support, i.e. nurturing students' sense of control over their behaviors and goals, increase students engagement with the learning. When students embrace collaborative learning, their learning may

Table 1 Students feedback about the Group activity "Engaging with Pharmacology"

	Students' response (%)				
Overall experience of participation in the activity	Excellent 13.2	Good 56.7	Fair 23.6	Poor 6	No response –
Invoked interest & contributed to knowledge of Pharmacology	Yes 72.6	No 9.4	Don't know 17.9		
The activity should be continued	Yes 66.1	No 12.3	Can't say 21.7		
Major factors for overall positive experience					
Making models	34.9				
Team work	27.4				
Mentoring	27.4				
Engaging	24.5				
Group activity	22.6				
In depth reading	22.6				
Creative learning	21.7				
Participation	17				
Practical use of learning	16.1				
One to one interaction with teachers	15.1				

get amplified; mostly due to experiencing a sense of connection to others during the activities.[5] Such activities also help in establishing positive teacher-student relationships.

This experience has encouraged the department to plan more such activities to keep the students engaged with Pharmacology, making its learning interesting and useful. We advocate such activities to be included in the teaching especially of the pre- and para-clinical subjects in medical curriculum.

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