

Study on Effectiveness of Integrated Lecture Module versus Didactic Lecture Module in Learning Skills

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Abstract: Objective: To evaluate effectiveness of didactic and integrated lecture modules on learning skills of II MBBS students.

Materials and Methods: The study was conducted on 146 second MBBS students. They were exposed to didactic lecture module (DLM) and integrated lecture module (ILM). The didactic lecture on chemotherapy of malaria was taken by Pharmacology faculty for 60 minutes, while integrated lectures on same topic were taken by Pharmacology, Microbiology, General Medicine and Community Medicine faculty. 20 minutes were allotted for each faculty. After the lectures, the evaluation of effectiveness of ILM and DLM was done by a feedback questionnaire with 10 questions.

Results: In the feedback questionnaire, 95% of the students opined that ILM improved their understanding and learning skills. 77% opined that ILM enhanced their intellectual curiosity and brought concept clarity. 84% stated that the knowledge gained in ILM would help them in clinical practice. 88% stated that they are able to score better in exams when taught in ILM whereas only 12% stated that they are able to score better in exams even when taught by DLM.

Conclusion: Integrated teaching improved learning skills of students.

Keywords: Didactic lecture, Integrated lecture, pharmacology, skill learning.

I. Introduction

Since long time, teaching process is being followed in a traditional way mainly in the form of isolated didactic lectures. In this method passive absorption of information is done by the students in a disciplinary manner and then they are expected to recall the knowledge in a competitive manner during examinations. This method of teaching is being followed in many medical colleges of India as per curriculum of Medical Council of India. In this the subjects have been divided into Pre clinical, Para clinical and Clinical branches. The present system being followed has some disadvantages. Disjointed approaches of teaching, repetition, overlapping of some subject areas and disunity of subject matter creates confusion in students mind due to differences in opinion which leads to disinterest, hence, the subject as a whole is less grasped than expected. There is a saying, "knowledge learnt in isolation is rapidly forgotten". To overcome these drawbacks, we have to teach students by using teaching learning skills. i.e, problem based learning, bedside clinics, case based teaching, integrated lectures^{1,2}.

Many medical educationists all over the world recommended imparting integrated teaching in the curriculum. In 1997 Medical Council of India strongly recommended integrated teaching in undergraduate medical education. Dr.NTRUHS also emphasized to conduct integrated teaching sessions for undergraduate and postgraduate students.

The dictionary meaning of integration is "to make entire". Integration is defined as organization of teaching matter to interrelate or unify subjects frequently taught in separate academic courses or departments. It entails cooperation and coordination among teachers of different disciplines to teach core topics. Integration increases effectiveness and efficiency of teaching-learning process of students.

Advantages: Integration aims at giving the students a holistic instead of a fragmented outlook on his studies. Topics can be presented in a more meaningful way. It can overcome confusion in the students mind between form and function of the system concerned, its diseases, their diagnosis, treatment and epidemiological aspects. Students learn to apply their knowledge to clinical practice.

Integration can be done in two ways. 1. Horizontal integration – Two or more departments teaching concurrently merge their educational identities. 2. Vertical integration – An integration between disciplines traditionally taught in the different phases of curriculum.

Integrated teaching results in facilitation of attainment of knowledge, skills and attitudes in theoretical aspects. This knowledge enables the students to relate to clinical data and findings taught in clinical subjects. It also enforces students to understand subject in depth, creates curiosity, interest and ultimately leading to internal motivation in students. Studies have concluded that the students who attended to integrated lectures expressed gratitude that these sessions increased effectiveness of their learning and memory³.

For integrated lecture programs to be effective and to achieve their purpose of deeper understanding of concepts by students, interdepartmental faculty members are required to co-operate, co-ordinate, plan and spend adequate time⁴. Before taking such lectures it is important to share and check all information to be presented in lecture. This may avoid repetition and could cover all necessary information. Thus planning and collaborative efforts by faculty is vital before designing integrated lecture modules and sessions.

Medical (MBBS) students in their 3rd, 4th and 5th semester (Second year) are taught pharmacology as a subject in our institute as per curriculum of Dr. NTR University of Health Sciences (Dr. NTRUHS). The subject pharmacology is taught with the help of didactic lectures, practicals, seminars and tutorials and integrated lectures. II MBBS students have clinical postings from their 3rd semester onwards. Hence, if students are taught pharmacology topics with its clinical applications in the form of integrated lecture module (ILM) it will be beneficial for them. Thus the present study was designed to evaluate the learning skills of students after exposure to didactic lecture module and integrated lecture module with the help of interdepartmental faculty by using vertical ILM.

II. Materials And Methods

The design of study was prospective and questionnaire based. The study was conducted on 146 second MBBS students. They were exposed to didactic lecture and integrated lecture modules. The didactic lecture on chemotherapy of malaria was taken by a faculty member from department of Pharmacology for 60 minutes, while integrated lectures on same topic were taken by Pharmacology, Microbiology, General Medicine and Community Medicine faculty on the next day. 20 minutes were allotted for each faculty. After the lectures, students were given a 10 question feedback questionnaire to express their opinion, Comments regarding advantages, disadvantages and suggestions were also encouraged.

Student feedback Questionnaire

1. Which lecture module is comfortable?
2. Which lecture module provides better understanding of subject and learning skills?
3. Which lecture module enhances your intellectual curiosity?
4. Which lecture module gives concept clarity?
5. Which lecture module is helpful to score better in examinations?
6. Which lecture module gives knowledge and skills that are helpful in clinical practice?
7. Which lecture module helps in better retaining of the subject?
8. Is repetition of similar points causing boredom in ILM?
9. Would you like similar integrated lectures to be organized periodically?
10. Any comments/ suggestions about integrated teaching methodology.

III. Results

A total of 146 students participated in the study. Feedback was taken from all students. In this, 95% of the students opined that ILM improved their understanding and learning skills. 77 % opined that ILM enhance their intellectual curiosity and brought concept clarity. 84% stated that the knowledge gained in ILM would help them in clinical practice. 88% stated that they are able to score better in exams when taught in ILM whereas only 12 % stated that they are able to score better in exams even when taught by DLM .39% students stated that repetition of similar points during integrated lecture causes distraction and made the session boring. 96% of students are in favour of conducting periodical integrated lectures. 21% of students stated that they were excited by practical aspects explained by clinician. 60% of students state that these integrated lectures are more useful if they are interactive.

IV. Discussion

Integrated lecture aims at giving the student a holistic instead of a fragmented outlook on his studies. A medical integrated lecture program helps students to put together the learned facts so as to get the whole picture and adopt a holistic approach while treating a patient or planning a health care strategy. MCI emphasized to run integrated lectures⁵. For effective ILM, theme of topic, sequencing of topics, contents of each topic and relationship of contents to the learning outcomes must be defined. To achieve this, teachers participating in a particular ILM have to co-ordinate, plan, discuss with interdepartmental members and do pre session workup. These interdepartmental pre-session activities require time and commitment on the part of teachers and subject experts to achieve good results⁶.

This study shows that integrated lecture is effective for better understanding of subject and improvement in learning as is documented^{4,6,7} by many medical educationists. The overall impact of the session was positive most of the students are favouring integrated teaching module. Majority of students agreed that the ILM is good teaching method and should be conducted from 3rd to 9th semester of their MBBS course for topics in accordance to their clinical postings. They felt that integrated teaching helped in better understanding

of a particular topic. Few students also felt that ILM is time consuming, involves repetition of points (38%) and only few topics can be taught by this teaching method. Repetition of points in any teaching technique module is essential for reinforcement of the topic. This could be minimized if faculty involved in ILM, discuss and decide during the pre session meetings on the points to be reinforced and the extent of repetition required in the session. This will bring up clarity and students also will not feel boredom. In our study the figure is quite high as we did not plan pre session workup.

In this study we have chosen vertical integration method involving clinician⁸. Involving clinicians in teaching sessions of basic medical sciences generate interest in students and make them to understand the importance of basic medical sciences. The concerned departments come together and form topic committees with subject experts. These committees must check the content of the lectures. It is for Institution authorities and medical educationists to plan conduction of integrated lectures periodically.

There are some limitations in our study. Pre session workup with interdepartmental faculty members was not conducted. As same topic was taught on previous day in didactic lecture module, this might have affected the learning outcome of students. Some of the students might have read the topic earlier which may be one of the reasons for more positive response to integrated lecture module.

V. Conclusion

Integrated lecture module had a good response from the medical undergraduate students which was accompanied by effective learning. There is an absolute need for integrated teaching. So it must start early as a part of para clinical subject training for most of the topics. Careful planning of integrated lecture program with purposeful pre-session workup with interdepartmental faculty will prove to be powerful teaching technique and effective learning approach for students.

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