

Review article:

Student's perception about integrated teaching in an undergraduate medical curriculum

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Abstract:

Integrated curriculum in medical teaching learning to become a physician is different from research. Medical students need to fit things together as well as tease things apart. They need to learn the relationship between the parts, how to synthesize, how to see the big picture. Integration of the curriculum promotes a holistic and cross discipline approach to patients and their problems. It can also help promote learning in context. This encourages a more holistic view of a patient's problems; increased motivation levels among students; better educational effectiveness of teaching because learnt material is applied; more emphasis on higher learning objectives, such as application of knowledge and problem solving skills; and promotion of staff communication and collaboration, with a more efficient use of teaching resources. There are some disadvantages with this method being the fundamentals of a discipline may be neglected; some topics may be omitted; teachers may be less enthusiastic and less comfortable when not teaching in their own discipline; discipline based teaching may be cheaper; and students may develop a clearer picture of a discipline as a career in the discipline based method. In the present study 95.6% of students felt that integrated teaching is advantageous mainly horizontal over vertical, with negative perception in 35.4% of students. They felt that it is time consuming, cuts down the time of self study and lengthy.

Key words: Integrated teaching, Students perception .Undergraduate medical curriculum.

Introduction

The term curriculum traditionally refers to the teaching content in one subject area. An integrated curriculum (IC), in a nutshell, refers to the fusion of knowledge from different disciplines; the approach to learning and teaching from a variety of world-views, strategies, and resources; and the tapping of real-life situations for problem solving and critical thinking in the classroom

Integrated Curriculum Education that is organized in such as way that it cuts across subject-matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas

of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive Benefits Students develop team spirit. Students have improved attitudes and work habits. Students have more motivation for learning when they work on "real" problems. Higher student attendance. Most teachers prefer an integrated curriculum over a traditional one. Integrated priorities that overlap multiple disciplines are examined for common skills, concepts and attitudes. It encourages students to see interconnectedness and interrelationships among disciplines. Students are motivated as they see the connections. The disadvantages are it requires

interdepartmental teams with common planning and teaching time

Aim of this study: Was to analyze the perception of the students towards integrated teaching. The students were queried regarding their attitudes towards integration, in order to expose the barriers to integration and to identify a potential new mechanism for facilitating the implementation of the integrated curricula.

Methodology: One hundred students of 2nd MBBS were included in the study. A brief introduction regarding integrated teaching and its types was given before the questionnaire. Student feedback was taken by preparing a questionnaire. The questions were framed, keeping in mind the utility of the integration, the understanding, appreciation and the application of the clinical knowledge to the health and disease. It consisted of open ended questions about the positive and negative aspects and the various teaching methods to be adopted in integrated teaching. It was administered on 1st August 2014. The opinions were tabulated and analyzed.

Results:

All the one hundred students participated in the study. Eighty five percent of the students agreed that integrated teaching helped in appreciation and application of the basic science knowledge to health and disease and integrated teaching improves the performance in clinics and university examinations. Twenty four percent of students preferred traditional teaching to integrated teaching and 24% of students

felt that horizontal integrated teaching is better than vertical integrated teaching. Twenty two percent students could not give their decision on general concepts of integrated teaching. [Table 1]

Many positive aspects were listed by the students like; Improves the application of knowledge (100 %), develops logical thinking (96%), creates interest in subjects (98%), boosts the confidence and speaking skills (93%), broaden the horizon about the medical applications in various situations(96%), provides extra information(94%), interaction and participation by all (91%), motivates the student to study (95%), good concept(97%) and revision of topics covered in theory and practical class(96 %).Overall the positive response was 95.6% .Negative perception was seen in 35.4% of students, especially with respect to conduction of integrated concepts on weekends(48%),time consuming, cuts down the time of self study(48%) and Lengthy (51%).[Table 2].

On analyzing the perception of students regarding various teaching methods to be adopted in integrated teaching; traditional methods like black board teaching, power point presentation etc (51%),interactive sessions(96%) ,group discussion (94%), workshop (90%), demonstrations (94%) out of class room teaching(bed side, laboratory) (95%) and symposium (72%).The student suggested that interactive session and out of classroom teaching was the most preferred methods of teaching in integrated teaching.[Table 3]

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TABLE 1: RESPONSES PERTAINING TO GENERAL CONCEPTS OF INTEGRATED TEACHING IN THE STUDENTS – 100 STUDENTS

	General concept of integrated teaching	Agree	Disagree	Not decided
1	Integrated teaching helps in appreciation and application of basic science knowledge in health and disease	85	-	15
2	Integrated teaching improves the performances in clinics and university exam	85	-	15
3	Prefer traditional teaching to integrated teaching	24	52	24
4	Prefer horizontal integrated teaching more than vertical integrated teaching	24	43	33

TABLE 2: RESPONSES PERTAINING TO NEGATIVE AND POSITIVE PERCEPTION TOWARDS INTEGRATED TEACHING – 100 STUDENTS

	POSITIVE PERCEPTION	Number	Percentage
1	Improves the application of knowledge	100	100
2	Develops logical thinking	96	96
3	Creates interest in subjects	98	98
4	Boosts the confidence and speaking skills	93	93
5	Broaden the horizon about the medical applications in various situations	96	96
6	Provides extra information	94	94
7	Interaction and participation by all	91	91
8	Motivates the student to study	95	95
9	Good concept	97	97
10	Revision of topics covered in theory and practical class	96	96
	NEGATIVE PERCEPTION		
11	Helps only small group	19	19
12	Boring	11	11
13	Integrated concepts on weekends (Saturday)	48	48
14	Time consuming cuts down the time of self study	48	48
15	Lengthy at times	51	51

TABLE 3: VARIOUS TEACHING METHODS TO BE ADOPTED IN INTEGRATED TEACHING - 100

	TEACHING METHODS	Preferred	Not preferred
1	Traditional methods(Black board teaching, power point presentation)	51	49
2	Interactive sessions	96	4
3	Group discussions	94	6
4	Work shop	90	10
5	Demonstrations	94	6
6	Out of classroom teaching(bedside, laboratory)	95	5
7	Symposium	72	28

Discussion

There is a famous saying that, ‘Knowledge that is learnt in isolation is rapidly forgotten’. The dictionary meaning of integration is “to make entire”. Integration is defined as the organization of teaching matter to interrelate or unify the subjects which are frequently taught in separate academic courses or departments.^[1]

The medical colleges in India have been following a traditional curriculum which was characterized by a discipline wise model “with a high degree of compartmentalization into the subject of basic sciences and the para clinical and the clinical branches”. Several areas of redundancy, repetition and overlapping, along with the observation of a gap between the qualitative and quantitative advancement in medical education and achievements in the field of health care prompted the Medical Council of India to adopt a need based curriculum for undergraduate medical education in India. Regulation on undergraduate medical education, 1997” recommends a teaching approach which is characterized by maximal efforts to encourage integrated teaching between the traditional subject areas by using a problem based learning approach and to de-emphasize the compartmentalization of the

disciplines, so as to achieve both the horizontal and vertical integration in the different phases.^[2]

Medical education is changing rapidly, with more than half of the American schools being engaged in curricular reforms. Many of these modifications focus on implementing horizontal or vertical curricular integration. Horizontal integration blends either the related basic science disciplines in order to enhance the student’s understanding of the body systems, or the related clinical science disciplines through interdisciplinary clerkships.^[3]

In the present study, integrated teaching was perceived to be useful by a majority of the students with regards to an improvement in the appreciation and application of basic science knowledge. A similar finding was noted by Vyas et al.^[4]

Vidic et al^[5] have suggested that it is imperative for the success of the new curriculum, however, that certain criteria should be satisfied: To 1. Reorganize the basic science departments to determine the course ownership.2. Establish a reward system for the teaching faculty.3.Establish course objectives. Muller JH et al^[6] felt that integrating a curriculum is a complex process. It is differentially understood and experienced by students and faculty, and can refer to instructional method, content, faculty work or

synthesis of knowledge in the minds of learners. It can occur at different rates and some subjects are integrated more easily than others.

In a study which was done by Soudarssanae and Sahai ^[7] the integrated teaching of epidemiology and the incorporation of the presentation and discussion of the actual studies which were conducted in the local population with the involvement of the clinical departments, was a novel attempt in the lecture discussions of the subject. This method was well appreciated by their students. Kingsley et al ^[8] stated that curricular integration was one method for improving the teaching and learning of the complicated and interrelated concepts, thus providing an opportunity to incorporate the research training and objectives into traditionally separate didactic courses. Kalpana Kumari M et al ^[9] emphasize that considering the volume load which the students are subjected to; integrated teaching can definitely save their time and energy, and give them better insight into the subject. Implementing a well

integrated curriculum requires strong leadership and overcoming departmental barriers. It is difficult to formulate modules for integrated teaching and that the process required a thorough planning by faculty who were committed, who were genuinely interested in conducting these sessions. The faculty should be successful in creating sufficient interest among the students, so as to ensure maximum student participation.

Conclusion

The students recognized that integrating the medical subjects was useful and of interest to them, and that they should be continued. Twenty four percent of students preferred traditional teaching to integrated teaching and forty three percent of students felt that horizontal integrated teaching is better than vertical integrated teaching. Overall 95.6% of students felt that integrated teaching is advantageous with negative perception in 35.4% of students. They felt that it is time consuming, cuts down the time of self study and lengthy.

References

1. Joglekar S, Bhuryan PS, Kishore S. Integrated teaching – Our experience. *J Postgrad Med* 1994; 40:231-2.
2. Ghosh S, Pandya HV. Implementation of an integrated learning program in neuroscience during the first year of the traditional medical course; Perception of the students and faculty. *BMC Medical education* 2008; 8:44.
3. Jennifer K, Brueckner, Gould DJ. The health science faculty member's perceptions on curricular integration: Insight and obstacles. *The Journal of the International Association of Medical Science Educators* 2006; 16: 31-4.
4. Vyas R, Jacob M, Faith M, Isacc B, Rabi S, Satish Kumar S , Selvakumar D, Ganesh.A. An effective, integrated learning programme in the first year of the medical course. *The National Medical Journal of India.* 2008; 21:1-6.
5. Vidic B, Weitlauf HM. The horizontal and vertical integration of academic disciplines in the medical school curriculum. *Clin Anat* 15:233-5

6. Muller J H, Jain.S, Loeser H, Irby D.M. Lessons which have to be learned about integrating a medical school curriculum and the perceptions of the students, the faculty and the curriculum leaders. *Med. Educ* 2008;42: 778-85
7. Soudarssanane MB, Sahai A. Innovative integrated teaching of epidemiology *Indian Journal of Community Medicine*.2007; 32:1- 10) Schmidt H. Integrating the teaching of basic sciences, clinical sciences and biopsychosocial issues .Chapter 4. *Academic Medicine* 73: S-24- 31
8. Kingsley K, Malley S O, Stewart T, Howard M K. Research Enrichment: evaluation of the structured research in the curriculum for dental medicine students as a part of the vertical and horizontal integration of biomedical teaching and discovery.*BMC Med Edu* 2008;8:91472- 6920
9. Kalpana Kumari M.K., Vijaya V., Mysorekar Seema Raja. Student's perception about integrated teaching in an undergraduate medical curriculum. *Journal of Clinical and Diagnostic Research* 2011; 5:1256-1259.