

Original Article

Approach of medical students towards project based learning

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Abstract:

Background: Teaching in India is still dominated by teacher-centred classrooms. Nowadays a deluge of techniques are encouraged to increase interest of students in learning. The purpose of the study was to examine the approach of 1st year medical students towards project based learning.

Method: Study was undertaken on 134 students of 1st year MBBS. Questionnaire was prepared regarding effectiveness of project based learning in teaching - learning process and feedback was taken from all 134 students.

Result: More than 78% students were in favour of and 12% students were neutral for project based learning while only less than 9% students were not in favour of active learning process based on project.

Conclusion: Majority of students considered project based learning as a stimulating technique and active learning method and it should be encouraged in routine teaching learning process.

Keywords: Project, Medical education, Teaching method, feedback

Introduction:

Teaching in India is still dominated by teacher-centred classrooms. Students passively receive information from the teacher and internalize it through memorization. Concepts such as independent learning, flexibility in learning, critical thinking and problem solving are least recognized¹. Reports have shown that students' inactivity in traditional teacher-centred classes would make them bored and exhausted that consequently would decrease their concentration and learning and finally would result in their absence from the classroom². Nowadays a deluge of techniques are encouraged to increase interest of students in learning.

Project-based learning involves completing complex tasks that typically result in a realistic product, event, or presentation to an audience. Five key components of effective project-based learning are: central to the curriculum, organized around driving questions that lead students to encounter central concepts or principles, focused on a constructive investigation that involves inquiry and knowledge building, student-driven (students are responsible for designing and managing their work), and authentic, focusing on problems that occur in the real world³.

Project-based learning has found that students who engage in this approach benefit from gains in factual learning that are equivalent or superior to those of students who engage in traditional forms of instruction.³The aim of active learning methods is to involve students in higher-order thinking tasks as analysis, synthesis, and evaluation.⁴

The purpose of the study was to examine the approach of 1st year medical students of Medical College towards project based learning. This will help teachers for choosing better method to teach medical students.

Design and method:

The study was carried out on 1st year medical students at one private medical college in Gujarat. Study was undertaken on 134 students of 1st year MBBS. Questionnaire was prepared regarding effectiveness of project based in learning process and feedback was taken from all 134 participants.

Total ten questions were included in questionnaire. Ten questions were showed in three different tables (Table-1,2,3). These questions were given to all 134 students and asked to feel the details after explaining the procedure. The participants were informed what the investigation was about and were told that the responses would be anonymous and must be unbiased. Grading and Likert scale was used for taking feedback.⁵

Consent was obtained from all the students and propose of the study was explained. Questionnaire was prepared with the help of many faculty members. It was assessed and summarised with the MS excel and IBM SPSS statistical software version 20.0. Permission from Institutional research committee was taken.

Result:

This was observational study. We took the feedback from the students regarding seminar and summarised the feedback in tables. (Table – 1,2,3)

Table 1: Response of students to various aspects of Project-based learning							
Q	Feedback	Frequency /Percentage					Mean ± SD
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
1	Good academic activity	71/53	44/32.8	14/10.4	3/2.2	2/1.5	4.34 ± 0.87
2	Time duration	85/63.4	36/26.9	9/6.7	2/1.5	2/1.5	4.49 ± 0.81
3	Orientation to research work	43/32.1	60/44.8	20/14.9	7/5.2	4/3	3.98 ± 0.98
4	Opportunity to show some creativity	57/42.5	59/44	17/12.7	1/0.7	0/0	4.28 ± 0.71
5	Team work	44/32.8	28/20.9	26/19.4	15/11.2	21/15.7	3.44 ± 1.44
Average		60/44.76	45.4/33.88	17.2/12.82	5.6/4.16	5.8/4.34	4.10 ± 0.96
Result		SA + A		N	SD + D		
		115/78.64		17/12.82	12/8.54		

Table 2: Opinion of students to other aspects of Project-based learning

Q	Feedback	(n=134)						Mean ± SD
		Frequency /Percentage						
		Inadequate	Poor	Fair	Good	Very good	Excellent	
6	Topic	0/0	4/3	7/5.2	24/17.9	47/35.1	52/38.8	4.01 ± 1.02
7	Pattern	0/0	2/1.5	8/6	39/29.1	55/41	30/22.4	3.77 ± 0.91
8	Novelty	5/3.7	3/2.2	9/3.7	40/29.9	45/33.6	32/23.9	3.59 ± 1.20
9	Guidance	3/2.2	2/1.5	4/3	14/10.4	19/14.2	92/68.7	4.39 ± 1.12
Average		2/1.48	2.75/2.05	7/4.48	29.25/21.83	41.50/30.98	51.50/38.45	3.94 ± 1.06
Result		Inadequate + Poor + Fair			Good + Very good + Excellent			
		12/8.74			122/91.26			

Table 3: Concluded response of students:

Feedback		Yes Frequency /Percentage	No Frequency /Percentage
Q. 10	Would you suggest this activity to your colleague or Junior?	124/92.5	10/7.5

Discussion:

Studies have shown a positive impact on learning when students participate in lessons that require them to construct and organize knowledge, consider alternatives, inquiry, writing, and analysis, and require them to employ subject knowledge to solve real-world problems.⁶“Learning by doing” concept has changed mind-set of teachers about teaching methods.

In this study, more than 78% students were in favour of and 12% students were neutral for project based learning while only less than 9% students were not in favour of active learning process based on project. More than 90% students were satisfied while less than 10% students were unsatisfied about other aspects of project based learning like topic, pattern and guidance.

More than 92% students were willing to use this method for future study of self and wanted to suggest this activity to other peers in future. Few other studies have documented positive changes for teachers and students in motivation, attitude toward learning including work habits and problem-solving abilities⁷.

Few short-term, comparative studies of traditional vs. project-based approaches have showed many benefits from projects, such as an increase in the ability to define problems.⁸Students who may struggle in traditional Teaching-

learning process have often been found to perform well when they have the chance to work in a problem based learning background.^{9,10}

By including more medical colleges and other advance methods, this study could be made more engaging. Limitations of this study were relatively smaller size of subject and non-inclusion of other advance teaching methods.

Conclusion:

Majority of students considered project based learning as an interesting technique for learning. Students' approach was very conclusive for this type of active learning method and it should be encouraged in routine teaching learning process. Further studies on larger scale are required to develop more understanding on this aspect.

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