

Effectiveness of educating the medical students about the “study skills”

Ajay Kasumbiwal^{1,*}, Vishal Chavan²

¹Associate Professor, ²Assistant Professor, Dept. of Paediatrics, ¹Government Medical College Nagpur, Maharashtra, ²Shree Vasantnao Naik Government Medical College and Hospital, Yavatmal, Maharashtra, India

***Corresponding Author:**

Email: ajaykyvt@gmail.com

Abstract

Aims and Objectives: The primary purpose of this study is to establish effectiveness of Study Skills classes to teach medical students how to learn better as an aid in overall goal of better medical education.

Materials and Methods: Second year MBBS students of SVNGMCH, Yavatmal, were enrolled for the study. Total 180 students participated in the study. Four Interactive lectures were taken over a period of two month. In lectures different study skills and methods were discussed like audio-visual aspects of study skills. Evaluation was done with the Pretest and Post-test questionnaire specifically designed for study skills evaluation.

Results: Time Scheduling was improved significantly in post-test for daily study schedule of students. Few students were struggling with concentration while doing self-study and in class room. Majority of students are less receptive in class room teaching sessions. There is significant improvement in reading skills of students in post-test evaluation with better remembrance of just read topic at the time of examination, 82% of students have problem with remembering topics read before for examination. Most of the (~90%) students showed improvement in reading skills in post-test evaluation. Post-test evaluation showed improved thought process before paper writing.

Conclusion: Study skills classes are beneficial to the medical students and study skill methods should be taught to them before every semester so students become more receptive during classes, better organized in self-study and there will be improvement in academic performance.

Recommendation: Study-skills teaching should be introduced specially and separately in all curriculums especially medical courses.

Keywords: Study-skills teaching, Study skill methods, Self-study, Time scheduling, Reading skills, Writing skills.

Introduction

One of teacher's most important functions as educators is helping students improve their ability to learn by instructing them in study skill strategies. Medical students need to be effective lifelong learners in order to continue practice professionally. This not only demands encouragement of diverse teaching styles but also innovation in self-study skills. It includes application of adult learning principles, student autonomy, self-learning, experiential learning, reflective learning, computer assisted learning, distance learning, e-learning, etc. to improve their knowledge.⁽¹⁾ In recent developments of education system, the teaching pattern is shifted from pro-teacher to more pro-learner or pro-students, where, various methods of study-skill, helps to improve the new teaching-learning methods. This way, student may come more prepared in the class and their participation will be more proactive. Improving the quality of education through the diversification of contents and methods and promoting experimentation, innovation, the diffusion and sharing of information and best practices, is the need of time.⁽²⁾

As the learning, is to be building on already present knowledge, teaching-learning styles will be more effective after student come prepared in the systematic way. Study-skill will form core component of the innovative teaching-learning style especially in case of interactive learning.⁽³⁾

There is no one “best” way to study. It is increasingly recognised that people study in different ways. The study skill lectures aims at

1. Motivation, goal setting, and time management
2. Organising resources, environment for effective study.
3. Improving reading and note-making ability
4. Preparing for examinations.

Study Skills are strategies and techniques that enable students to make the most efficient use of time, resources, and academic potential. Developing and improving your study skills can help to make more efficient use of your study time and get more work done in less time. To make learning easier, and help retain what they have learned for longer.

Students can benefit from developing his or her study skills when preparing for college exams improve ability to learn, retain, and retrieve information so that increase chances of being successful in every level.^(4,5)

Materials and Methods

Second year MBBS students of SVNGMCH, Yavatmal were enrolled for the study. Total 180 students participated in the study. Four Interactive lectures were taken over a period of two month. In lectures different study skills and methods were discussed like audio-visual aspects of study skills. In this study we, explained and discussed the following

study skills and their simple ways, ideas that student should apply.⁽⁶⁻¹⁰⁾

- i. Time Scheduling
- ii. Concentration
- iii. Listening & Note taking
- iv. Reading.
- v. Exams
- vi. Rereading
- vii. Writing Skills

Evaluation was done with the pretest and post-test questionnaire specifically designed for study skills evaluation, from reference articles 2 to 5 (appendix 1). Questionnaire was developed by authors were validated by panel of three senior teachers of Govt. Medical College Yavatmal. Responses to pre and post- test questionnaire were analyzed with Chi square test.

Results

- i. Time Scheduling- (Question 1 & 2)
Time Scheduling was improved significantly in post-test for daily study schedule of students with $p= 0.001$ but no improvement seen in pre examination study schedule.
- ii. Concentration (Question 3, 4 and 5)
Constant concentration in self-study for longer duration is issue with 17 to 18 % of students and in classroom, 37 % of students often feels sleepy.
- iii. Listening & Note taking (Question 6,7 and 8)

Listening in the class and taking note is problem with students as 77 % of students feel class notes are not useful for revision as study material and 33 % of students feel it not as per standard of their satisfaction and need.

- iv. Reading (questions 9, 10 and 11)
There is significant improvement in reading skills of students with post-test evaluation shows better remembrance of just read topic, better understanding of important points of topic read and better revision skills for preparation of examination($p=0.000001$).
- v. Exams (Question 13)
At the time of examination, 82 % of students have problem with remembering topics read before for examination, which could be due to stress or anxiety.
- vi. Rereading (Questions 15,16 and 17)
In post-test evaluation almost all students were able to revision or re-read topic with better understanding, and 83 % of students were able to read at variable speed as per difficulty level of topic and its familiarity. Seventy present of students were satisfied with their reading speed in post-test evaluation.
- vii. Writing Skills (Questions 18, 19 and 20)
In post-test evaluation 84 % of students found to have improved thought process before paper writing.

Table 1:

	Questions	Pre Test		Post Test		P =
		Yes	No	YES	NO	
1	I spend more than required time in studying for what I am learning.	140	40	35	145	0.001
2	I usually spend hours cramming the night before an exam.	158	22	107	73	0.5878
3	I usually try to study with the radio and TV turned on.	57	123	34	146	4.256
4	I can't sit and study for long periods of time without becoming tired or distracted.	34	146	32	148	0.0000001
5	I go to class, but I usually doodle, daydream, or fall asleep.	68	112	66	114	0.00131
6	My class notes are sometimes difficult to understand later.	137	43	140	40	0.0000001
7	I usually seem to get the substandard material into my class notes.	74	106	60	120	0.0000001
8	I don't review my class notes periodically throughout the semester in preparation for tests.	86	94	70	110	0.0000001
9	When I get to the end of a chapter, I can't remember what I've just read.	78	102	26	154	0.0000001
10	I don't know how to pick out what is important in the text.	38	142	18	162	0.0000001
11	I can't keep up with my reading assignments, and then I have to cram the night before a test	58	122	37	143	0.0000001

13	I study enough for my test, but when I get there my mind goes blank.	156	24	148	32	0.8785
14	I often study in a haphazard, disorganized way under the threat of the next test.	23	157	10	170	0.0000001
15	I often find myself getting lost in the details of reading and have trouble identifying the main ideas.	178	2	09	171	000
16	I rarely change my reading speed in response to the difficulty level of the selection or my familiarity with the content.	64	116	30	150	0.0000001
17	I often wish that I could read faster.	123	57	54	126	0.0046
18	When my teachers assign papers I feel so overwhelmed that I can't get started.	143	37	35	145	0.4001
19	I usually write my papers the night before they are due.	76	104	27	153	0.7998
20	I can't seem to organize my thoughts into a paper that makes sense.	37	143	29	151	0.0000001

Discussion

We conducted in this study, sessions of education about study-skills, its different methods, with interactive lectures. We stressed the need of the curriculum learning not only to get through the examination, but all also making them competent doctors for betterment of society. Student developed a new way of looking to the study and how to study for exams. This will serve to improve goal of better medical education.

We found, in this study that, constant concentration in self-study for longer duration is issue with 17 to 18 % of students and in classroom, 37 % of students often feels sleepy. This could be due to difficult topics for understanding or interest in said topic or variable individual personality.

Study skills are important component of the teaching. The idea is to provide a "toolbox" of resources, information readily available for the students and different conservative methods to use valuable time and energy. It all ensures better success in examination and in life. The education about study skills helped student to decide which part of syllabus is important and it's applicability in future.

Most of the students were benefited from the topic covered in the lectures for study skills and strategies. Students filled worksheets and discussed various techniques like, Mind mapping, graphic arts to remember topics. There is significant improvement in reading skills of students with post-test evaluation shows better remembrance of just read topic, better understanding of important points of topic read and better revision skills for preparation of examination ($p=0.000001$). In post-test evaluation almost all students were able to read topic with better understanding, and 83 % of students were able to read at variable speed as per difficulty level of topic and its familiarity. Seventy present of students were satisfied with their reading speed in post-test evaluation.

The lack of time management skills is a problem that many students have in common. Time Scheduling was improved significantly in post-test for daily study schedule of students ($p=0.001$), but no improvement seen in pre examination study schedule. Implementing the tools that help students improve these skills can be done in any subject area.

Searching references, through effective use of library & web links resources, are discussed and thought to the students. Listening skills are also been told to students. Getting students to listen actively in class helps to prevent repeating topic in the classroom and to maintain give- take business of teaching with learning. Employing a variety of devises to get everyone's attention in a creative way is good way to get students to listen.⁽¹¹⁾

Writing strategies are often overlooked. We discussed in class, how to create outlines and use storyboards to collect their ideas for doing written assignments. Using the 6 traits of writing is a good way to develop a document using mechanics, organization, voice, ideas, effective word choice, and sentence fluency. Taking advantage of the writing process such as pre-writing (brain storming and outlining), rough drafts, proof reading and correcting, revising the draft and publishing the final draft will make ideas clear and concise.⁽¹²⁾

Most students liked the idea of using Mnemonics and Acronyms to help to remember key points. Demonstration of artificial memory aids like Frank's Mnemonic devices as a study tool for students were given in lecture. Note taking is a skill which also been discussed with the students. Students were free to choose different ideas and methods of study-skills, that fits their learning style.⁽¹²⁾

Listening in the class and taking note is problem with students as 77 % of students feel class notes are not useful for revision as study material and 33 % of students feel it not as per standard of their satisfaction and need. This denotes not only that give and take

process of knowledge in class, need to be further improved and refined but also teachers need to be up to date, responsive, interactive while teaching to high intelligent quotient students.⁽¹³⁾

At the time of examination, 82 % of students mentioned about problem with remembering topics read before for examination. Test taking skills include more than just note taking and studying. It is important to teach the students behaviors and relaxation techniques that will help them improve their abilities to pass tests. Helping students with improving their attitudes and behaviors that will help them increase their test taking abilities. In post-test evaluation 84 % of students found to have improved thought process before paper writing.

For comparing result of this study with previous studies we were not able to find the similar study in past. Though importance of implementation of study skill is mentioned in literature of higher education no study is conducted to analyze effectiveness.⁽¹⁴⁾

Conclusion

There is no better time to learn the skills necessary to use resources than in school and college. Medical students not only demands encouragement of diverse teaching styles but also self-study skills. Study skills classes are beneficial to the medical students and after teaching study skill methods to them, students became more receptive during classes, better organized in self-study and showed improvement in academic performance.

Time Scheduling was improved significantly in post-test for daily study schedule of students.

Few students were struggling with concentration while doing self-study and in class room. Majority of students are less receptive in class room teaching sessions which needs to emphasize more in study skill classes.

Most of the students showed improvement in reading skills and revision skills, in post-test evaluation with better remembrance of just read topic.

At the time of examination, majority of students have problem with remembering topics read before for examination, which is probably due to stress and can be tackled with stress management sessions.

In post-test evaluation showed improved thought process before paper writing.

Recommendation

Study-skills teaching should be introduced specially and separately in all curriculums especially medical courses so as to encourage diverse study methods and improved time scheduling to have organized thought process. It will result in better performance not only in academics but also student's entire life.

Reference

1. Karpicke, J. D., & Blunt, J. R. (2011). Retrieval practice produces more learning than elaborative studying with concept mapping. *Science*, 331(6018), 772–775. doi:10.1126/science.1199327
2. Rohrer, D., & Pashler, H. (2010). Recent research on human learning challenges conventional instructional strategies. *Educational Researcher*, 39(5), 406–412. doi:10.3102/0013189X10374770.
3. LADD, P. (1999) 'Learning Style and Adjustment Issues of International Students', *Journal of Education for Business* 74:363–371.
4. Barrass, Robert (1998) *Study: A guide to effective learning, revision and examination techniques*. London: Spon.
5. Brown, Alan (2001) *The how to study book: Essential survival guide*. London: Scheldon.
6. Bodden, J. L., Osterhouse, R., & Gelso, C. J. The value of a study skills inventory for feedback and criterion purposes in an educational skills course. *Journal of Educational Research*, 19720164(7),309–311.
7. Cottrell, S. (2003). *The Study Skills Handbook*. Palgrave Macmillan.
8. Gillham B. *Developing a questionnaire (real world research)*. London: Continuum, 2000.
9. Oppenheim AN. *Questionnaire design, interviewing and attitude measurement*. London: Continuum, 1992.Sapsford R. *Survey research*. London: Sage, 1999.
10. McColl E, Thomas R. *The use and design of questionnaires*. London: Royal College of General Practitioners, 2000.
11. LADD, P. (1999) 'Learning Style and Adjustment Issues of International Students', *Journal of Education for Business* 74:363–371.
12. Kiewra, K. A. (2002). How classroom teachers can help students learn and teach them how to learn. *Theory into Practice*, 41(2), 71–80.
13. Knight, L. J., & McKelvie, S. J. (1986). Effects of attendance, note-taking, and review on memory for a lecture: Encoding vs. external storage functions of notes. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 18(1), 52–61. doi:10.1037/h0079957.
14. The Institute for Learning and Teaching in Higher Education and SAGE Publications (London, Thousand Oaks, CA and New Delhi) Vol 3 (1): 24–39 [1469-7874(200203)3:1:24–39:021783].