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Super Student or Super Study Methods; Which One Matter? Studying Methods of Top Medical Sciences Students

Redhwan Ahmed Al-Naggar^{1*}, and Muhamed T Osman².

¹Faculty of Medicine, Universiti Teknologi MARA (UiTM), Selangor, Malaysia;

²Faculty of Medicine and Defence Health; National Defence University of Malaysia (UPNM), Kuala Lumpur, Malaysia.

ABSTRACT

One of the things that separate great students from those are average is the methods they use for studying. Some methods are a lot faster and more effective than others. This study was conducted to identify the studying methods of top ten students in every semester of the Bachelor in Medical Sciences (BMS) course at Management and Science University (MSU), Malaysia. The study methods used by the top students were divers including study schedule, notes, source of information, consult with senior students, consult with lecturers, good preparation for final exam and family support. A camera was used to record the interview sessions. There were 22 students with the CGPA of 3.75 and above from semester 3 to semester 6 in Bachelor of Medical Sciences (BMS) course, however only 18 students were interviewed due to some problems faced. Most of the top 10 students that obtained the CGPA of 3.75 and above were female with the age varies from 20 to 24 years, mostly sponsored by MARA and staying with friends. The studying methods that are very common among all the students were to take notes during the lecture, make their own notes, books and internet as their main source of information, do the past year question papers as the final preparation, refers to friends or internet after class rather than lecturer, prefer the lecturer to use both whiteboard and slides to teach, use both the understanding and memorizing techniques when studying, and using colors to memorize.

Keywords: Learning, Top ten students, Medical students, University.

**Corresponding author*



INTRODUCTION

Learning style or studying methods may be the most important key to improve the student's grades [1]. Students learn in many ways, like seeing, hearing, and experiencing things first hand. But for most students, one of these methods stands out [2].

Why is this important? Research has shown that students can perform better on tests if they change study habits to fit their own personal learning styles [3]. For example, visual-learning students will sometimes struggle during essay exams, because they can't recall test material that was "heard" in a lecture. However, if the visual learner uses a visual aid when studying, like a colorful outline of test materials, he or she may retain more information. For this type of learner, visual tools improve the ability to recall information more completely. A simple explanation of learning styles or studying method is this: Some students remember best materials they've seen; some remember things they've heard, while others remember things they've experienced [4].

Studying effectively is not a matter of chance. Educators have researched study methods for years. Some of the best studies come from the top universities: Stanford, Indiana, and Chicago where precise experiments with student groups have shed light on the most effective study methods. Students who follow these methods learn more easily, retain material for longer periods of time, and save themselves hours of study time [5]. Summary of these methods are; making and keeping a study schedule, studying in an appropriate setting- same time, same place, every day, equipping study area with all the materials student needs, not relying on inspiration for motivation, keeping a well-kept notebook improves grades, keeping a careful record of assignments, making use of "trade secrets", taking good notes as insurance against forgetting, overlearning material enhances memory, and reviewing material frequently [5].

The question is how some students are able to be top student through the faculty. This is because the vast majority of top students achieve their success by developing and applying effective study habits. This means top students have employed their own study habits in order to be highly successful students. So that if all other students know these habits they can follow them to become a top student as well. Hence average students will not get discouraged, not give up, just work to develop each of the study habits of top students and they will see their grades go up, their knowledge increase, and their ability to learn and assimilate information improve [6-7]. These facts motivated us to conduct this study to investigate the studying methods for top 10 students in International Medical School (IMS) specified for Bachelor in Medical Science (BMS) students at Management and Science University (MSU), to reveal all the best tips to be success in the studies, to help all the weak students improved their achievement and get better results, to prepare the students to be always ready for the examination, and lastly to expose all the students in the MSU about the important of studying method in the studies.

MATERIAL AND APPARATUS

This study targeted top 10 students in every semester of the BMS course and special questions that were designed for the top 10 students in every semester of the BMS. A camera was used to record the interview sessions. The duration of study was 3 months. All participants had signed a written consent and approval from MSU to conduct the study was obtained.

Procedure:

The procedure stages were (1) The proposal of the research with the title of the studying methods of top 10 students in every semester of the Bachelor in Medical Science (BMS) course at Management and Science University (MSU) were given to the lecturer 2 weeks after the assignment were given; (2) A questionnaire was prepared for IMS Faculty specified for BMS students that obtained cumulative grade point average (CGPA) of 3.75 and above from every semester; (3) The names and the contact numbers of the top 10 students from each semester that obtained CGPA of 3.75 and above were collected by visiting each semester (semester1-semester 6) before or after the classes. The names and contact numbers were listed according to the semester. There were 22 students from semester 3 to semester 6 that obtained CGPA of 3.75 and above and no students from semester 1 and semester 2 because they do not have the CGPA yet and there were no students with CGPA of 3.75 and above respectively; (4) During the interview sessions, the top students were given the questionnaire on personal details, nutritional status, methods of studying and other important information to be filled up.

Then, one of researchers started interviewing the student according to the questionnaire being design particularly to obtain the information about the studying methods, studying tips and techniques. While the interview was being conducted a second researcher was shooting the interview session using camera. The permission to shoot the interview sessions were obtained from the students before the interview being conducted. The top students answered according to the questions being asked. This is to collect the data and explore on how they used to be the top students; (5) after the interview sessions, the videos of the interview session were studied and analyzed. The videos were also used to write back the answers provided by the top students in the questionnaire being prepared to obtain further information and clarify their methods of study; (6) A report about the studying methods of top 10 students in every semester of the BMS course at MSU were done based on the result obtained from the interview session.

RESULTS

A total number of 18 students were participated in this study. They were the top students in Medical Sciences, and from semester 3, 4, 5 and 6, Faculty of Medicine, Management and Science University, Malaysia. Majority of them were female, Muslim and Malay. Table 1 shows the socio-demographics information about the participants and additional information with their CGPA results.

Table 1: Socio-demographics, CGPA, Health information and Lifestyle Practice.

VARIABLES	NUMBER OF STUDENTS		PERCENTAGE (%)
AGE	20	4	22.22
	21	7	38.89
	22	3	16.67
	23	1	5.55
	24	3	16.67
SEX	Female	11	61.11
	Male	7	38.89
RACE	Malay	14	77.78
	Indian	4	22.22
	Chinese	0	0.00
	Others	0	0.00
RELIGION	Muslim	15	83.33
	Hindu	3	16.67
	Buddhist	0	0.00
	Others	0	0.00
MARITAL STATUS	Single	15	83.33
	In relationship	2	11.11
	Engaged	1	5.56
	Married	0	0.00
SEMESTER	1	0	0.00
	2	0	0.00
	3	8	44.44
	4	7	38.89
	5	1	5.56
	6	2	11.11
CGPA	3.75 – 3.79	9	50.00
	3.80 – 3.84	3	16.67
	3.85 – 3.89	2	11.11
	3.90 – 3.94	3	16.67
	3.95 – 4.00	1	5.56
STAYING WITH	Family	5	27.78
	Friends	12	66.67
	Alone	1	5.56
SOURCE OF INCOME	MARA	11	61.11
	PTPTN	3	16.67
	Private	4	22.22
SMOKING	Yes	2	11.11
	No	16	88.89
DRINKING	Yes	-	0.00
	No	18	100.00
BMI	Underweight	1	5.56
	Normal	11	61.11
	Overweight	5	27.78
	Obese	1	5.56



The study methods used by the top students were divers including study schedule, notes, source of information, consult with senior students, consult with lecturers, good preparation for final exam and family support.

Daily Study Schedule

Majority of the participants don't have a fix study schedule. However, they prepared themselves for the final exam a month or 2 weeks ahead.

The majority of the students study whenever they are free. One of them said *"I don't have exact study schedule. Just when I have time I will do my study. Usually I will do weekly study and it depends on situation. If there's any examination I will do my study around 6 to 8 hours per day."* said Siva (Sem3).

Another student said *"I don't have fixed study schedule. Usually I will start to study 2 weeks or 3 weeks before the examination. If in the usual day I will just do my assignment and study whenever I have time."* Nazrath (Sem3),

Some prepared a month or one or two weeks before the examination. One of them said *"I don't have fixed study schedule as I will normally study when the examination is near and then if there any quiz I will start to study. Then the other time I will do my assignment, tutorials, and others". "It depends, when the examination is near then I will study more and maybe I will not sleep and for normal day I don't study, just get some relax. I really don't have the specific time."* Hasif (Sem3),

Another participant said *"Usually I will prepare a month before according to the subject and divide each of the subject according to the topic for example if one day, one subject and choose topic until following the next week will be the same. I will spend around 15 to 20 minutes per each time. I also will include a tutorials in my study time but not include the assignment"* Daniel (Sem3),

Few of them included assignments, tutorials, laboratory reports and presentation in study schedule. *"Usually I will prepare my study schedule one month before the examination and spend about four hours to study for per subject for per day. I include my assignments, lab reports, and lecturer notes in my study"*. Faeizal (Sem3),

"I don't have other activity; I just focus on my study" said Farid (Sem 6).

Majority took a break about one hour to watch TV, videos or movies. One of them said *"Usually I will just take break for 10 to 15 minutes or more just for relax by watching television, talk to friends, and I actually don't have specific activities in my schedule"* said Yoga (Sem3).

Reasons for missing their schedule study time

Some missed their schedule due to hectic daily classes, fatigue, personal problems, family gathering, and sudden plan to go somewhere and maybe because of sick, will replace their schedule by extending their study time or replacing it during free time. *"Sometime I will miss my schedule due to the family gathering, or have other assignment that I should do and I put the assignment as the priority and I will replace my schedule in the other time at night"* said Daniel (Sem3). Meanwhile according to Faeizal (Sem3), *"I will miss my class if the class is too bad for me and thus I will replace my missed class by extend my study hour on the subject that I missed from 4 hours I extend it to 6 or 8 hours per day"*.

Notes

During lecture, 12 (66.66%) of them got down the important key points said by the lecturer. *"I will take note on the important point from the lecture in form of diagrams and mind map as it will easy for read back and understand"* said Nazrath (Sem3).

Some composed their own notes after class in point form (83.33%). Faeizal (Sem3) said, *"During the lecture, I will just listen to it and after that I will do my own notes at home by referring to the lecture notes"*. However, typically, 4 (22.22%) of them arranged notes in a sequence of chapter according to subjects. Same



percentage represents the idea of organizing their notes to make it systematic, for example they putting inside a file, compile it together and staple or attach their notes to a ring. *"I will arrange my notes according to subject and give priority based on the credit hour of the subject"* said Faeizal (Sem3).

About 88.88% of students equally divided into two, representing the preferable method of study through printed notes and hand-written notes. *"I prefer to study with my own handwritten notes rather than by printed or study with the laptop". "This will help me to memorize my notes"* said Syahidah (Sem4). Meanwhile, 5 students (27.77%) preferably to study in front of laptop because it is the same slides used by the lecturer, able to visualize and easy to remember. *"I prefer to study direct from the slides and then do a short note based on slides. Thus, everywhere I go, I can bring my notes and repeat it again and again"* said Hazman (Sem3).

Source of Information

About 72.22% of information that got by students was from books that well published and trusted source. *"My main source of information is from the internet"* said Hidayah (Sem4). However, 66.66% of students got information from internet which was being the main source for student to reach their information as it is easy and fast access. According to Siva (Sem3), *"My main source of information is from an internet and lecturer note as it easy to access"*. About 94.44% of information on the piece or task that they are working on gets from the internet. According to Hasif (Sem3), *"Also I will use internet as the source of information for my task as it easier and fast access" when there's information not get from the internet I will refer to the references book"*

Seniors

About 66.67% or 12 of them did not get the extra notes, laboratory reports, tutorials and information from seniors because they have no contact with their seniors and usually they did not depend on others and prepare their own notes. According to Daniel (Sem3), *"No, I don't get any extra note, laboratory reports, and tutorials from the seniors"*. The remaining 33.33% of students obtained extra notes from seniors or friends when the lecturer does not give any PowerPoint notes as well as to compare the notes and as a reference. According to Nazrath (Sem3), *"Sometimes I get extra notes from senior by asking for it from them, but for the laboratory reports, assignments, I don't ask from seniors. This because seniors will have the notes from lecturer so that I could get and read the notes before the lecturer start to teach"*

Majority of students that received extra laboratory reports and tutorials never copy and paste from the seniors; some modify the whole laboratory report and remove any unnecessary things. *"No. I don't use any from seniors because the notes could be different from the lecturer give and I don't want it to be clash. If any task or assignment, I don't copy and paste form seniors however if I do, I will modify it and just move the things that not important"* said Daniel (Sem3).

Final Preparation before Examination

Among top students; 5.56% had study group with friends one day before exam and after completing their notes by sacrificing their sleeping time. 27.78% of students only use mnemonics sometimes and not always. *"Sometimes if it is given by lecturer then I will use it, and some other time if I want to memorize I will use it too, even when I do discussion with my friend I will use it. For example that given by lecturer for clinical medicine, Socrates"* said Yoga (Sem3). 11.11% of the students prefer to study alone without any group study.

Majority of the top students (88.89%) include past year question papers as a medium for their final preparation for examination. *"Yes. One week before the exam, I will do past year question paper because as usually the question will be quite similar and some of the paper will repeat the question from the past"* said Faeizal (Sem3). The remaining (11.11%) of students did not include past year question papers as a medium for final preparation for examination. 27.78% students prefer not to study until the last minute entering the examination hall because they tend to forget what they have memorized and might get confuse or panic.

Lecturer

Many top students (61.11%) referred to the lecturer after the class in state of not understanding certain topics. According to Yoga (Sem3), *"Yes, firstly it based on lecturer, secondly if I really don't understand, my friend"*

also don't understand, then I will refer to the lecturer but sometimes if my friends understand and can explained better, then I will just ask them".

Majority of them preferred the lecturer to use both the slides and whiteboard itself to teach because these make them easy to understand and remember rather than use only one of the methods. *"To use both presentation and slides, slides because we can know what the lecturer is talking about, and if white board its better for an explanation, and thus making you to understand better"* said Yoga (Sem3).

About 8 of them said that the teaching method depends on the lecturer itself. 33.33% of the students that have been interviewed interested in the student centered learning. 66.67% or 12 students were not interested in student centered learning. However, 50% of them did not prefer to obtain more exercises and tutorials from the lecturer. The remaining half prefers to obtain more exercises.

The students memorized the notes by reading the notes before memorizing (50%), read over and over (25%), repeat many times (14%), write down notes (9%), memorized with loud music and speak out loud are (2%). Use mind maps, key points and mnemonics to memorize better certain topics that are difficult to understand. 22.22% of students do not use colors to memorize the notes.

Any Other Reasons to Excel in Studies

Majority of the students said that their family and parents are the one who support them to keep moving forward in what they are doing. Meanwhile, some of them said that their housemates, lecturers and own initiative are the things that make them to move forward on what they are doing. *"I want be a good doctor, success in my study, secondly is about my parents, my family, and my brother"* said Yoga (Sem3). According to Nazrath (Sem3), *"The examinations itself make me eager and really motivate me to study"*. About 22.22% or 4 of the students said that they never had experienced any kind of humiliation from their friends and relatives regarding their studies.

DISCUSSION

One of the things that separate great students from those that are average is the methods they use for studying. Some methods are a lot faster and more effective than others. This research was done to identify the studying methods of top 10 students in every semester of the Bachelor in Medical Sciences (BMS) course at Management and Science University (MSU).

The following are the examples of questions being asked to the top students during the interview session to obtain more information about their studying methods; how do you prepare your study schedule? How many hours you spend on studies? How do you take notes during lecture? Consequently, everyone has a different "studying style".

In this study majority of the students does not have their own study schedule. According to them, they normally study whenever they are free, however, some of them prepare a month or one or two weeks before the examination. Meanwhile some students included assignments, tutorials, laboratory reports and presentation in their study schedule.

As mentioned earlier, majority of them does not have fixed study schedule, thus, we are unable to ask them what causes them to miss their schedule. Some of them missed their schedule due to hectic daily classes, fatigue, personal problems, family gathering, and sudden plan to go somewhere and maybe because of sick. Consequently, half of them replaced their schedule by extending their study time or replacing it during free time. During lecture, majority of these students got down the important key points said by the lecturer. Similarly, either they take note or not, they composed their own notes after class in point form. However, some of them explained that taking notes during lecture without understanding is meaningless. These are consistent with other authors [8-9].

Majority of information on the piece or task that they are working on get from the internet. According to Danial, "Internet is easy to access besides it will save time, money, but usually it should not from ".com" website but should from "edu" or "org" because it will be more reliable". Meanwhile, about 2 thirds of top



students did their own notes, laboratory reports. This actually made them easy to understand and remember on what they write. This also consistent with findings of other researchers [10-11].

Almost all the top students that have been interviewed did not receive any laboratory reports, assignments and tutorials from the seniors. This is because they do their laboratory reports, assignments and tutorials on their own without referring others where they will gain knowledge on that particular topic. Although, if they receive any laboratory reports, assignments and tutorials, the students informed that they never copy and paste from the seniors and modify the whole laboratory report and remove any unnecessary things. Sometimes, the top students refer the senior's laboratory report before laboratory test [12].

From what we have studied, majority of the top students include past year question papers as a medium for their final preparation for examination. According to them, they familiarize with the format used in the previous exam when they try past year question papers and they believe that some of the question might repeat in the examination [12].

Majority of the students have been interviewed said that they refer to the lecturer after the class in state of not understanding certain topics because they think the lecturer will give them a better elaborations and they afraid of getting wrong information from others. In contrast, the other few students more likely to refer to friends or internet in state of not understanding certain topics [13].

Although there are many teaching methods that are used by the lecturer, according to the survey two thirds of the top students that have been interviewed had reveal that they prefer the lecturer to use both the slides and whiteboard itself to teach because this make them easy to understand and remember rather than use only one of the method meanwhile the remaining few of them said that the teaching method is depends on the lecturer itself. Example, some lecturer can even teach the students without any PowerPoint presentation and by only using the whiteboard. According to some students, prefer the presentation slides prepared by the lecturer to be more attractive, well organized and not very compact [8, 12, 14].

Students centered learning is the new learning method introduced to all the students including medical students by Management and Science University (MSU). However, only 6 or 33.33% of the students that have been interviewed interested in the student centered learning because they feel that it gives them the chance to express their ideas, opinions, helps the students to study earlier as they prepare and at the same time they prefer the lecturer to guide them in preparing the presentation slides. Meanwhile majority of students are not interested in student centered learning because they feel it is boring, the information is not well delivered, the presenter tend to do mistakes or gives incorrect information and this confuse the students [15].

Both understanding and memorizing are the most common methods used by the top students that have been interviewed while studying because in their point of view, understanding and memorizing makes them easy to remember and explain in examination rather than just read or memorize for the examination without understanding. Example, certain students tend to forget important points or information in examination if they just memorize the facts instead of understanding the main concepts. The methods used by the students to memorize the notes were by reading the notes before memorizing, read over and over, repeat many times, write down notes, memorize with loud music and speak out loud. They also use mind maps, key points and mnemonics to memorize better certain topics that are difficult to understand [16].

Motivation is a desire to achieve a goal, combined with the energy to work towards that goal. Students who are motivated have a desire to undertake their study and complete the requirements of their course. Based on current study, majority of top students said that their parents are the one motivates them to do well in their studies. Besides that, their own ambitions and dreams to become a great doctor motivate them to excel in studies. Obtaining good results in exam, scared about their future, past experiences and their aim to become the best student or graduate with first class honors are also the reasons for the students to do well in their studies [15-16].

CONCLUSION

Regarding the studying methods of top 10 students in every semester of the Bachelor in Medical Sciences (BMS) course, we can conclude that most of the top students followed same methods among all the them which

are to take notes using A4 papers in a point form during the lecture, make their own notes, books and internet as their main source of information, do the past year question papers as the final preparation, refers to friends or internet after class rather than lecturer, prefer the lecturer to use the whiteboard and slides to teach, use both the understanding and memorizing techniques when studying, use colors to memorize and try to improve.

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REFERENCES

- [1] Crede, M., & Kuncel, N. R. Perspectives on Psychological Science 2008; 3: 425-454.
- [2] Marshall, Lorraine. A guide to learning independently - 3rd Ed. Melbourne: Addison Wesley Longman, 1998.
- [3] Newport, C. How to become a straight-A student: The unconventional strategies real college students use to score high while studying less. New York: Broadway Books, 2007.
- [4] Ayres, I. Super crunchers: Why thinking-by-numbers is the new way to be smart. New York: Bantam Books, 2007.
- [5] Chadron State College. Ten Study Methods That Work. <http://www.csc.edu/learningcenter/study/studymethods.csc>. Retrieved by 15th June 2016.
- [6] Fry, R. How to study (6th ed.). Clifton Park, NY: Thompson Delmar Learning, 2004.
- [7] Pauk, W. and Fiore, J.P. How to succeed in college - 6th Ed. Boston: Houghton Mifflin, 2000.
- [8] Weinstein, C. E., & Palmer, D. R. Learning and Study Strategies Inventory (LASSI): User's manual (2nd ed.). Clearwater, FL: H & H, 2002.
- [9] Landrum, R. E., Turrisi, R., & Brandel, J. M. College students' study time, course level, time of semester, and grade earned. Psychological Reports 2006; 98: 675-682.
- [10] Watkins, Ryan. 75 e-Learning Activities: Making Online Learning Interactive. San Francisco: Pfeiffer, 2005.
- [11] Wallace L. Journal of Distance Education 1996; 11: 1-31.
- [12] Wyatt et al. Managing your own learning at university: A practical guide. Dublin: UCD Press, P. 59, 1997.
- [13] Gurung, R. A. R., Weidert, J., & Jeske, A. S. Journal of the Scholarship of Teaching and Learning 2010; 10: 28-33.
- [14] Rashid Al-Mehrzi, S Al-Busaidi, S Ambusaidi, M Osman, M Amat, S Al-Ghafri.. World Applied Sciences Journal 2011; 14 (4): 52-59.
- [15] Pauk, W., & Owens, R. J. Q. How to study in college (9th ed.). San Francisco: Wadsworth, 2007.
- [16] Gurung, RAR. Teaching of Psychology 2005; 32: 367-372.