

## Assessment of current situation of medical education in the College of Medicine-University of Baghdad

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### Summary:

**Background:** The most important advances in medical education in the last decade are the shift in focus from learning objectives to learning outcomes. The advantages of active over passive learning are researched-based. The aim of this study was to evaluate the students reading habits; utilization of lectures, group study, resources utilized during study, and if there is a need to change the curriculum.

**Methods:** A prospective study was done in Medical City Teaching Hospital, from January 2007 to January 2008, including 438 students from the college of medicine, university of Baghdad. A questionnaire consist of 28 questions was given to them. These questionnaire elicited responses regarding reading habits, utilization of lectures, group study, and resources utilized during study. The t-test was used for statistical analysis, the results were considered significant if  $P$  value  $< 0.05$ .

**Results:** In this study students were dependant on passive learning mainly. There was greater use of the lecture notes, and less use of library, textbooks, Journals and online sources. The willing of the students to have active learning was significant ( $P$  value  $< 0.05$ )

**Conclusion:** We would like to conclude that teaching methods are changing, and we should consider that in our curriculum, we should concentrate on active learning. There is a public expectation that we, in the academic and clinical community, will produce safe, ethical and professional doctors.

**Keywords:** Medical education; Medical students; Study habits; Graduation; Teaching; Group study

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### Introduction:

Frequently much time is devoted to developing the content of the curriculum and the type of assessments, with little attention given to how the students best learn or if they will be enhancing their lifelong learning habits (1,2). Almost all schools have undergone major curriculum reform in the last decade (3). Modern concepts of medical teaching are in favor of active learning (small group discussion, clinical workshop, watching medical movies and photographs for learning, using online sources, reading journals, doing seminars) over passive learning (dependant on lectures and textbooks only), and an integrated approach, where clinical disciplines start early and softly from the bulk of the basic sciences (1<sup>st</sup> three years) then progressively gain importance until completion at sixth year (1,4). The aim of this study was to evaluate the students reading habits in the college of medical, university of Baghdad, whether they are dependent on active or passive learning, and their utilization of lectures, group study, resources used during study and if there is a need to change the curriculum.

### Methods

A cross sectional study was done in Medical City Teaching Hospital, from January 2007 to January 2008. 438 students from the college of medicine, university of Baghdad were selected Randomly to be involved in this study. Including students from the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> Academic year (the total number of students for those three academic years were 900). A questionnaire consist of 28 questions was given to them (table 1). These questionnaire elicited responses regarding reading habits, utilization of lectures, group study, and resources utilized during study. The results were evaluated by computer and t-test was used for statistical analysis, the results were considered significant if  $P$  value  $< 0.05$ .

### Results

438 students were participated in this study (table 1), 252 (57.5%) were female and 186 (42.5%) were male. 146 students were from the 4<sup>th</sup> year, 146 from the 5<sup>th</sup> year, and 146 students from the 6<sup>th</sup> year. 255 (58.2%) of them were depending mainly on lectures to gain their medical knowledge, while 183 (41.8%) were depending on lectures and textbooks, 339 (77.4%) prefer reading lectures than textbooks. 321 (73.3%) of them said that they understand the lectures when they read it, while 117 (26.7%) said that they did not, 153 (34.9%) believe that the lectures provide adequate knowledge, while 255 (58.2%) did not.

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Table 1 the questionnaire used in this study, with the result

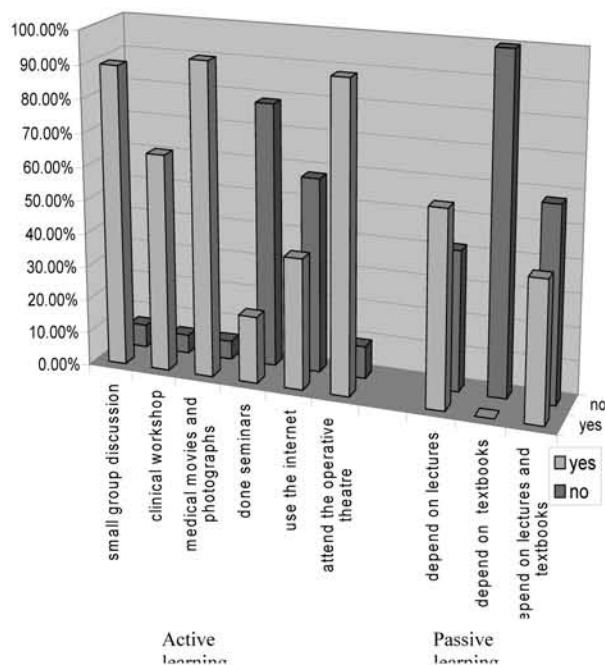
Sex	Male 186 (42.5%) Female 252 (57.5%) Total 438	
1. Do you depend on lectures only to gain medical knowledge	Yes 255 (58.2%)	No 183 (41.8%)
2. Do you depend on textbooks only	Yes 0 (0%)	No 438 (100%)
3. Do you depend on lectures and textbooks	Yes 183 (41.8%)	No 255 (58.2%)
4. Do you prefer reading lectures from reading textbooks	Yes 339 (77.4%)	No 45
5. Do you understand the lectures	Yes 321 (73.3%)	No 117 (26.7%)
6. Does lectures provide adequate knowledge	Yes 153 (34.9%)	No 255 (58.2%)
7. Do you prefer to write the lectures by yourself	Yes 51 (11.6%)	No 387 (88.4%)
8. Do you prefer to receive a printed lectures	Yes 408 (93.2%)	No 30
9. How do you like the lectures to be presented	Overhead (28.8%)	Power point 306 (69.9%)
10. Are textbooks provide adequate knowledge	Yes 264 (60.3%)	No 138 (31.5%)
11. Do you understand what is written in textbooks	Yes 315 (71.9%)	No 72 (16.4%)
12. Do you prefer if we publish a new textbook	Yes 267 (60.9%)	No 171 (39%)
13. which of the following is of more advantage to you	Lectures 9 (2%) Clinical training 123 (28.1%) Both 294 (67%)	
14. Do you prefer the small group discussion	Yes 393 (89.7%)	No 30 (6.8%)
15. Do you need the clinical workshop	Yes 284 (64.8%)	No 24 (5.5%)
16. Do you prefer watching movies and photographs	Yes 408 (93.2%)	No 24 (5.5%)
17. Are you doing seminars	Yes 87 (19.9%)	No 345 (78.8%)
18. Do you use the internet for medical learning	Yes 171 (39%)	No 255 (58.2%)
19. Do you prefer to attend the operative theatre	Yes 402 (91.8%)	No 42 (9.6%)
20. does attending the operative theatre helps you in learning	Yes 414 (94.5%)	No 15 (3.4%)
21. Do you still willing to be a doctor	Yes 393 (89.7%)	No 45 (10.3%)
22. Do you prefer to go to another college	Yes 63 (14.4%)	No 372 (84.9%)
23. Do you like to be a specialist	Yes 321 (73.3%)	No 51 (11.6%)
24. Is there social activities in your college	Yes 93 (21.2%)	No 345 (78.8%)
25. Are social activities important to you	Yes 348 (79.5%)	No 87 (19.9%)
26. Do you attend lectures regularly	Yes 69 (15.8%)	No 369 (84.2%)
27. what you depend for clinical learning	Textbooks 264 (60.3%) What heard from the lecturer 363 (82.9%) lectures 402 (91.8%)	
28. how you prefer the examination	MCQ 237 (54%) Short assay 156 (35.6%) Long assay 63 (14.4%)	

387 (88.4%) prefer not to write the lectures by themselves, while 51 (11.6%) liked to do, 408 (93.2%) wish to receive a printed lectures. 306 (69.9%) prefer to see the lectures presented using the power point, while 126 (28.8%) prefer the overhead for presentation. 264 (60.3%) said that the textbooks provide adequate knowledge for them, while 138 (31.5%) said not. 315 (71.9%) said that they can understand what is written in textbooks, while 72 (16.4%) said they don't. 267 (60.9%) wish if we publish a new textbook for them, while 171 (39%) said no need for that. 9 (2%) of the students gain advantage from the lectures only for their learning, 123 (28.1%) regard the clinical training as the most valuable, while 294 (67%) regard both the lectures and the clinical training as the most valuable for their learning. 393 (89.7%) prefer the small group discussion for learning, 30 (6.8%) did not. 284 (64.8%) need the clinical workshop, while 24 (5.5%) don't like. 408 (93.2%) prefer watching medical movies and photographs for learning, while 24 (5.5%) don't like. 87 (19.9%) of the students did seminars, 345 (78.8%) did not. 171 (39%) use the internet for medical learning, while 255 (58.2%) don't. 402 (91.8%) prefer attending the operative theatre, 42 (9.6%) don't like, 414 (94.5%) said this helps more in learning, while 15 (3.4%) didn't find any difference. 393 (89.7%) still like being a doctor. 63 (14.4%) prefer to go to another college, while 372 (84.9%) still like the medical college. 321 (73.3%) liked to be a specialist, 51 (11.6%) don't like. 345 (78.8%) said no social activities in the medical college, 93 (21.2%) said there is. 348 (79.5%) regard the social activities in the college an important thing, 87 (19.9%) they didn't care about it. 69 (15.8%) attends lectures regularly, 369 (84.2%) don't attend lectures. Regarding the clinical learning 264 (60.3%) depends on textbooks to have the information, 363 (82.9%) depends on what heard from the lecturer during the clinical session, 402 (91.8%) depends on lectures. 237 (54%) prefer the MCQ as the best method for examination, 156 (35.6%) prefer the short assay, while 63 (14.4%) prefer the long assay (table 1). So there is greater use of the lecture notes, and less use of library, textbooks, journals, online sources, small group discussion, clinical workshop, watching medical movies and photographs for learning, doing seminars. The dependence on passive learning was significantly more than active learning ( $P$  value  $< 0.05$ ), (table 2), (figure 1).

Table 2 Comparison between the need of the students for active learning and passive learning

Active learning			Passive learning		
prefer the small group discussion	Yes 393 (89.7%)	No 30 (6.8%)	depend on lectures	Yes 255 (58.2%)	No 183 (41.8%)
Prefer clinical workshop	Yes 284 (64.8%)	No 24 (5.5%)	depend on textbooks	Yes 0 (0%)	No 438 (100%)
prefer watching medical movies and photographs	Yes 408 (93.2%)	No 24 (5.5%)	depend on lectures and textbooks	Yes 183 (41.8%)	No 255 (58.2%)
Have you done seminars	Yes 87 (19.9%)	No 345 (78.8%)			
use the internet for medical learning	Yes 171 (39%)	No 255 (58.2%)			
prefer to attend the operative theatre	Yes 402 (91.8%)	No 42 (9.6%)			
t	df	Sig. (2-tailed)	t	df	Sig. (2-tailed)
5.238	5	.003	2.692	3	.074

Figure 1. Student's preference of active and passive learning



**Discussion**

Medical graduation in Iraq consists of a 6 years, at the end of which the students obtain the degree of MBChB. As regards the curriculum, it's mostly basic in the first 3 years, then exquisitely clinical during the last triennium. Modern concepts of medical pedagogy are presently in favor of an integrated approach, where clinical disciplines start early and softly from the bulk of the basic sciences then progressively gain importance until completion at sixth year. This approach is believed to be highly effective and able to optimize the learning abilities of the students (4). The most important advances in medical education in the last decade are the shift in focus from learning objectives to learning outcomes. The graduation of medicine is necessary but not sufficient to practice the medical profession. A significant percentage of medical students utilized active study methods. Most frequently utilized methods include group study, formulating questions prior to reading, written summaries of material read, and use of question books. The advantages of active over passive learning are researched-based, students utilizing active learning are more likely to internalize, understand, and remember concepts and learned experiences (1). In this study students were dependant on passive learning mainly. 255 (58.2%) of them were dependant on lectures, while 183 (41.8%) were dependant on lectures and textbooks, 339 (77.4%) prefer reading lectures than textbooks. So there is greater use of the lecture notes, and less use of library, textbooks, journals, online sources, small group discussion, clinical workshop, watching Medical movies and photographs for learning, doing seminars. The dependence on passive learning was significantly more than active Learning ( $P$  value  $< 0.05$ ), (table 2), (figure 1). Technological changes and the drive towards professionalism in both medicine and medical education depending on Skills teaching and skills assessment would also feature highly as key advances in the past decade. Skills teaching are now part of all undergraduate medical courses in recognition of the fact that there is little point in producing doctors who know a lot of facts but who cannot talk to patients, cannot examine them properly and cannot carry out any practical procedures effectively on them. Each has contributed to a revolution in the way in which medical students are educated. This revolution is not yet world-wide and many medical schools— indeed many countries—

have yet to have it. Teaching delivery has moved from “talk and chalk” via the epidiascope, slide projector, overhead projector and PowerPoint presentation, to teleconferencing and the “web cam”. Clinical skills are learnt in specially designed clinical skills laboratories using sophisticated models. Access to so many resources is now available from anywhere in the world through the internet. Students can be assessed using some very sophisticated computer programs for example, the United States Medical Licensing skill. In this way “multiple biopsies” of students’ skills are assessed, all students being tested on the same set of skills. (5,8,9,10,11,12). While we still depends on routine methods for examinations. In this study 171 (39%) use the internet for medical learning, while we don’t have a specific learning web site, whoever students rely increasingly on online sources that may not be appropriate to their educational needs (13,14). 393 (89.7%) of the students in this study prefer the small group discussion for learning, 284 (64.8%) wish to have the clinical workshop, 408 (93.2%) prefer watching medical movies and photographs for learning, 87 (19.9%) of the students only did seminars. Studies showed that Students seemed to prefer experiential methods of learning communication skills such as role-playing with simulated patients and communicating with real patients in a clinical context. Also performing seminars gives students the opportunities to facilitate their team working skills. (15). In many places, small discussion groups have become planned aspects of the curriculum. Small groups can support the development of attitudes and provide a place for growth of professional intimacy (16,17). The Harvard assessment seminars compared the performance outcomes of students who studied alone with those who studied in small groups. The students who studied in groups performed significantly better than their colleagues who studied alone. In addition, the students who studied in groups spoke more often, asked more questions, and were generally more engaged during learning activities (1). Studies have shown working in a collaborative environment using small group learning allows for the students to gain multiple perspectives, which enhances their ability to solve complex problems even in the absence of the group (1). In addition the group skills that are acquired can be transferable to the teamwork that will be required of them in their future as a healthcare professional (1). Some curriculum used Laboratory Medicine (LM) as an educational area mainly set near the beginning of the clinical path, i.e., from third year 2<sup>nd</sup> semester, to fourth year 2<sup>nd</sup> semester,

Examinations run by the National Board of Medical Examiners (NBME) in Philadelphia. Change has become so rapid that it is sometimes hard to keep up (3, 5, 6, 7) Students are generally taught communication skills from first year onwards. Looking specifically at the assessment of skills, perhaps the most significant advance came with the introduction of the Objective Structured Clinical Examination (OSCE). Students rotate round a series of around 20 “stations”, each of which is designed to test a particular thus constituting a sort of zip between the basic sciences and the clinical sciences (18). The academic disciplines usually contributing to LM are: clinical biochemistry, clinical microbiology, clinical pathology and more recently and increasingly molecular biology, particularly for the aspects of pathological and clinical relevance. Laboratory results are presently far more reliable than were only a few years ago (19). 402 (91.8%) of our students prefer attending the operative theatre, and 414 (94.5%) said that this helps more in learning. The operating room (OR) is an important venue where surgeons do much of medical student teaching. Studies proved that there is a favorable learning environment in the OR; it allows learners to “feel the pathology,” (20) Only 69 (15.8%) of our students attends lectures regularly, 369 (84.2 %) don’t, they generally prefer the active methods of learning. Studies demonstrated that instructional methods such as lectures were ineffective in the teaching in comparison with experiential methods like videotaped interviews with simulated patients and feedback from the teacher (15).

Responsibility for learning should be placed on the student, with the instructor’s role shifting from lecturer to facilitator. They learn better and more, when they are involved actively in learning than when they are passive recipients of instruction. In general, students learn what they practice (21). Professionals have to be taught to behave professionally. They have to learn to work in teams. They have to learn how to interact with the public. Need to practice medicine safely. They have to learn to adapt to changing knowledge, to keep up to date with new skills, with new laws, with new treatments, be they new drugs, new surgical procedures or even new complementary medicines, and, of course, they have to put up with an ever-changing Health Service structure. We would like to conclude that teaching methods are changing, and we should consider that in our curriculum, we should concentrate on active learning. There is a public expectation that we, in the academic and clinical community, will produce safe, ethical and professional doctor

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