

Assessment of Lecture Outlines as a Learning Resource at Dow Medical College – A Students' Perception

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ABSTRACT

Objective: To determine which study aid, Lecture Outlines or textbooks, do the students of Dow Medical College find more accessible and preferable for the comprehensive coverage of their educational course.

Introduction: Technology has revolutionized education as we know it. Each method has its proponents, with students preferring either one or a combination of those choices. The effects of the guided notes, overhead lectures, textbook reading and note taking methods on the academic performance of students have been studied thoroughly and convincingly in several studies.

Methodology: This cross sectional survey which was conducted at Dow Medical College from August 1st 2013 till October 1st 2013. Ethical approval for conducting study was taken from the Institutional Review Board of Dow University of Health Sciences. Data was collected by convenient sampling. The subjects for the study were students Bachelor of Medicine and Bachelor of Surgery (M.B.BS) from Dow Medical College (DMC) enrolled in 1st, 2nd, 3rd and 4th year. Students fulfilling the inclusion criteria were included in the study after written consent. For data collection, 225 students were approached and given questionnaire for the assessment purpose. 197 students returned the filled questionnaire. Out of which, 6 were discarded due to their inappropriate filling giving an overall usable return rate of 84.88% (191 out of 225). Data was entered and analyzed using SPSS software (version 16.0).

Results: From 191 valid participations, for the comprehensive coverage of educational course, 23% of students prefer textbooks, 1% prefers lecture outlines, 74.3% prefer both lecture outlines and textbooks and remaining 1.6% mentioned the usage of other study sources. 54.16% of students, who use Lecture Outlines only or Lecture Outlines and textbooks both in combination, prefer Lecture Outlines because they contain the complete and authentic information required to pass Dow University of Health Sciences (DUHS) exams. 78% of students believe that Lecture Outlines available on DUHS websites are unorganized, uneven and haphazard. 67% of students face disparities between the Contents in textbooks and Lecture Outlines. 47.6% of the students consider the prior availability of Lecture Outlines, a cause of students bunking their classes. 56.5% of students believe that if the Lecture Outlines were not available on the DUHS website, students would be encouraged to pay more attention in their respective lecture halls. 74.3% of students believe that Lecture Outlines must be made more effective for the students to learn.

Conclusion: Majority of the Student mass of DMC prefer Lecture Outlines and textbooks in combination for the comprehensive coverage of their educational course. According to them, Lecture Outlines provided, are unorganized, uneven and haphazard and they fail to build the conceptual understanding of the topic. Hence, they should be made more effective and easily understandable for the students.

Key words: Preferrance, textbooks, lecture outlines, effectiveness.

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INTRODUCTION

Technology has revolutionized education as we know it. Each and every day, new modes of learning are

created, tried and tested to discover more productive learning experience. A journey that takes its root from the textbooks and traditional method of delivering lectures in a classroom has now evolved by the advance techniques of overhead lectures (lectures on transparencies), guided notes and multimedia slide presentations.

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Guided Notes are teacher-prepared handouts that outline or map the lectures, intended to prompt the students to write the key concepts, examples, definition, the

facts etc. They are intended to help the learners organize the contents of the lectures which they are taking in class and thus providing them with the opportunity for the active participation in class room lectures.

Each method has its proponents, with students preferring either one or a combination of the above mentioned choices, sometimes leaning towards the side that offers a chance for the best academic performances.

The effects of the guided notes, overhead lectures, reading textbooks and note taking method on the academic performance of the students have been studied thoroughly and convincingly in several studies. For example a study conducted across two sections of a college course via quizzes, concluded the mean increase in quiz scores averaged 3.5 in the guided-notes condition (range, 2.5 to 4.5) from 3.1 in the completed-notes condition (range, 1.9 to 4.2)¹ Jennifer L. Austin, Melissa Lee and Jeffrey P. Carrin, in their study, found that the academic performance of the students was 62% with the traditional lectures, 97% with overhead lectures and 100% with overhead lectures combined with guided notes.² John Morrow signifies various perceptions of students towards the guided notes.³

Keeping in view all of the above, the objective of the underlying survey based research is to evaluate which study aid, the Lecture Outlines or the textbooks, do the students of DMC, find more accessible and preferable for the comprehensive coverage of their course. The designed research will also determine students' perceptions regarding usefulness of the lecture outlines and disparities they come across between the content of textbooks and Lecture Outlines.

RATIONALE

Advancements are being made in medical courses every day. The competition among the students themselves, to be at best in their professional skills and to get the best possible results at the end of their academic year, forces them to adopt the best study aid or teaching tool available. The main idea or the goal behind conducting the above described survey based research is to a) highlight which study aid is followed more by the students, b) why it is followed, c) if it is followed then whether it is useful or not, d) either the set targets for the academic performances are achieved or not and e) will they prefer the same aid in the future too, so that the appropriate steps can be taken by the higher authorities to enhance that particular study aid for the betterment and ease of the students.

OBJECTIVE

To determine which study aid, Lecture Outlines or

textbooks, do the students of Dow Medical College find more accessible and preferable for the comprehensive coverage of their educational course

MATERIALS & METHODS

RESEARCH DESIGN

This cross sectional survey was conducted at the undergraduate students' level at DMC, Karachi. The duration of study was from 1st August 2013 till 1st October 2013.

SAMPLE SIZE

Putting prevalence (p) as 96% for the positive reaction of students towards guided notes, Confidence Level 95%, Margin of Error (d) 5% and $Z_{d/2}$ 1.96 in One Sample Proportion Sample Size Calculation Formula $n = \frac{(Z_{d/2})^2 pq}{(d)^2}$, Sample Size (n) calculated was 60 minimum.

SAMPLE TECHNIQUE

The sample technique was convenient sampling.

INCLUSION/ EXCLUSION CRITERIA

1. Students of DMC were chosen as subjects.
2. Students currently enrolled in 1st, 2nd, 3rd and 4th year of M.B.B.S program were approached.
3. Students were approached in their classes only, at the end of their ongoing lectures, in order to maintain an organizing way of data collection and to avoid any haphazardness.
4. No gender discrimination was made while collecting data.
5. No discrimination was made on the basis of the respective ages of subjects for participation.
6. Students absent at the day of the research were excluded.
7. Students unwilling to participate were excluded.
8. Students of the 5th year M.B.B.S were not included for the survey as they were not provided with the facility of lecture outlines by Dow University of Health Sciences, to prepare for their semester exams.

SAMPLE COLLECTION

Ethical approval for the study was taken from the Institutional Review Board of DUHS Karachi. Minimum of 25 students from each year were approached. Students were approached by the researchers in their respective classrooms or lecture

halls. Students present on the date were explained briefly, the aims and the objectives of the research by the researchers and were invited to participate as subjects in the survey. Participants who fulfilled the inclusion and exclusion criteria and gave written consent were given data collecting tool to participate in the survey. Note that all the subjects were assisted by the researchers in filling of their questionnaires at each step. After collection, the data was entered and analyzed by SPSS (version 16.0). Categorical data was presented as proportion and frequency.

DATA COLLECTING TOOL

A questionnaire comprising 17 items in totality was administered to all the participants to collect data. 17 items of the questionnaire are explained below:

- First, second and third item of the questionnaire was to examine students’ preference of Lecture outlines over textbooks or both as their study aid for the comprehensive coverage of their educational course and the main idea behind their preference.
- Fourth item was ranking the suitability of lecture outlines and the textbooks as an effective teaching tool.
- Fifth and sixth item was clarifying students’ perceptions regarding lecture outlines.
- From seventh up to the eleventh item the questionnaire was discussing the disparities between the contents of lecture outlines and textbooks.
- Twelfth to fourteenth was giving an assessment of the impact of lecture outlines on the behavior of students in their respective lectures hall.
- Fifteenth, sixteenth and seventeenth item was analyzing the students’ general recommendations regarding lecture outlines.

RESULTS

For the given survey based research, 225 students of Dow Medical College were approached and given aforementioned questionnaire. Amongst the 225 questionnaires distributed, 197 were filled and returned. Of these 197, 6 were discarded for they were in appropriately filled. Hence, the data based on information provided by rest of the correctly filled 191 questionnaires was used for the final analysis. Table 1 shows baseline data of subjects.

From 191 valid participations, graph 1 shows students' preference for different study tools for the comprehensive coverage of educational course. Graph 2 signifies students' belief regarding how effective different study tools are.

The responses that were obtained for the different beliefs to prefer Lecture Outlines from those who use Lecture Outlines and who use Lecture Outlines and textbooks in combination are shown in table 2. Similarly when those, who prefer textbooks only and who use them in combination with lecture outlines, were asked why they had the said preferences, the responses that were obtained then are shown in table 3. Table 4 signifies various perceptions of students for Lecture outlines.

Survey showed 67% students face disparities between the content in textbooks and that provided in the lecture outlines. 22.5% verify such disparities from textbooks and other sources. 20.9% believe that questions related to such disparities appear in the semester and modular exams and when such disparities occur, 35.1% students follow lecture outlines for solving such questions, 58.6% go with the contents of textbooks and remaining 6.3% deny attempting such questions. 69.9% believe that such disparities affect conceptual understanding of the respective topics.

56% students believe that they are able to derive greater benefit from their scheduled lectures in college, after going through the Lecture Outlines beforehand. 17.8% students don't go to the lectures halls after reading Lecture Outlines. 56.5% students believe that if Lecture Outlines were not available on the Dow University of Health Sciences' website, students would be encouraged to pay more attention in class rooms. 47.6% of the students consider the prior availability of Lecture Outlines, a cause of students bunking from lecture halls. 60.7% of students will continue the use of Lecture Outlines in the future. 55.5% would like to recommend the use of Lecture Outlines to their fellow students. 74.3% believe that Lecture Outlines must be made more effective for the students to learn. 15.2% favor their removal from the website. 5.2% students were not sure, saying that things should be left as they are. 5.2% have other suggestions for Lecture Outlines.

Table 1: Baseline Data of the subjects

	No. of Students	
	(n)	%
Sex		
Male	26	13.6
Female	165	86.4
No of Students		
First year	21	11.0
Second Year	62	32.5
Third Year	42	22
Fourth Year	66	34.6

Table 2: Percentages and frequencies of students who agree with the following reasons for their preferences for Lecture Outlines

Lecture Outlines are Preferred Because:	No. of Students	
	(n)	%
They are short and precise.	45	23.6
Lack of the time requisite for going through textbooks.	28	14.7
They contain the complete and authentic information required to become a doctor	9	4.7
They contain all the complete and authentic information required to pass DUHS exams.	78	40.8
They preferred by all/almost all the students (Peer pressure).	22	11.5
They are preferred by all/almost all the teachers.	18	9.4
Due to the perception that examination papers are being made from the lecture outlines.	49	25.7
They have other reasons to prefer	15	7.9

Table 3: Percentages and frequencies of students who agree with the following reasons for their preferences for textbooks:

Textbooks are Preferred Because:	No. of Students	
	(n)	%
They contain all the complete and authentic information to become a good doctor	86	45
They contain all the complete and authentic information to pass DUHS exams	65	34
They help in conceptual understanding of the topic	101	52.9
They are also preferred by their fellow students (peer pressure)	18	9.4
They are preferred by almost all of their teachers	35	18.3
Examination papers are made from the books	12	6.3
They have their own reasons to follow textbooks	11	5.8

Graph 1: Preference of students for textbooks and Lecture Outlines for the comprehensive coverage of their educational course

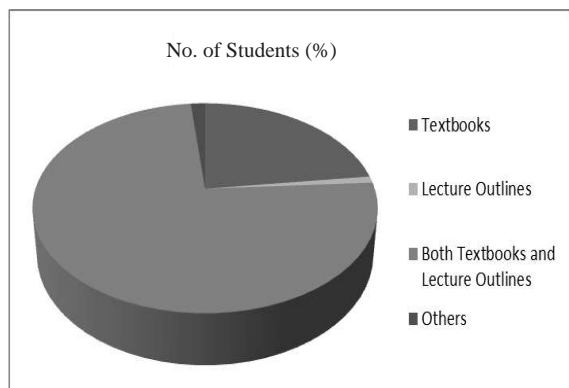
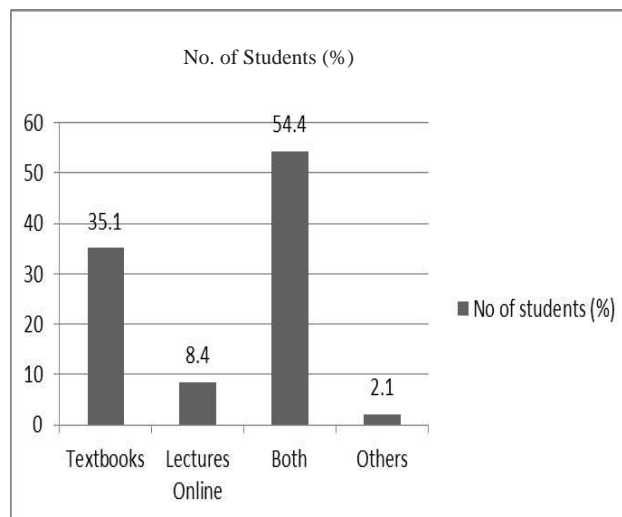


Table 4: Percentages and frequencies of students who agree with the below mentioned perceptions regarding Lecture outlines

Perceptions	No of students (%)
Lecture Outlines help them in solving Multiple choice Questions	70.7
Lecture Outlines help them in Scenario Based Learning	40.3
Lecture Outlines help in Conceptual understanding of the topic	15.7
Lecture Outlines helps them in their clinical rotations	13.1
Lecture outlines help them in discussion among other students and teachers	34.6
Lecture Outlines are retainable	49.7
Lecture Outlines are recallable	57
Satisfied from Lecture Outlines for get good academic results	23
Satisfied from Lecture Outlines for becoming a good professional	15.5
Those who study from textbooks only will be better doctors of the future	74
Lecture Outlines provided by the university are un organized	78

Graph 2: Grading of effectiveness of Lecture Outlines and textbooks by student community



DISCUSSION

Most of the students of Dow Medical College combined the use of both Textbooks and Lecture Outlines. This was an expected finding, although the margin of this majority (74.3%) was surprising indicating a drift in the preference of the students from the conventional method of learning from textbooks to a computer assisted studying tool, Lecture Outlines.⁴

As per our expectations, students preferred the use of Lecture Outlines for better academic results. The study published in *Journal of Behavioral Education*¹ and the one conducted by Gertner R T⁵ supports our finding. Study highlights the lack of professional satisfaction students have for Lecture Outlines. This opinion was later reaffirmed by the questions regarding the reasons for textbook and Lecture Outlines preference. A majority did not see Lecture Outlines as sufficient for their course coverage but include the usage of Lecture Outlines along with textbooks simultaneously for the better gain of knowledge. This observation is supported by the results other researches as well.^{7,8} This was further augmented by the view that exams themselves are focused on the material provided in these Lecture Outlines. Hence, it is our assessment that their utility, in the eyes of the student body is restricted to their usefulness in exams only, this is really contradictory from the conclusion of a previously conducted study.⁹ Moreover, along with passing exams, students of DMC find Lecture Outlines more feasible for covering up the huge burden of syllabus in a short interval of time given to them for preparing for exams. This coincides with the results of a study, published in *Rev Bras Anesthesiol*¹⁰ and *J Dent Educ*.¹¹

Textbooks still hold their importance for receiving quality education in our study also.¹² The most major part of the questionnaire was regarding the perceptions of the students for Lecture Outlines. The idea that students see Lecture Outlines as a preferred teaching tool, as was found in previous studies on the subject, did not carry weight in our results.³ We believe this difference of opinion is because of the validity issues which students find while studying from Lecture Outlines provided by DUHS.

78% students said they believe that Lecture Outlines available on websites are unorganized, uneven and haphazard. This is a major finding of the research. Students do not believe that the Lecture Outlines are accurate in their subject matter, yet up to 70% believe their examinations will be easier if they go through them. Keeping in consideration that the ultimate goal of the academic process is attainment of knowledge and not grades, this is a disturbing finding.

Research gave a clue about students' perception, that prior availability of Lecture Outlines forces them to take risk of class bunking. This is the matter of concern here because prior availability of Lecture Outlines has encouraged students even more to attend Lectures in lecture halls in a previous conducted study.¹³

Delivering of lectures by an instructor in a lecture hall enable students to synchronies their gathered

knowledge, therefore, different effective strategies must be applied and tested by higher authorities for improving class room environment so that lectures in class rooms can become more appealing for the students as concluded by the other studies too.¹⁴⁻¹⁸ A part of the research that assessed the student body's views regarding effectiveness of the Lecture Outlines, garnered results in keeping with previous such conducted researches.³ Roughly, half the student populace reported that the material in the Lecture Outlines is retainable and recallable. It was interesting to find how most students considered textbooks as the ultimate learning tool, with 74% saying that they believe those who study exclusively from textbooks would be better doctors than those who study from Lecture Outlines. This finding does not coincide with an another study made,¹⁹ may be due to the fact that either they are not able to make concepts from Lecture Outlines due to their haphazardness or may be due to the reason that the quality of the content of Lecture Outlines itself is not fair enough.

Despite these shortfalls, a majority (55.5%) of the students say they would suggest the use of Lecture Outlines to their peers, reflecting the faith of the students in the Lecture Outlines as a tool of learning. At the same time, an even greater majority (74.3%) believes that the Lecture Outlines must be made more effective for the students to learn from them as textbooks are. This is consistent with conclusion of a study done.²⁰ While it is understood that the system is quickly finding its feet; the opinions of the student body can provide valuable insight into the matter.

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