Students' perception of factors affecting learning

Factors affecting learning

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Abstract

Aim: In this study, we aimed to evaluate the perception of medical students of external factors, which influence their learning process.

Material and Methods: The study was conducted in the Central Park Medical College Lahore in August - September 2021. The questionnaire was distributed to the medical students who wished to participate in this study. Two hundred and one completely filled proformas have been received, which were analyzed using computer software.

Results: The analysis of the two hundred and one completely filled proformas revealed that factors, which strongly influence the learning process include teaching by teachers with excellent teaching strategies/skills, having a separate room for study, 24/7 library availability, and revision of important component/topics in special revision sessions at the end of the course.

Discussion: The evaluation of the factors that influenced the learning process of the students from the students' point of view is vital for teachers and administrators of the institution because improvements made in this regard will enhance the performance and academic achievements of the students. The most important factors that have an impact on the learning process of the students are teaching strategies and a comfortable environment.

Keywords
External Factors, Learning, Medical Students

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Introduction

Teaching and learning are the key steps in the progress and development of the human race. The development of effective plans and application of appropriate strategies for the process of learning are of vital importance. There are many factors, which may yield an impact on the learning process. The important influencing factors include internal motivation of the learners such as willingness to learn, mental and physical capabilities. However, external factors also contribute a lot to the learning process, which may include teaching strategies, infrastructure and an encouraging atmosphere.

The academic achievement of the students is influenced by the educational infrastructure facilities [1]. The type of institution (public/private) and income of the parents also affect the academic performance of the students [2]. The culture also has an impact on learning [3]. Teaching strategies revealed influence on the students’ academic achievements [4]. Another important factor, which affects the learning process is the use of information technology [5]. Parental education is also an external factor influencing the children’s learning [6].

The aim of the present study is to assess the opinion of the medical students regarding the external factors, which influence their learning process.

Material and Methods

A questionnaire has been designed that included questions regarding the factors, which influence the learning process of students. This questionnaire contained twenty questions. After receiving ethical approval from the institutional ethics review board, the questionnaire was distributed among the medical students who consented to participate in this research. Medical students from the Central Park Medical College in Lahore participated in this study. This study was carried out in August and September 2021. This questionnaire lacks any personal identification like participants’ name, cell phone number and email address. Completely filled proformas were analyzed using a computer software.

Statistical analysis:

Completely filled questionnaires were considered for data analysis. Microsoft excel was used to get the average of responses of students to each parameter and total score.

Results

In the present study, 201 completely filled proformas were received from the willing participants. The analysis of the data revealed that according to the students’ point of view regarding the factors, which strongly influence their learning process include teaching by teachers with excellent teaching strategies/skills (average score: 4.7), having a separate room for study (average score: 4.7), 24/7 library availability (average score: 4.6), a well as revision of important component/topics in the special revision sessions at the end of the course (average score: 4.6). The results are shown in Table 1.

Other factors, which may affect the learning process of students in the opinion of students, include conduction of lectures containing difficult conceptual contents in the beginning of the day (average score: 3.9), conduction of practical sessions after the delivery of lectures of the respective topic (average score: 4.3), presentation of students in the small groups of 10-20 students (average score: 3.5), highlighting important things (in bold with different colors) in the slides of lectures (average score: 4.3), lecture theaters/laboratories with appropriate temperature such as air conditioning and heating (average score: 4.5), teaching by high qualified teachers (average score: 4.4), types of seats of the lectures theater wooden benches/ plastics /soft sofa (average score: 4.1), conduction of tests on the first working day of every week (average score: 3.5), conduction of tests in alternative weeks (average score: 3.9), posttest/exam discussion in class (average score: 4.5), having a shared room for study (average score: 2).

Table 1. The factors which affect the learning process

| Question                                                                 | Gender | Score | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Total score |
|-------------------------------------------------------------------------|--------|-------|-------------------|----------|---------|-------|---------------|-------------|
| Having own laptop                                                       | F      | 4.1   | 1                 | 0.87     | 5       | 4.35  | 15             | 13.4        | 49        | 42.65   | 45       | 39.13   | 115      | 100   |
|                                                                         | M      | 4.2   | 2                 | 2.33     | 3       | 3.49  | 11             | 12.79       | 28        | 32.56   | 42       | 48.84   | 86      | 100   |
| Having a separate room for study                                        | M      | 4.6   | 1                 | 0.87     | 4       | 3.48  | 2              | 1.74        | 30        | 26.9    | 78       | 67.83   | 115     | 100   |
|                                                                         | F      | 4.5   | 2                 | 2.33     | 1       | 1.16  | 4              | 4.65        | 26        | 30.23   | 53       | 61.63   | 86      | 100   |
| Living in your house                                                    | F      | 3.8   | 5                 | 4.35     | 8       | 6.96  | 30             | 26.9        | 34        | 29.57   | 38       | 33.04   | 115     | 100   |
|                                                                         | M      | 3.7   | 3                 | 3.49     | 8       | 9.30  | 23             | 26.74       | 32        | 37.21   | 20       | 23.26   | 86      | 100   |
| Living in a hostel                                                      | F      | 3.1   | 11                | 9.57     | 18      | 15.65 | 40             | 34.78       | 33        | 28.70   | 13       | 11.30   | 115     | 100   |
|                                                                         | M      | 3.4   | 5                 | 5.81     | 16      | 18.60 | 20             | 23.26       | 27        | 31.40   | 18       | 20.93   | 86      | 100   |
| Uninterrupted power supply (electricity) round the clock (24/7)         | F      | 4.6   | 0                 | 0.00     | 3       | 2.61  | 6              | 5.22        | 30        | 26.9    | 76       | 66.09   | 115     | 100   |
|                                                                         | M      | 4.4   | 1                 | 1.16     | 0       | 0.00  | 11             | 12.79       | 27        | 31.40   | 47       | 54.65   | 86      | 100   |
| Availability of Cantt(en for food/tea/coffee) round the clock (24/7)    | F      | 4.5   | 0                 | 0.00     | 1       | 0.87  | 4              | 3.48        | 41        | 35.65   | 69       | 60.00   | 115     | 100   |
|                                                                         | M      | 4.3   | 0                 | 0.00     | 2       | 2.33  | 8              | 9.30        | 38        | 44.19   | 38       | 44.19   | 86      | 100   |
| Availability of Library facility round the clock (24/7)                 | M      | 4.4   | 3                 | 2.61     | 0       | 0.00  | 11             | 9.57        | 33        | 28.70   | 69       | 60.00   | 116     | 101   |
|                                                                         | F      | 4.5   | 0                 | 0.00     | 1       | 1.16  | 3              | 3.49        | 32        | 37.21   | 50       | 58.14   | 86      | 100   |
| Teaching by teachers with excellent teaching strategies /skills         | F      | 4.8   | 0                 | 0.00     | 0       | 0.00  | 1              | 0.87        | 22        | 19.13   | 92       | 80.00   | 115     | 100   |
|                                                                         | M      | 4.7   | 1                 | 1.16     | 0       | 0.00  | 0              | 0.00        | 18        | 20.93   | 67       | 77.91   | 86      | 100   |
| Revision of important component / Topics in the special revision sessions at the end of the course | F      | 4.6   | 0                 | 0.00     | 1       | 0.87  | 2              | 1.74        | 38        | 33.04   | 74       | 64.35   | 115     | 100   |
|                                                                         | M      | 4.6   | 0                 | 0.00     | 2       | 2.33  | 0              | 0.00        | 27        | 31.40   | 57       | 66.28   | 86      | 100   |

*means strongly disagree, “ means disagree, “ means Neutral, “ means Agree, “ strongly agree.
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Discussion
The data analysis in the present study revealed that according to the perception of the students, the strongest factor, which influences students’ learning process is the excellent teaching strategies used by teachers. A study published by Urmutia-Aguilar ME et al showed that the teaching strategies have an impact on the learners’ academic achievements [7]. Good teaching exerts a strong influence on learners [8].

In our study, the second most important factor that affects the learning of medical students is the availability of separate rooms for the study as per students’ point of view. A peaceful and comfortable environment without distracting factors plays an important role in the learning process. Even the classroom environment such as temperature and ventilation influenced the students’ examination scores [9].

The current study revealed that the third most influencing factor in the learning process is the availability of library facility round-the-clock (24/7) and revision of important components/topics in the special revision sessions at the end of the course. The library use is closely related to academic achievement [10]. More use of the library in the college of medicine is quite important for the growth and development of the learners.

In our study, the majority of the students favors 24/7 library availability. The students also expressed their strong opinion regarding the revision of the important topics at the end of the course, which may reinforce the learning. According to the students’ perception, other factors, which may affect the learning process include round-the-clock uninterrupted power supply (electricity), posttest/exam discussion in class and lecture theaters/laboratories with an appropriate temperature (air conditioning and heating). The learning process and the students’ academic performance are also influenced by environmental factors such as noise, wall colors, room lights and open space [11].

The study and assessment of the factors, which may influence the learning of the students from the students’ point of view, are also important for the teachers and administrators of the institution, as they may affect student performance and academic achievements and may influence the ranking of the institution nationally as well as internationally.

Conclusion:
The external factors such as excellent teaching strategies, peaceful and comfortable environment, as well as the facility of library are of importance in the learning process according to the students’ viewpoint.

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Scientific Responsibility Statement
The authors declare that they are responsible for the article’s scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement
All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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