

The challenges and limitations of the theoretical Coursers from the perspective of General Surgery trainees in Mashhad University of Medical Sciences.

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ABSTRACT

The Department of Surgery has always been grappling with issues in the course of doing its missions and duties. Meanwhile, continuation of those challenges and failures, will lead to a sharp drop in the quality of education and teaching. Therefore, the aim of this study is to examine the challenges and limitations in the theoretical Coursers from the perspective of General Surgery trainees. In this descriptive study, 180 male and female students of undergraduate training in general surgery group were examined during 2012 to 2013 for four two-month periods making 8 months. The data were collected via a questionnaire designed by the researcher and were analyzed through descriptive and inferential statistics methods including chi-square test, Fisher's exact test, the Student Test for the Independent group or its non-parametric equivalent test i.e., the Mann-Whitney test in the SPSS statistical software.

The findings of this study showed that statistically there was no significant differences between the attitudes of students in terms of gender, and whether they were indigenous or non-indigenous. However, there was no significant difference between student's attitude concerning the following issues but the majority of the students fully agreed with these issues: limited duration of the course, lack of required time for learning, the time classes are held at, students' motivation, academic failure, quitting a Single-Course was a significant difference, but most students fully agreed to the view. The results indicate most students fully agree with the problems and challenges of the theoretical courses and consider these problems as factors for school failure during this two-month period, and they often quit the course.

KEYWORDS: challenge, limitations, theoretical training, trainee, General Surgery

1. INTRODUCTION

Higher education is a key element of human development in each country. Universities are also considered as one of the most important educational sites that prepare students for different jobs by providing different trainings for them {1}. Management is a matter of particular sensitivity and importance in educational organizations and consequences of any negligence on the part of authorities in charge of these centers in provide services to students, will be directed towards the society. Therefore, the main objective of universities would be training skilled manpower needed by the society, promotion of research and providing opportunities for development of the country {2}.

Today, most universities worldwide are in search of teaching method which seeks to expand and upgrade students' capacity of decision-making, continuous and self-interested learning. Faculty members should come to believe this idea with respect to educational activities that their duty is not merely to convey scientific realities but using modern methods of education they should also provide learning opportunities for students as well as teach them how to think {3}. Another fact requiring consideration by many academics is making use of various active teaching methods, which suits each filed of education {4}. Since the disciplines in higher education are varied, instructors should select their teaching and educational methods with regard to the nature of these disciplines and they should take into consideration all aspects of education including presentation, implementation and feedback. They should also pay due attention to educational problems in this path and take serious action in resolving such problems. Teaching and learning processes should be reconsidered in the context and specific standpoint of different disciplines, and all aspects from problems, challenges and deficiencies facing education should be taken into consideration and serious measures be taken in resolving them {5}. Otherwise, persistence of challenges and

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deficiencies leads to significant decline in the quality of education and teaching and consequently dissatisfaction on the part of trainees {6}.

Education is only effective when it is designed and planned beforehand. In educational designing it is essential to identify and categorize educational needs of the department as well as educational needs of students, in order to be able to meet them {7}. Since the Department of General Surgery is vested with direct responsibility of educating medical students and specialists, it is crucial to plan and organize the whole educational program from the outset to the end from different educational perspectives, and figure out solutions for the relevant educational problems. Educational services should be provided by the group in such a manner that students feel safe and ready to learn more. Accordingly, the Department of General Surgery should have persistent effort in identifying problems, developing, implementing and amending them, in the course of its mission. Data collection and technical ability and skills in problem solving leads to the success of education systems {8}.

Therefore, what is important in education, is considering a targeted education which seeks to identify and amend problems in the education process, and by considering the effective teaching methods leads to increased productivity, improvement of access to high-quality educational goals {9}. Therefore, this study sets out to examine the educational problems pertaining to the theoretical courses provided by the general surgery group for the trainees who are required to attend these classes in the afternoon during two months and for 52 sessions. The 52 sessions are set according to the curriculum approved by the ministry and the department is required to fully abide by it.

On the other hand, presentation of these topics within two months, the days of which are mostly holidays, makes it more difficult for the department and forces the trainees to attend these classes continually during the week and even sometimes they would have to attend two sessions in a single day which causes boredom in students and lack of proper leaning. During the past programs, these 52 topics would be presented to the students of surgery department during 6 months. Therefore both the Department as well as students had a much easier task in terms of presentation and learning. However this has turned to a too grave and impossible task due to the pressures form the faculty necessitating accomplishment of the program within only two month. Therefore an attempt is made to examine these problems from the standpoint of the learners.

2. MATERIALS AND METHODS

This study is a simple descriptive study. The population of this study included medical students, doing their internship in the Department of General Surgery of Imam Reza (AS) Hospital in Mashhad, during the academic 2012-2013. The population consisted of total number of 180, of which 94 were male students and 86 were female students.

In this study, the sample size of the study population was calculated based on chi-square test and with regard to the overall framework of the population under study as well as the objectives and hypotheses of the study. Therefore, with regard to the 80 percent potential, significance level of 5% and an equivalent effect size of 0.2, the minimum required sample size for the study was estimated as 180. The sample size was calculated using the statistical software NCSS & PASS. This study during this internship program, medical students in general surgery group were studied within 8 months consisting of 4 two-month periods (Feb, April, May, 50 students), (June-July 35 students), (August-September 45 students), (October-November 50 students).

The data collection tools and procedure consisted of a researcher-made questionnaire and half-structured interviews with students which were carried out for each period at the time of admission of students to the group, as well as the documents relating to the grades, course omissions and failing of students. The questionnaire consists of two demographic factors (being indigenous or not, and gender) and 10 questions based on Likert scale of five options (strongly agree to strongly disagree).

To confirm the validity and reliability of the questionnaire, 40 preliminary questionnaires were distributed among the population. Then, based on the results of the pilot study, and by making use of expert's knowledge in the field of educational management as well as statistical techniques such as factor analysis and reliability and Cronbach's alpha, the questionnaire was considered valid and reliable. Finally, the valid and reliable questionnaires were distributed randomly among students. Questionnaires were collected during 8 months. Given the fact that the length of the training program in general surgery group was a two months period, students completed the questionnaires at the end of each course in person.

Before distributing the questionnaire, we explained the purpose of the research and its benefits for future students in advancing the objectives of the group. Due to the fact that students had just passed the two-month period and had grappled with its problems, all of the students carefully cooperated in filling the questionnaire. After data collection and primary processing of them, to analyze the data we made use of descriptive statistics (single and two-dimensional frequency tables, rectangular statistical charts and frequency distribution charts and calculation of descriptive statistics index) and inferential statistics (chi-square test, Fisher's exact test, the Student Test for the

Independent group or its non-parametric equivalent test i.e., the Mann-Whitney test). To analyze the data we made use of the statistical software SPSS. The significance level for this study was considered less than 05/0.

3. ANALYSIS OF COLLECTED DATA

The Quantitative results of a study showed that of 180 medical internship students of general surgery, 94 students were male and 86 students were female. The data also show that the number of indigenous students (114) was higher than the number of non-native students (66).

The results in Table 1 shows that the students' views on the items pertaining to the large volume of material to be covered during the period with (7%) 56 item concerning time limitation for exam preparation with (7%) 56 have the highest frequency and the majority of students highly agree with these items. Student's views on the question of extending the classes beyond the two-month period with (8%) 17 had the lowest frequency percentage and (7%) 31 of students relatively agreed with that item.

The results in Table 1 also shows that the majority of the students strongly agreed with 90% of theoretical questions and they only relatively agreed with 1% of theoretical questions.

Table 1: Relative frequency distribution, Absolute and mean of students' Viewpoint

Viewpoint	Fully Agree	Agree	Rather Agree	Disagree	Fully Disagree	Miss	Mean
1. Limited period of two months for the general surgery internship program	(1/0%)46	(0%)20	(2%)12	(0%) 15	(7%) 6	(0%)0	(0%)20
2. Large volume of material to be covered during the period	(7%) 56	(4%)24	(0%)10	(1%) 6	(8%) 2	(0%)0	(0%)20
3. Time limitation for learning	(3%) 48	(6%)30	(2%)12	(7%) 6	(2%) 2	(0%)0	(0%)20
4. Time limitation for exam preparation	(7%) 56	(8%)27	(2%) 7	(6%) 5	(2%) 2	(0%)0	(9%)19
5. Inappropriateness of the time of the day for holding classes	(6%) 45	(8%)22	(8%)17	(2%) 7	(7%) 6	(0%)0	(2%)20
6. Compression of the material taught in class	(7%) 41	(6%)25	(6%)15	(1%) 11	(1%) 6	(0%)0	(2%)20
7. lack of student motivation for learning	(7%) 41	(6%)30	(8%)12	(2%) 12	(8%) 2	(0%)0	(2%)20
8. Academic failure of students	(7%) 46	(8%)32	(6%)10	(2%) 7	(8%) 2	(0%)0	(2%) 20
9. Single-course Omission	(3%) 28	(1%)21	(7%)26	(0%) 15	(3%) 8	(6%)	(88%)19
10. Extension classes beyond the programmed 2 months period	(8%) 17	(6%)10	(7%)31	(4%) 19	(6%) 20	(0%)0	(74%)19

Results in Table 2 shows that the significant difference between two variables of, gender and indigenouness is greater than 05%. Therefore the null hypothesis is not rejected. In other words, there is no significant difference between the existing challenges in theoretical courses from the perspective of students with respect to gender and indigenouness.

Results in this Table also shows that in the rest of the variables including the duration of the period, the volume of courses, student motivation, single-course removal, academic failure rate, the time for holding classes, the significance level is less than 05% . Therefore there is a significant difference between these variables and the existing challenges in theoretical courses from the perspective of trainees. However, most students have opted for the "completely agree" option with respect to the challenges.

Table 2: The chi-square test between variables

Dependent variable	chi-square	Df	significance
1. Gender	2.261	4	688.
2. indigenous and non-3.indigenous	3.308	4	433.
The period	803.	4	000.
4. The volume of courses	833.175	4	000.
5. Motivation	89.111	4	000.
6. Single-course omission	24.994	4	000.
7. Degree of academic failure	128.111	4	000.
8. The time of holding classes	90.611	4	000.

4. DISCUSSION AND RESULTS

Education can be defined as making efforts in improving the performance of students with respect to education and learning. The educational process would be effective only when it includes a learning experience and educational activities, or it is planned to meet a recognized need. {10).

In this study, the results of the research showed that most of the male and female students completely agreed to the existing challenges in the theoretical courses. The results also showed that there was no difference between male and female students with respect to the challenges present in the theoretical courses. Results of the study conducted by Boroujeni *et al.* on educational problems of male and female students showed that attitudes of male and female students towards educational problems were different (11).

The study revealed that majority of the students with respect to indigenusness completely agreed with the presence of challenges in the theoretical courses. These researches later on showed that there was no difference between the indigenus and non-indigenus students with respect to presence of challenges in theoretical courses. The results in the study carried out by Boroujeni *et al.* with regard to the problems of indigenus and non-indigenus students showed that students attitude towards educational problems differ with respect to the factor of indigenusness.

Given that the general surgical internship classroom program has been appointed to be completed by holding 54 sessions according to the list of subjects appointed by the ministry for covering, and given that the department is fully obliged to cover all the subjects for the students, and given that over the past years this program was presented during 6 months, reducing this period from 6 months to 2 months could have been the source of students dissatisfaction with the program. All these factors altogether have led to the fact that majority of the students consider the two months period of the program insufficient for 54 sessions of theoretical classes and completely agree with that. The research also showed that there is a significant difference between students' attitude concerning insufficiency of the two month period for the program.

Given that the period of the program for the theoretical courses have been modified from 6 months to 2 months, this factor has caused the students to consider this period insufficient for learning and reaching a deeper understanding of topics. All these factors altogether have led to the fact that majority of the students consider the effect of the two months on their quality of learning as unsatisfactory and completely agree with that. The research also showed that there is a significant difference between students attitude concerning insufficiency of the two month period for the program.

Given that the theoretical courses of trainees are held at 1 pm students did not consider it an appropriate time for that matter since it is right after their recess and meal time, and would cause boredom and drowsiness, which would consequently render students unable to make due advantage out of classes and often feel drowsy in class. All these factors altogether have led to the fact that majority of the students consider the time of holding the classes as inappropriate and completely agree with that. The research also showed that there is a significant difference between students' attitude concerning the time for holding secessions of the program.

Student's educational motivation as one of the main challenges of universities, has enormous impact on the output of educational systems. Therefore, one of the biggest problems in education, is the reduction in academic motivation of students. Therefore, in order to improve educational quality in universities, the factors that reduce students' motivation should be identified and resolved. In this regard, the sixth hypothesis of this study suggests that, given that the theoretical class are held for two month on a regular basis at 1 pm., and from 11 am. to 3 pm. on Fridays, this can be considered a factor which reduces students' motivation to attend classes. All these factors altogether have led majority of the students not to have enough motivation for attending classes, and completely agree with that. The research also showed that there is a significant difference between students' attitude concerning the lack of incentive to attend classes.

Continuous assessment of students' academic achievement during the course of education is one of the indispensable elements in improving the quality of educational systems (specifically universities), which can be achieved by comparing the mean scores of students in different programs. This issue would have a significant impact on planning better educational programs, improving educational quality and ultimately improving the performance of relevant authorities with this respect. Therefore, the high volume of material to be covered, as well as holding the practical classes of the surgical group in the morning and holding the theoretical classes in the afternoon, has generated fatigue and lack of motivation in the students during the two-month period, not allowing them to learn the material the way they should, since they are faced with a huge amount of material every day for which they do not have enough time to study. Therefore it has resulted in lack of motivation in students and ultimately led to academic failure among them. All these factors altogether have led to the fact that majority of students experience a serious academic failure and completely agree with that. The research also showed that there is a significant difference between students' attitude concerning academic failure among them. Results from other studies show that there is no relation between gender and academic failure.

All the factors explained above, have led the students to have no other choice but to cancel the course process and opt for postponing the course to next terms, as a consequence to lack of sufficient proficiency obtained by them on the subjects as well as the huge amount of material to be studied overnight on the one hand, and allocation of

insufficient exam preparation time from the part of the department on the other. On the other hand, those students who take part in the final examination, obtain very low scores such that the department is faced with a huge number of students who have failed in the exam. Therefore they would have no other option than adding some scores to the students to the extent that the number of failed students would reach the allowed minimum, thereby more students will be obtaining the minimum passing score. Despite all of the above factors, the scores of students are in general very low and the department is often faced with student protests. All these factors altogether have led to the fact that majority of students to have no option but to cancel the course and completely agree with that. The research also showed that there is a significant difference between students' attitude concerning opting for cancellation of the course.

5. CONCLUSION

Although one of the main goals of education in today's world is assisting people in finding meaning and purpose, unfortunately, due to the dominance and the ruling of quantitative and measurable approaches, issues such as teaching-learning, motivation, educational achievement, satisfaction from learning and education are simply ignored or neglected or underestimated. As it is observed in this research and the findings it is clear that the primary focus of educational department of the general surgery group has been on quantity rather than quality of the program.

Therefore, to improve the current situation and to remove the created impediments, making major changes in educational process and the time required for teaching-learning processes would be inevitable because it would seem rather unreasonable to propose new expectations and demand their accomplishment through methods inefficiency of which have already been agreed. Therefore, in line with the doing a number of essential effective reforms in education it would seem very crucial to consider macro level solutions for meeting the educational needs, identifying and assessing the challenges and opportunities to learning, explaining the strengths and weaknesses of the educational system as well as investigating and explaining the teaching-learning strategies.

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