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Entry knowledge and situational feedback of MBBS students

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Abstract

Introduction: A need has been felt to acquire knowledge of students at Kathmandu Medical College (KMC) who have decided to take up a medical career and have enrolled at KMC after completing two years of basic sciences. **Objective:** The intent was to (i) find out the entering status with regard to general knowledge, (ii) get feedback from the students about the facilities provided by the management both at basic sciences complex at Duwakot and clinical sciences at Sinamangal and (iii) get feedback regarding the teaching learning activities provided by various departments in KMC. This attempt at getting their point of view was for trying to improve upon the facilities by taking up their suggestions and doing away with the weaknesses. Preference was given to hostel students as they would be able to comment on living conditions. **Methodology:** A total of 150 students from three consecutive batches from basic and clinical sciences were included in the study. Survey questionnaires were distributed and all the forms were returned. The obtained data was analyzed using SPSS 11.5 version for Windows. **Results:** It was found that the entry knowledge on general issue was better in 6th batch of students (87.08±17.41) than 5th batch (82.19±17.43) and 7th batch (78.93±20.60), but not significant ($p=0.164>0.05$). The students in different batches differed in their rating of various facilities provided by KMCTH. The most liked departments in terms of teaching learning activities were departments of Anatomy and Pathology. **Discussion:** Entry knowledge of the students of three batches was found to differ but not significant, correlating with the amount of teaching and learning received at KMC. The facilities provided by KMC were perceived as more satisfactory by the students who enrolled at KMC in later years. The earlier students had to cope with more difficulties as KMC was trying to improve on various facilities it provided to its students. **Conclusion:** Level of entry knowledge got better as the students attained more and more years of teaching and learning activities. It was also seen that the student's perception of the quality of facilities provided by KMC got better overtime.

Key words: Student, Knowledge, Aptitude, facilities, KMC, feedback, course

Intelligence as a term usually refers to a general mental capability to reason, solve problems, think abstractly, learn and understand new material, and profit from past experiences. Intelligence is a strong predictor of any type of human achievement, be it academic or otherwise. Aptitude refers instead to an individual's capacity for learning, with reference to "natural ability"—for example, "suitability, natural ability, or capacity to learn; ... potential rather than existing capacity ... given the necessary education or training," and "natural ability to acquire relatively general or special types of knowledge or skill." Assessment of intelligence would thus provide a clue on how a particular student's performance will be. Intelligence can be assessed in various ways. Interview is one of the methods. Another method can be the presentation of a prior designed questionnaire which taps on the specific knowledge that a medical student is supposed to have. Every occupation – whether it is engineering, medicine, law or management – uses certain tests to assess aptitudes. The work you are most likely to enjoy and be successful in, is work that uses your aptitudes. For example, if you are a doctor but possess aptitudes not used in medicine, your work might seem unrewarding. If you lack the doctor's aptitudes, your work may be difficult or unpleasant[2].

The authors feel that aptitude is an amalgam of knowledge and attitude. A successful medical student must have the right medical attitude. Most of the selection processes into medical education omit the assessment of these 'medical attitude" and focus on assessing the factual knowledge of science. The individual who is assessing these qualities before the student is selected for medical education must have a

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keen understanding of these attitudes. He/she should be able to "see" these qualities in a "want to be" medical student. The "medical attitudes" and the factual knowledge of science sum up what is more widely known as medical aptitude.

In principle, student feedback can be obtained for at least three different reasons: i) to monitor the quality of teaching and learning; ii) to improve the quality of teaching and learning; and iii) to advise potential students about the quality of teaching and learning. Clearly, both students' evaluations of teaching and their perceptions of academic quality have been investigated in different studies with each of these aims in mind[1]. The research evidence suggests: that student feedback provides an important source of evidence for assessing quality; that it can be used to improve quality and that student feedback can be communicated in a way that is informative to future students.

Student feedback can be obtained in many ways other than through the administration of formal questionnaires. These include casual comments made inside or outside the classroom, meetings of staff-student committees, and student representation on institutional bodies. Good practice would encourage the use of all these means to maintain and enhance the quality of teaching and learning in higher education. However, surveys using formal instruments have two advantages: i) they provide an opportunity to obtain feedback from the entire population of students; and ii) they document the experiences of the student population in a more or less systematic way.[4]

The practice of taking feedback from medical undergraduate students has been an important tool used for evaluation of a teaching programme. The purposes of taking feedback may be to: i) bring real improvement in subsequent sessions; ii) appreciate teacher's own efforts. However, feedback given by undergraduate medical students has been debatable and sometimes considered weightless during informal talks. Therefore, this study was undertaken with the objectives: i) to know medical undergraduate students' level of understanding ii) to seek their opinion about utility of various services provided by the management.[5]

Material and Methods

An endeavour was made to assess the level of factual knowledge, opinion on facilities provided and feedback on teaching/learning of three batches of students at Kathmandu Medical College by a pre-designed questionnaire. Altogether 150 students were surveyed for the study where 50 students from each of the fifth, sixth and seventh batches were included. The questionnaires of factual knowledge, feedback on course and facilities were introduced to 5th batch of medical students who had just entered to clinical sciences at Sinamangal after completing two years of basic sciences at Duwakot, 6th batch of students were those who had one year of education at basic sciences at Duwakot and 7th batch of students who had just entered to medical education and were totally new to KMC. Mostly hostel students were taken in for the study.

The timing of survey was chosen in such a way that it was at the middle of the teaching programme and the students had no cultural or academic preoccupations. Thus survey of all students present in the class was done using a pre-designed questionnaire. This questionnaire contained mostly structured and few open-ended questions on various aspects from college facilities to teaching and course. During the survey, students were made to sit apart to avoid mutual exchange of views. All the questions were explained in advance and the anonymity was maintained to ensure their frank opinion.

Observations (Result)

1) Level of entry knowledge

General type questionnaire were asked and responses were collected from 150 surveyed students. The result of the study was divided into three broad groups to compare: level of entry knowledge regarding general issue of students; KMC's Basic sciences facilities at Duwakot and Clinical Sciences facilities at Sinamangal; and feedback on basic and clinical sciences courses.

The mean score obtain by the fifth, sixth and seventh batches were 82.19, 87.08 and 78.93 with Standard Deviation 17.43, 17.41 and 20.60 respectively. It was found that the knowledge of three batches was not significantly different from each other ($p=0.164>0.05$)

Table 1. Entry Knowledge on general issues

Batch	N	Mean Score	Std. Deviation
Fifth	50	82.19	17.43
Sixth	50	87.08	17.41
Seventh	50	78.93	20.60

2) Student Feedback regarding College Facilities

Among the students 24.17% responded that hostel facilities given at Duwakot were reasonable. Classroom settings were reported as reasonable by 47.93% of the students. The most important finding was that the three batches of students differed significantly in terms of how they rated the facilities. Students responded that the rooms were not well constructed, properly coloured and seemed dark. No sufficient lights were available inside room and passage and that lumination was inadequate. There was lack of security guards for boys and girls hostel and that it led to personal items being stolen. Load shedding often occurred and there was no means of power backup which hampered teaching and learning in both audio/visual classes as well as their study at night. Water supply was not regular and there was a shortage of drinking as well as bathing water.

Table 2. Different college facilities rated in best/ideal-very bad continuum (in %)

	5th Batch					6th Batch					7th batch				
Particulars	**Best**	**Good**	**Reasonable**	**Bad**	**Very bad**	**Best**	**Good**	**Reasonable**	**Bad**	**Very bad**	**Best**	**Good**	**Reasonable**	**Bad**	**Very bad**
Hostel facilities	3.8	1.9	20.8	62.3	11.3	-	2.0	30.0	40.0	28.0	2.2	-	21.7	26.1	50.0
Mess/canteen facilities	-	11.1	42.6	42.6	3.7	2.0	2.0	50.0	28.0	18.0	2.1	2.1	21.3	38.3	36.2
Toilet facilities	-	27.8	38.9	18.5	14.8	-	28.6	38.8	22.4	10.2	4.3	25.5	48.9	10.6	10.6
Classroom setting	-	25.9	37	27.8	9.3	-	24.0	38.0	30.0	8.0	2.1	10.4	68.8	10.4	8.3
Library facilities	-	46.3	35.2	16.7	1.9	-	40.0	42.0	14.0	4.0	4.1	22.4	55.1	14.3	4.1
Administration cooperation	-	50	34.6	11.5	3.8	4.0	32.0	36.0	16.0	12.0	2.1	17	44.7	21.3	14.9
Sports facilities	-	5.8	38.5	38.5	17.3	-	6.7	35.6	31.1	26.7	4.3	2.1	12.8	34	46.8
Bus facilities	-	14.8	33.3	35.2	16.7	4.0	10.0	44.0	24.0	18.0	4.8	-	38.1	33.3	23.8

When asked about the classroom settings, most of the students (47.4%) responded that it was reasonable. It was reported that the classroom setting was overcrowded and it was not easy to see who was sitting at the back of the classroom. The projectors, boards, microphones should be in good condition. Dissection class was overcrowded and that there was lack of teachers. Teachers did not give individual attention as was required at times. Unit tests were not taken regularly and timely, which were very essential for students to evaluate themselves and improve their performance. Furthermore, teachers seemed to be cooperative but they were not friendly. Course should have been finished three months before examination so that students could have ample time to prepare for university examinations. Though the students had to travel half an hour to reach to the basic sciences facilities at Duwakot and even that by standing inside bus, 38.4% responded that the bus facility was reasonable and felt that buses should be added to avail seat for every students and staffs.

Regarding the library facility, 36.6% and 43.8% respectively responded that it was good and reasonable. Sufficient books were not provided in the library. Frequently needed books like GRANTS, detour's and different medical journals were to be added in sufficient numbers so that entire students could use those books till they needed. Multimedia system and computers were not sufficient. Internet facility in the library was slow in accessing.

It was felt by most of the students that there was a lack of interaction between students and top management staff including the board members. Students feel that it would have been better if management visited Duwakot frequently and interacted with students to know their problems and suggestions. Strict rules and regulations should be formulated regarding the implementation of the suggestions made by the students.

When asked about Administrative cooperation 33.6% responded that the administrative cooperation was good. The majority of students felt that there should be a regular meeting between administrative staff, students and Head of Departments for evaluating the college activities and for further improvement. Chief of student affairs should be easily approachable. Classes should be held according to routine and on time as students missed many classes. Furthermore teachers were absent many times. Moreover, the criteria for internal assessment should be declared at the beginning of the session. Evaluation and examination should be strict and fair.

3) Student Feedback regarding Course and teaching /learning activities

In the first question which asked to rate the various departments (viz. Anatomy, Physiology, Biochemistry, Pharmacology, Microbiology, Pathology and Community Medicine) in the best/ideal-very bad continuum. It was found that department of Anatomy (25.5%), (24.0%) and (3.5%) was regarded as the best/ ideal department by the students of 5th, 6th and 7th batches respectively. Similarly, (9.6%), (24.8%), and (17.5%) of 5th, 6th and 7th batches of students respectively responded that Pathology as the best/ideal department. The batch-wise result is presented in more detail in Table 3. A faculty member in Pathology was regarded as best by most of the students and other students differed in their evaluation of other teachers.

Table 3. Different department rated in best/ideal-very bad continuum (in %)

	5th Batch					6th Batch					7th Batch				
Department	**Best/Ideal**	**Good**	**Reasonable**	**Bad**	**Very bad**	**Best/Ideal**	**Good**	**Reasonable**	**Bad**	**Very bad**	**Best/Ideal**	**Good**	**Reasonable**	**Bad**	**Very bad**
Anatomy	25.5	43.1	25.5	2.0	3.9	24.0	42.0	22.0	12.0	-	3.5	61.4	21.1	10.5	3.5
Physiology	5.8	26.9	55.8	7.7	3.8	2.0	50.0	42.0	6.0	-	12.3	56.1	31.6	-	-
Biochemistry	3.8	21.2	40.4	23.1	11.5	-	10.0	54.0	30.0	6.0	3.6	32.1	35.7	23.2	5.4
Pharmacology	3.9	13.7	31.4	21.6	29.4	8.0	46.0	36.0	6.0	4.0	3.5	61.4	24.6	10.5	
Microbiology	3.8	17.3	44.2	25.0	9.6	2.0	8.0	32.0	38.0	20.0	-	14.3	44.6	30.4	10.7
Pathology	9.6	48.1	36.5	3.8	1.9	24.0	46.0	26.0	4.0	-	17.5	57.9	14.0	8.8	1.8
Community Medicine	11.5	28.8	44.2	5.8	9.6	8.0	14.0	58.0	14.0	6.0	-	26.3	52.6	12.3	8.8

Table 4. The three departments rated for their teaching/learning activities (in %)

	5th batch			6th batch			7th batch		
Department	**Rank 1**	**Rank 2**	**Rank 3**	**Rank 1**	**Rank 2**	**Rank 3**	**Rank 1**	**Rank 2**	**Rank 3**
Anatomy	63.8	19.0	7.7	40.8	25.6	22.5	25.0	14.9	26.7
Physiology	4.3	16.7	23.1	2.0	9.3	32.5	15.4	25.5	22.2
Biochemistry	-	11.9	7.7	-	2.3	7.5	9.6	8.5	11.1
Pharmacology	-	7.1	10.3	10.2	18.6	30.0	1.9	25.5	31.1
Microbiology	4.3	2.4	15.4	-	2.3	0.0	-	2.1	-
Pathology	23.4	38.1	17.9	42.9	41.9	5.0	48.1	12.8	8.9
Community Medicine	4.3	4.8	17.9	4.1	-	2.5	-	10.6	-

Department of Anatomy was rated as the best department in terms of teaching learning activities by 63.8% of 5th batch students while Department of Pathology was rated as the best department in terms of teaching and learning activities by 42.9% and 48.1% of 6th and 7th batches students respectively. Similarly, Pathology was rated as the second best department by 38.1% and 41.9% of 5th and 6th batches of students respectively. Physiology and Pharmacology departments were rated as second best 25.5% and Pharmacology department was again rated as third best department by 31.1% of 7th batch of students. The batch-wise result is presented in more detail in Table4.

Department of Anatomy was rated both as the best department and the best subject by the students of the 5th batch and also rated as best in terms of teaching learning activities. The students in the 5th batch differed in terms of their knowledge and understanding of the concept of teachers as advisors. About two third of the students chose various teachers as advisors and consulted with them and rest of the students responded that they were unaware of the concept of advisors.

Department of Pathology was rated as the best department (42.9%) in terms of teaching learning activities by students in the 6th batch. However the students rated Anatomy and Pathology (24.0%) as the best/ideal subjects. In all three batches the students consistently rated a few subjects and departments as poor both in terms of their attractiveness and their teaching learning activities. Most of the students have also given reasons for preferring certain departments and subjects to others, the description of which is not possible here. However, it can be summarized that most frequent reasons cited were: few teachers were more capable in teaching/learning activities and students felt much more close to them emotionally.

Discussion

Most higher education institutions around the world collect some type of feedback from students about their experience of higher education. 'Feedback' in this sense refers to the expressed opinions of students about the service they receive. This may include perceptions about the teaching and learning activities, the learning facilities such as libraries and computer facilities; learning environment for e.g., lecture rooms, laboratories, social space and university buildings; support facilities like canteen, student accommodation, health facilities, student services and external aspects of being a student such as finance and transport infrastructure. Student's views were usually collected in the form of 'satisfaction' feedback. Sometimes there were specific attempts to obtain student's views on how to improve specific aspects of the institution or on their views about potential or intended future developments.

The justification of any teaching method largely depends upon genuine opinion of the students.[8] However; it is very difficult to ensure genuineness of the student's opinion. Although most of the responders have been found to be very much consistent in their evaluation of the services, few also have given highly exaggerated responses. A few of the responders were also found to be evasive in pointing out on the pitfalls of the system. Some reasons for this evasiveness could be a lack of

interest in the part of the responders, finding that feedback produces no change in the system and being fed up of frequent unattended feedbacks, or fear of being identified through handwriting as pointed out by some of the students.

The level of entry knowledge in the three groups viz., 5th, 6th and 7th batches did not differ significantly. It was an important factor here that 7th batch of students were most de novo in terms of teaching and learning received in KMCTH. 6th batch of students had one year of teaching and learning and 5th batch had two years of teaching and learning at KMCTH. The number of correct answer produced thus correlated with the amount of teaching and learning received. It should be noted that 6th and 7th batches of students were not in a position to give feedback on clinical sciences complex at Sinamangal and on clinical disciplines.

The level of satisfaction with the various facilities provided at KMCTH showed an increasing trend of popularity among the students. The 5th batch students, least of whom scored the facilities as "best", were the students who were at KMCTH when it was in its difficult days both financially and in term of infrastructure. The facilities subsequently started getting better and better as KMCTH overcame its weak financial scenario. The 6th and 7th batches of students' perception of the facilities were quite different. They tended to rate the various facilities as better than what 5th batch students rated. In some way, they were more fortunate to utilize various facilities.

As in the utilization of various facilities, the preference and the amount of support and enthusiasm seemed to differ in the three groups of students. Students in 5th batch invariably rated the departments as more bleak than did the students of 6th and 7th batch. Another reason for this could have been that the 6th and 7th batch of students were, at the time of this study, actually studying in those various departments whereas students from 5th batch were at the clinical sciences complex at Sinamangal and had to look in retrospect and recall how the various departments did when they were students one or two years ago.

Since the hostel of basic sciences were just shifted to the hostel at Duwakot building when the fifth batch entered to the MBBS course, the quality of hostel and basic sciences building facility were not good enough. The quality and facility have been gradually improved.

The qualitative evaluation of the data revealed many different aspects of teaching and learning activities inside the institution. Most of the students reported that effective teachers provided general direction, rather than systematic or methodical step-by-step guidance. Teachers were expected to challenge students, provoking them to think aloud and defend what they know. In turn, students were expected to challenge the content presented by teachers and texts, as a means of coming to understand that knowledge. Effective classrooms were portrayed as arenas where students were active, rather than passive, challenging rather than receiving the authorized knowledge of teacher and/or text. Although teaching might start with what students already know, the intent was to create a state of disequilibrium within the learner about those ways of understanding the particular content, and then progress on to more sophisticated ways of understanding.

Thus, effective teaching should result in a qualitative change in student thinking. Students were to be able to think differently, not just know more, at the end of teaching. Learning was understood to be a process of acquiring information, discovering new insights, and developing analytical and/or critical thinking. This process was facilitated by actively engaging students in discussion, application, and critique of the subject or content of instruction.

Conclusion

This study is an attempt to present the 'view' of the students. It is also to be able to outline the need and scope for improvement in various aspects. To draw a conclusion it can be said that most of the students evaluate the attractiveness of the subjects in terms of the teaching/learning activities and hence there is a need and scope for some of the departments to enhance their "attractiveness" to the students mainly through more innovative and interesting teaching/learning activities including discussion, student participation and use of effective graphical (audio visual) presentation of learning materials. Students should also consult with teachers about their difficulties freely and smaller group teaching learning should be encouraged by the teachers.

It was found that the students from the three batches differed in terms of the correct answer provided to the entry knowledge questionnaire. 5th batch of students were more in a position to provide correct answer than were the students from 6th and 7th batch respectively. It was also found that the perception of the facilities provided by KMC got better overtime. 6th and 7th batch students were found to perceive the facilities as much better than the students of 5th batch.

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