

Learning and Teaching Styles at Wah Medical College; A Qualitative Approach

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ABSTRACT

Objective: Study was conducted to understand the learning styles of students to improve teaching and learning and have a clear vision of students' perceptions about an educational institution.

Methodology: A mixed-methodology was used to conduct the study in Wah Medical College by using a structured questionnaire; responses were recorded from three students of third year MBBS. Quantitative part was analyzed as binary responses and qualitative part of the study was recorded and verbatim transcriptions were thematically analyzed.

Results: Majority of the students liked to learn independently initially but for the preparation of viva voce they preferred discussion with peers. Students also liked the use of information technology by teachers and the most agreeable part of their study was clinical rotation. Students think that the lectures should be made more understandable and enjoyable by providing less information and using a blend of languages. Five main themes emerged from the qualitative part of the study, namely: learning by doing, interaction-effective strategy of learning, career selection, institutional ranking and professional ability.

Conclusion: The students learn in two ways initially by making their own notes and studying separately and later by discussions with peers and teachers. Clinical rotations, small group discussions and demonstrations were considered very effective by the students when contrasted with lectures. Teachers should be trained to improve their skills on these modalities as it shall have positive impact in student learning. The institutional environment if disciplined and conducive contributed more to learning and offered them enough opportunity to acquire the required skills and competency needed for future practice.

Key Words: Learning styles, Mixed methodology, Medical students

Introduction

Learning processes vary from person to person due to differences in cognitive processing¹. While acquiring an abundance of knowledge in a medical college, the students experience a different learning environment in their setting than non-medicos. Literature tells us that each student typically adapts his or her learning predilections to their cognition environment. Concepts of learning styles have been broadly investigated to comprehend the dynamic procedures of learning².

Many studies have been conducted for assessing learning styles^{3,4,5}. Perceiving different learning styles of medical students is thought to be imperative for medical teachers⁶. To achieve the goal of maximum performance medical teachers must deliver the knowledge in accordance with the learning styles of the students⁷. Students' performance can be gauged through different steps including their problem-solving abilities, clinical performances in wards, and the

completion of an academic course⁸. This study was aimed at determining current learning methodologies and predilections of students regarding learning styles at Wah medical college, Pakistan. This study is expected to elucidate various learning styles of students and techniques applied by them to make their learning effective for their future roles and highlight the need for the training of medical teachers. It will also illuminate various institutional characteristics that determine students' preferences while seeking admission in a medical college.

Methodology

An exploratory study was conducted at Wah Medical College by taking a purposive sample of three third-year MBBS students to accomplish the objectives. Interviews were employed to contextualize the quantitative and qualitative outcomes as well as provide insights for future research and improvements⁹. A semi-structured questionnaire was designed to record the responses of students. Verbal informed consent was taken from the participants for the recording of interviews and publication of the data. The objectives of the interview were fully explained to the respondents, by giving complete assurance that their perspective was equally important as the teachers. They were assured of the confidentiality of their recorded views and that those would not affect their academic performance. The procedure of recording their views was explained to them beforehand to avoid confusion and discomfort.

In quantitative part of the questionnaire, student's study department and struggle to achieve the hopes were recorded, coded and analyzed as binary responses using SPSS. In qualitative part of the study, 10-open-ended questions were included to comprehend preferred learning styles, perceptions about teaching institutions and conceptual demeanor of students.

Interviews were recorded, transcribed verbatim coded and analyzed. Open coding was done by reading interviews transcripts line by line. Rethinking and

interpretation of the words of the students were done amongst three researchers. Three interviewers went through the data sets individually and compared their results. Eventually themes were generated by using interpretative approach.

Results

The proportions of responses to different questions in Quantitative part of the study are reported in Table 1.

Table 1: Response proportions regarding Learning styles and lecture fulfillment

Characteristics	Code	Categories	Counts
Gender	1	Male	0
	0	Female	3
Reason to select MBBS course		Childhood ambition	1
		own desire	1
		passion	1
At which part of the day you are more receptive to studies?	1	Morning	0
	2	Evening	1
	3	Night	2
Total duration of study in a day	1	< 2 hours	1
	2	2-5 hours	1
	3	> 5 hours	1
How long did you study at one time?	1	1-2 hours	2
	2	2-4 hours	1
Which place do you feel more comfortable for study?	1	Separate room	3
	2	Library	0
Do you make your own learning goals before starting your studies?	1	Yes	3
	0	No	0
Do you use electronic media for learning?	1	Yes	2
	0	No	1
Do you visit any specific website for understanding the topic?	1	Yes	1
	0	No	2
Do you prefer combined study over self study?	1	Yes	2
	0	No	1
Do you take any food (coffee, tea, nuts, snacks) while studying?	1	Yes	2
	0	No	1
Do you listen to music or use whatsapp	1	Yes	1

Do you use face book while studying?	0	No	2
Do you make your own notes for better understanding?	1	Yes	2
	0	No	1
Do you study on regular basis?	1	Yes	1
	0	No	2
Do you test yourselves on important topics until you understand them completely.	1	Yes	3
	0	No	0
Did you take notes in the lecture?	1	Yes	3
	0	No	0
Did you take handouts of the lecture?	1	Yes	3
	0	No	0
Have you consulted lecture notes again while studying the same topic?	1	Yes	3
	0	No	0
Is there any gain in knowledge or skill from the lecture?	1	Yes	3
	0	No	0
Is the content of lecture beneficial for your future career?	1	Yes	3
	0	No	0
Are you comfortable to have lecture in English only?	1	Yes	2
	0	No	1
By adopting which method of learning you get good results?	1	Self study	1
	2	Combined study	2

Two out of 3 respondents preferred to study at night as during that part of the day they were more receptive to studies. The time duration of the study was varying through all responses. Two out of 3 respondents preferred 1 – 2 hours for one-time study. All respondents preferred separate rooms for comfortable study. All three respondents were ambitious towards their learning goals as, all three set out learning goals before starting the studies. The combined study was more desirable as compared to self-study as 2 out of the 3 respondents showed a preference for combined study. They were not used to regular study, but still preferred to clear their concepts by taking notes and assessing the learned information. That was how they learned and understood better. If the lectures were interactive only then they thought could be rated as

useful. Two of them were satisfied with lecture being delivered in English.

Five themes emerged from nineteen codes against open-ended responses in a qualitative part of the study (Figure 1).

1. Learning by Doing: Clinical rotations were regarded as the most enjoyable part of MBBS course, in which the students learned skills to practice their knowledge. In addition, small group discussions and demonstrations gave them a better and clear learning of concepts.

2. Interaction- effective strategy of Learning: Interaction and discussions were the most effective learning strategies. Self-reading leading to group discussion helped better understanding and developing clearer concepts. Group discussion and peer assistance enhanced learning as intelligence level differed from person to person. Rote learning was identified as an ineffective learning strategy as the students had difficulty in retaining the gained knowledge. Combined studies promoted conceptual learning rather than just cramming the written text. The students preferred to understand the content first followed by discussion either amongst them or with the teachers so that they were able to apply the gained knowledge in the real-life situations. Trained medical teachers play an important role in effective learning.

3. Career Selection: The choice of the profession was linked with their childhood wishes and desires to become a part of a very noble profession. Their energies were focused on achieving the predetermined goal in life.

4. Institutional Ranking: The ranking of a medical college was based on the best academic records of the students and national as well as the international recognition of the teachers. The standard of the affiliating university and easy accessibility were regarded as the other positive aspects of the educational institutions. Secured and disciplined environment were important components in the institutional selection.

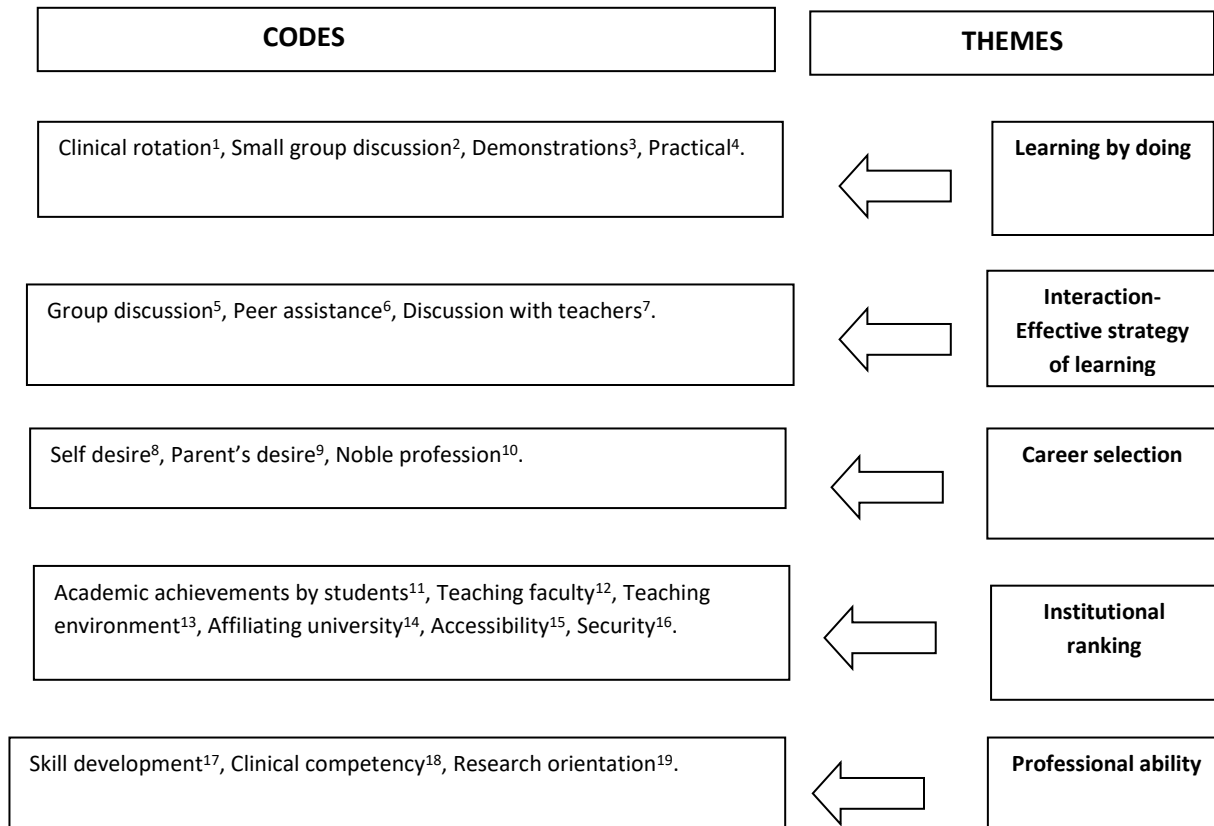


Figure 1: Codes and Themes

5. Professional ability. The training provided to the students was catering for skill development and competency to play the desired roles upon becoming doctors. Different teaching methodologies and techniques were regarded essential to train the students relevantly. Ideal Training meant orientation to research and clinical competency.

Discussion

The current study was carried out on Medical students of Wah Medical College. The study aimed at determining the current predilections of students for teaching methodologies and learning styles by qualitative approach. The teachers, who are aware of their students' learning styles, can modify teaching methodology accordingly and would be able to train students more effectively. In addition, the students who can appreciate their way of learning are optimistic and gain success in studies^{5,10}.

The results revealed that majority of students preferred studying separately but for preparation of viva they

wanted to discuss with the peers. In another study 72.6% of students favored multiple learning styles². Multiple ways of learning enabled the students to face academic challenges positively⁵. In a study conducted in India, the subjects had a predilection for multimodal learning⁶. In Iran, a survey was conducted among 184 students, of which 89 students preferred single modal and 95 students choose multimodal learning styles⁷. In West Indies, 16.7% students of Biochemistry course used more than one learning style³.

Students liked the teachers who used more electronics to enable the students to learn by diagrams and relevant illustrations. Students liked to use electronic media to achieve learning outcomes, which is supported by huge literature^{11,12}. Our students opted for combined studies. In contrast, self-learning had been endorsed more beneficial for medical students as means of in-depth and lifelong learning by Gurpinar et al¹³.

Through interviews, clinical rotations were regarded as the most enjoyable part of MBBS course, in which the students learned skills to practice their knowledge. In

Australia as well, the students liked case study and practical teaching module⁸. In a study by Williams, the students had had benefit from Case-Based Learning¹⁴.

Although our students did not study on regular basis but still preferred to clear their concepts by taking notes and assessing the learned information. They believed that the habit of writing after learning gave a firm and clear concept of what they learned. Similarly, in a study by Mlambo 27.8% subjects preferred Read/Write style and 31.5% had a preference for kinaesthetic way of learning³. A survey conducted by Sarabi-Asiabar revealed that 21.7% respondents chose Read/Write style while 6.5% chose the kinaesthetic way of learning⁷. Highest rank had been given to assimilating learning style in different studies^{6,15}.

The students wanted to develop their own learning materials, by collecting handouts, soft copy of the lecture and the notes that they took themselves during the lectures. Two common features identified were that they wanted lecture with a blend of different languages and a very candid environment to learn. Lectures are a common teaching method in medical education by which large amounts of information can be transferred to a vast majority of students, but are ineffective in nurturing a conceptual understanding of subject^{16,17}. Lectures as the only teaching method must be well thought-out for more perfection¹⁸. The lectures can be more effective by making them interactive and enjoyable for students, which depends on the ability of the medical teacher to captivate the undivided attention of the students by learning and developing basic lecturing skills¹⁹. Those teachers that have the required training in the concepts of learning are more effective than the untrained ones. Center for Innovation (CILT) at University of Health Sciences, Lahore is offering such a course in collaboration with University of Liverpool, UK. The students chose Wah Medical College for their studies because of the best academic records of the students, positions attained by students in university exam and dedicated as well as hardworking faculty. The standard of the affiliating university (University of Health Sciences is included in the top 10 universities of

Pakistan) and easy access were regarded as the other positive aspects of WMC. Secured and disciplined environment were important components in the institutional selection. In general the universities are graded on the basis of quality assurance, teaching quality, research, finance and facilities, and social integration.²⁰

Conclusion

The learning habits of students include; studying at night time for 1-2 hrs, taking snacks, not listening to the music and using electronic media while studying. Although they did not study regularly but they always set their learning goals before studying. The students learn in two ways initially by making their own notes and studying separately and later by discussions with peers and teachers. Clinical rotations, small group discussions, and demonstrations are found very effective by the students as compared to lectures. Teachers training programs can benefit student learning and such courses should be offered. The institutional environment, if conducive and constructive, supported acquiring of skills and competency needed for their future roles.

Limitations

The study has a few limitations.

1. Respondents/Students were hesitating to discuss their problems comprehensively in front of their dean, which failed to provide completely unbiased information on their learning styles. Had it not been an assignment geared towards a certificate where I was required to conduct this myself I would have assigned this duty to junior staff from another department or fresh graduates of the institution.
2. Our study sample size (n = 3) is very small which affects our theory base analysis and no advance analysis techniques can be applied

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