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## Teachers Perceptions on Medical Undergraduate Students' Learning Process –Cross sectional study on Malaysian students studying in India.

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### ABSTRACT

Formal education is accomplished in an organized environment whose explicit purpose is teaching students. In this project, Malaysian students' process of learning was evaluated and analysed through Indian teachers' experiences and perceptions. The factors investigated included the attitude, behaviour, motivation, conducts and interest of the students towards learning and studying. 58 Indian faculties involved in teaching Malaysian students of Medical undergraduates were interrogated with the set of close ended questionnaire designed to understand their viewpoints towards the students' various learning attitudes. The data obtained were analysed statistically by employing paired test method using SPSS package 15.0. Professional conduct of the students, interactions with the educators and their interest in practical, self-directed and problem based learnings were highly appreciated by the faculties. The agreement opinions in this regard were statistically significant when compared to disagreement made by few faculties ( $p < 0.005$ ). However, students' preparedness attitude and interest in learning beyond the scope of syllabus were quite disappointing as per the opinions of teachers. Irrespective of non-preparedness and not expressing interest in topics beyond the syllabus, overall students' attitude in learning and studying is appreciable and this positive aspect makes the teachers to be more enthusiastic during teaching sessions.

**Keywords:** Education, perception, problem based learning, self-directed learning

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## INTRODUCTION

Education is the process of facilitating learning and acquisition of knowledge and skills. It is achieved mostly under the guidance of educators. There are certain process of learning that facilitates educating selves. It is of profound significance to analyse and understand the perceptions of teachers to ensure effective achievement of students' learning process and feedbacks of teachers' teaching methods have to be taken into account alongside.

Teaching-learning process in the education system has an integral relationship with one another. An effective teaching often reflects the students learning [1]. It is also imperative to note that students' interests and experiences in their educational environment influence their approach to learning and its eventual outcomes [2,3]. Numerous studies have shown that teachers' perceptions on students affect their understanding of teaching duties and responsibility, as well as their interactions with the students, their teaching practice and methods [4,5,6].

Problem-based learning (PBL) is being practiced in a medical undergraduate curriculum in many countries including India. Student's self confidence to learn the subject independently in the contexts of complex and realistic problems is achieved through PBL sessions with minimal intervention by the teachers [7]. Self-directed learning (SDL) is yet another method of learning in which students are given a brief outline of the topic to be learnt by self and assessment was done at the speculated time. The assessments of students' understanding and presentation of PBL and SDL topics by the lecturers will help rectifying and improving the approaches teachers adopt in conducting these sessions.

Critical reflection on presuppositions held about elements of teaching effectiveness necessitates a proper evaluation of both commonalities and differences existing between the educators and students. This will also provide a chance for educators and students to understand each other's views and work towards common goals [8].

Present cross sectional study was aimed to understand Indian teacher's perspectives towards the medical undergraduate students' learning attitude. Evaluation was done individually for theory, practical, PBL and SDL sessions. Prior knowledge of student's overall attitude for each curricular aspects in advance is helpful to the teachers in planning appropriate teaching mode that eventually favours the students' academic skill. By interpreting the perceptions of teachers on students' process of learning would ultimately allow the faculty members and students themselves in coming up with resolutions to improve the effectiveness and to amend the weaknesses in the current teaching methodologies and academic curriculum.

## MATERIALS AND METHODS

Present cross sectional study was undertaken in the Melaka Manipal Medical College (MMMC), Manipal campus, India. Total of 58 Indian origin faculties teaching medical undergraduate (MBBS) Malaysian students of pre and para clinical years were involved in this study. Faculty validated- close ended questionnaire (Appendix 1) was used in this study. The questionnaire was designed with 16 questions attributed to theory, practical, PBL and SDL sessions. Each questions were provided with 6 options of grading and each participants had to indicate single best response using 6 point Likert's scale method. The data obtained were compiled to percentage values. Statistical significance between positive and negative opinions were compared by the paired t test method using SPSS software package 15.0. Comprehensive conclusions as drawn from the inferences were also shown in graphs for the comparison purpose.

## RESULTS

Professional conduct is an important quality expected in the students of professional colleges. In the medical profession it marks the foremost requirement where the doctor is considered to be servant of god in the healing art. In the MMMC, according to majority of faculties (74.5%), the students meet the criteria of professional conduct [graph 1].

As far as prior preparedness of students for theory and practical issues was considered, 40% of the faculties felt unsatisfactory and 31.5% faculties backed the students [graph 2]. This difference was statistically significant ( $p < 0.05$ ). Despite of lack of prior preparedness attitude in the students, 48% of teachers admit that the students actively participate during lecture classes which was statistically significant ( $p < 0.05$ ) when compared to 25% of the teachers' disagreeing this opinion [graph 3].

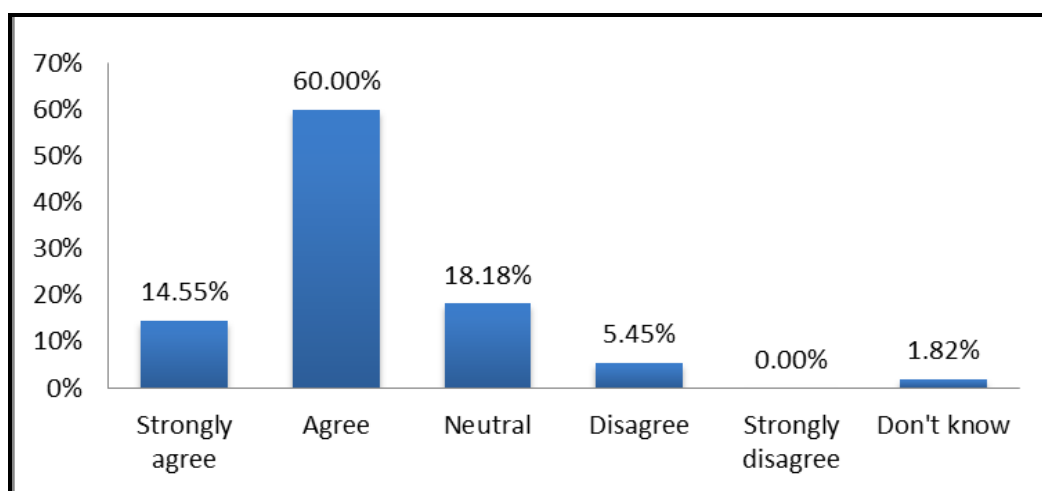
While providing the overall opinion about student's interest in learning beyond the scope of syllabus, less number (15%) of faculties stood in favour of this attitude of the students while majority of teachers disagreed (43%). Interestingly, 38% of faculties seem to be uncertain about this, as they preferred to stand neutral [graph 4]. This difference also showed statistically significant ( $p < 0.05$ ).

Graphs 5, 6 and 7 emphasizes student's interaction with the teachers in academic performances. Accordingly, majority of the teachers (70%) admit that there lies good interaction between teachers and students. Only 5% of the teachers were not in favour of this [graph 5]. This quality, however was appreciated by 58.6% of teachers as it makes them enthusiastic while teaching [graph 6]. However, 22% of faculties denied this. This difference of opinion marks statistically significant ( $p < 0.05$ ). At about 38% faculties opined that students are in regular consultancy with their teachers and about 27% said no to this [graph 7]. This narrow difference also showed statistically significant ( $p < 0.05$ ).

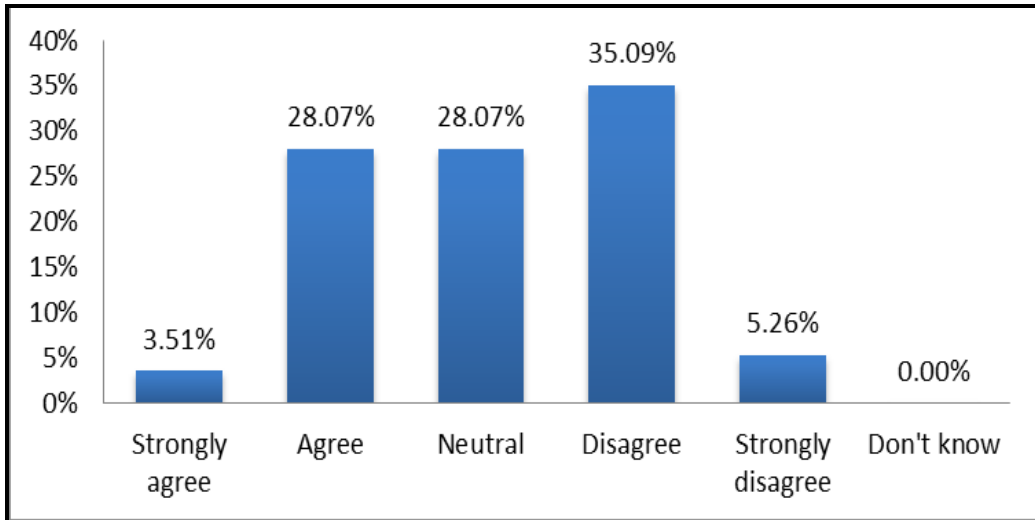
About the practical sessions, 57% of teachers found that students are more interested in practical sessions while 12% did not support this [graph 8]. At the same time 63.7% of teachers admit that students have the ability to learn practical skills while 5% felt that students do not have expected ability to perform practical experiments [graph 9]. Both the opinions showed statistically significant differences ( $p < 0.05$ ).

The preparedness approach and team work plan for PBL and SDL sessions were also in favour of agreement by the faculties. 66% of faculties appreciated the prior preparedness attitude of students while 14% ruled it out [Graph 10]. As high as 91% of PBL and SDL facilitators admired student's team work in PBL and SDL sessions [graph 11]. Both of these aspects showed statistically significant differences between 'agree' and 'disagree' opinions ( $p < 0.05$ ).

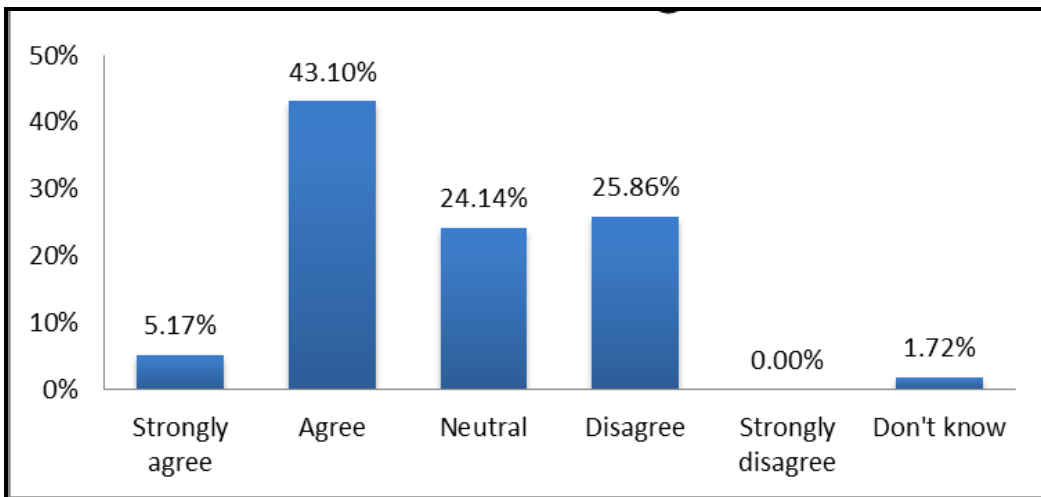
Graph 12 to 16 shows teachers overall positive opinions on students' ability towards various aspects of PBL sessions. Consequently, 82% agreement towards their capability in executing good ideas [Graph 12]] 59.6% towards presentation skills [Graph 13], 60% on good quality of content in the presentation [Graph 14], 61.7% for active participation [graph 15] and 70% for their capability to correlate issues to given PBL scenarios [graph 16]. The differences on these opinions also showed statistically significant ( $p < 0.01$ ).



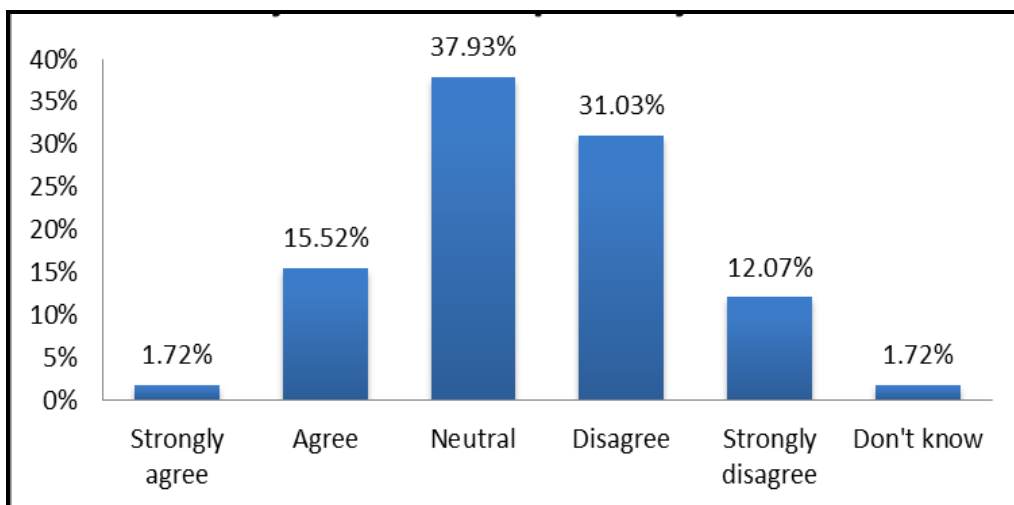
Graph 1: Professionalism among students as opined by the teachers.



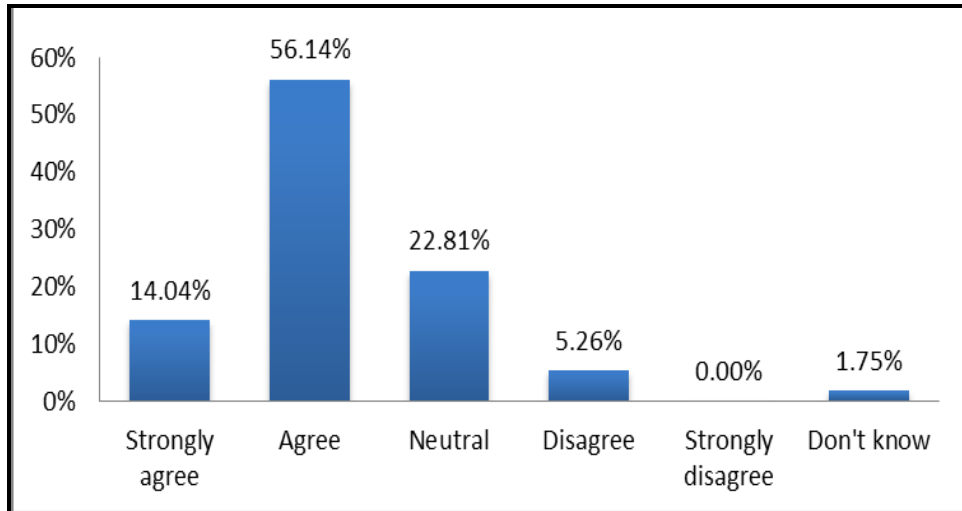
**Graph 2: Opinion on preparedness of students for classes and practical sessions.**



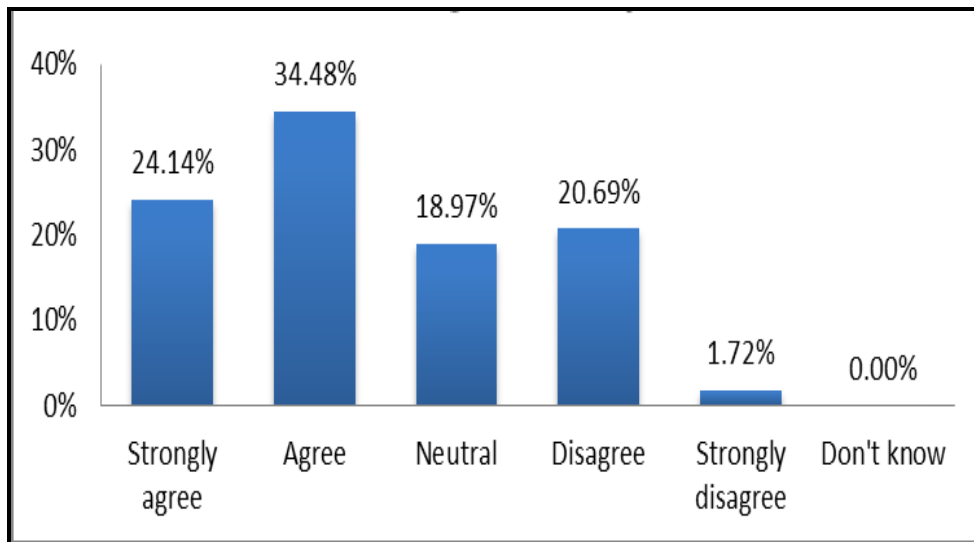
**Graph 3: Outlook profile on active participation of students during lecture class.**



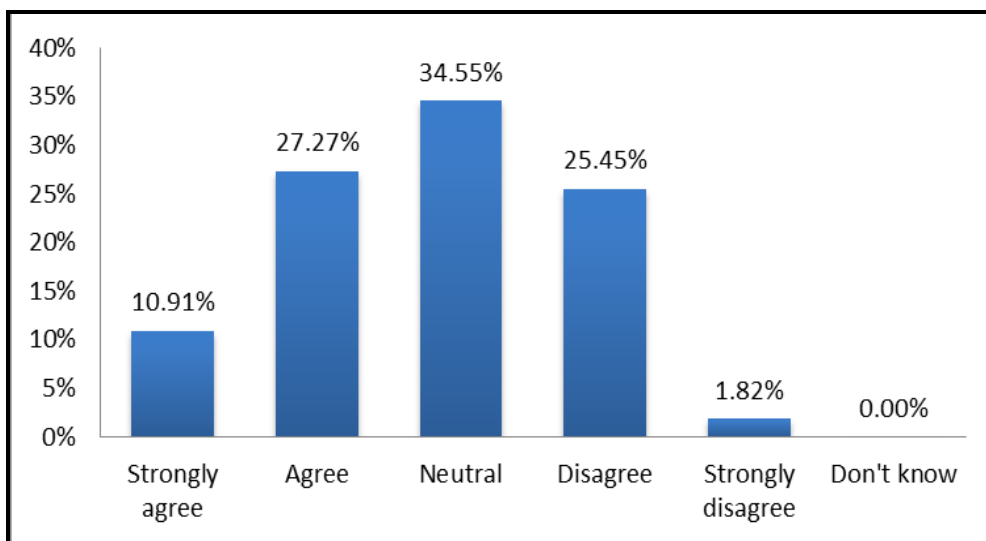
**Graph 4: Interest of students in learning beyond the syllabus.**



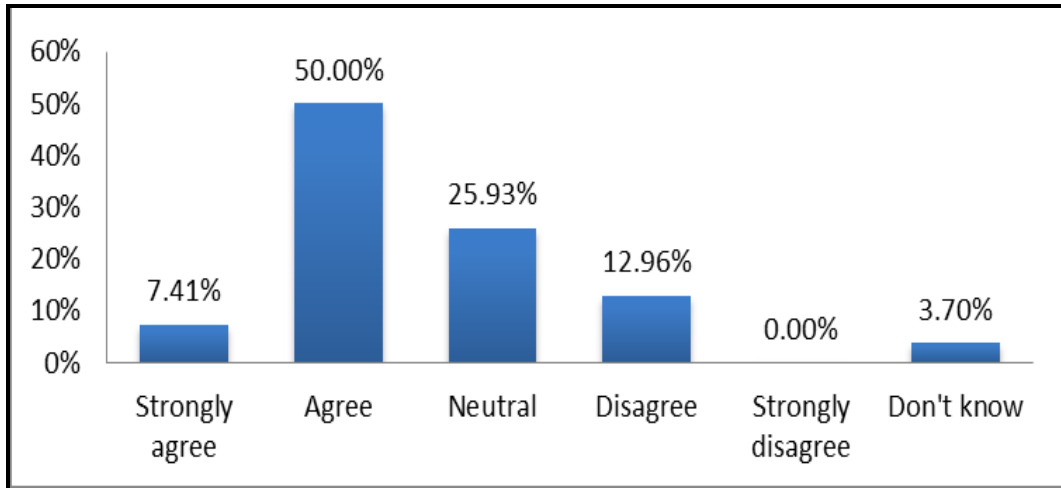
Graph 5: Teachers' opinion on students' interaction with the teachers.



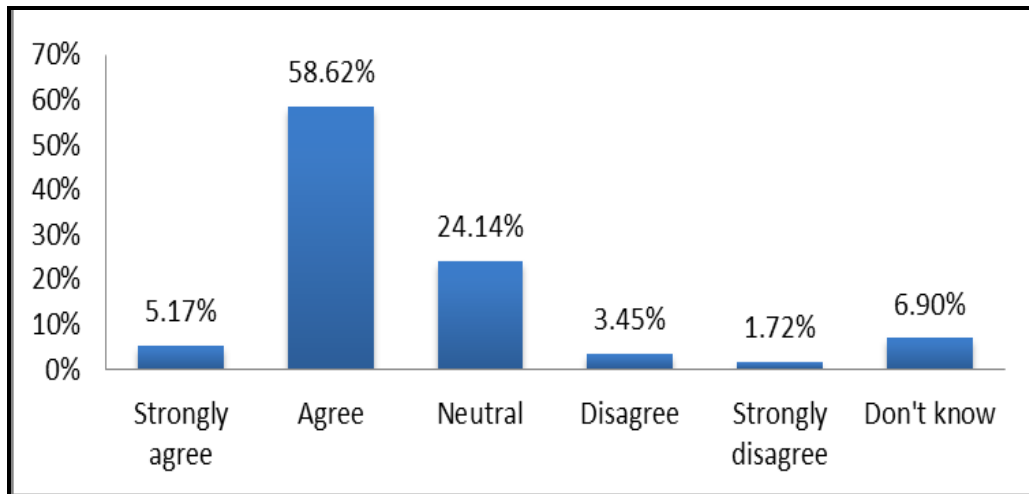
Graph 6: Effect of student interaction in teachers' enthusiasm for teaching.



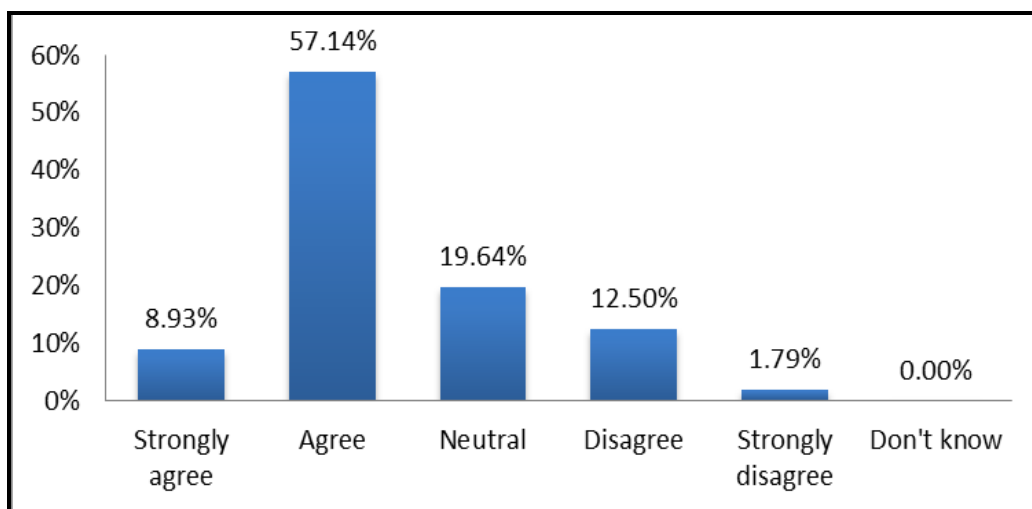
Graph 7: Profile of students' consultancy with their teachers.



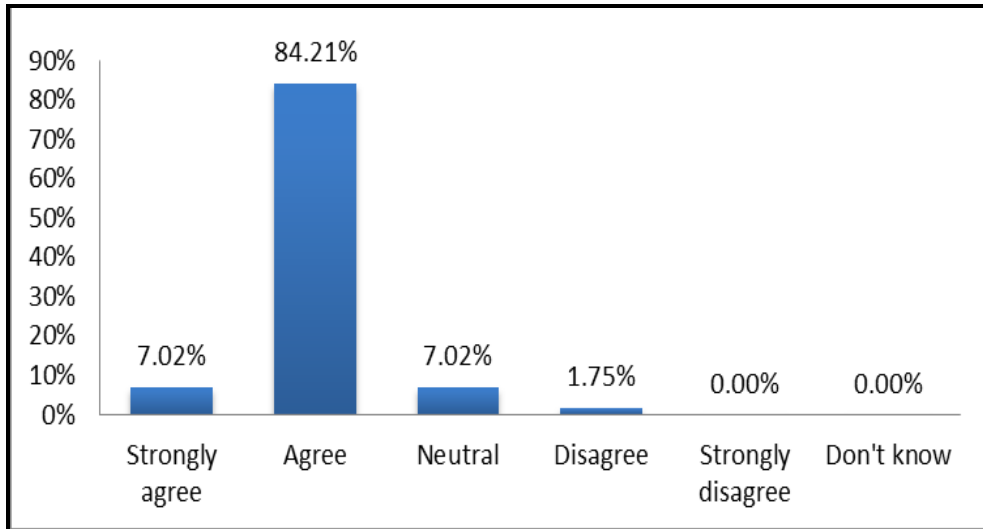
Graph 8: Students' interest in practical sessions.



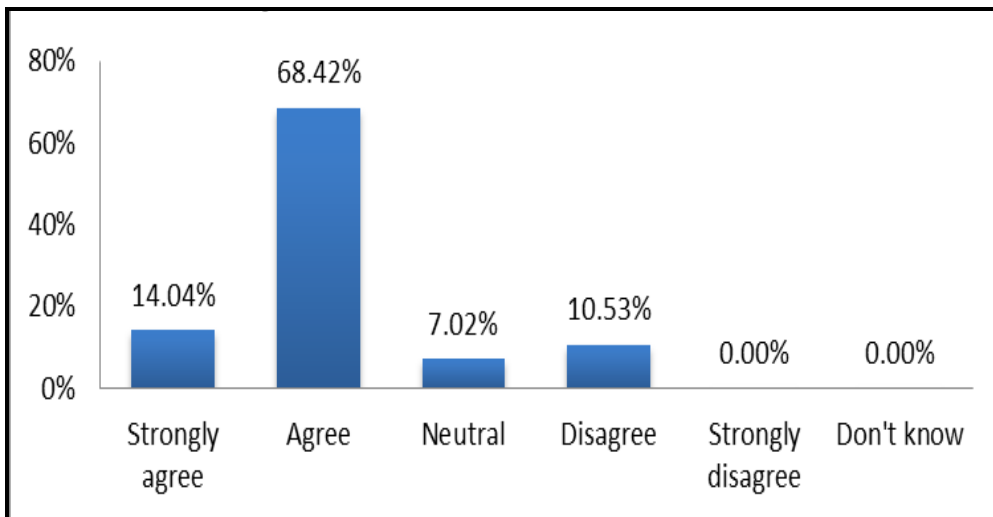
Graph 9: Ability of students in learning practical skills.



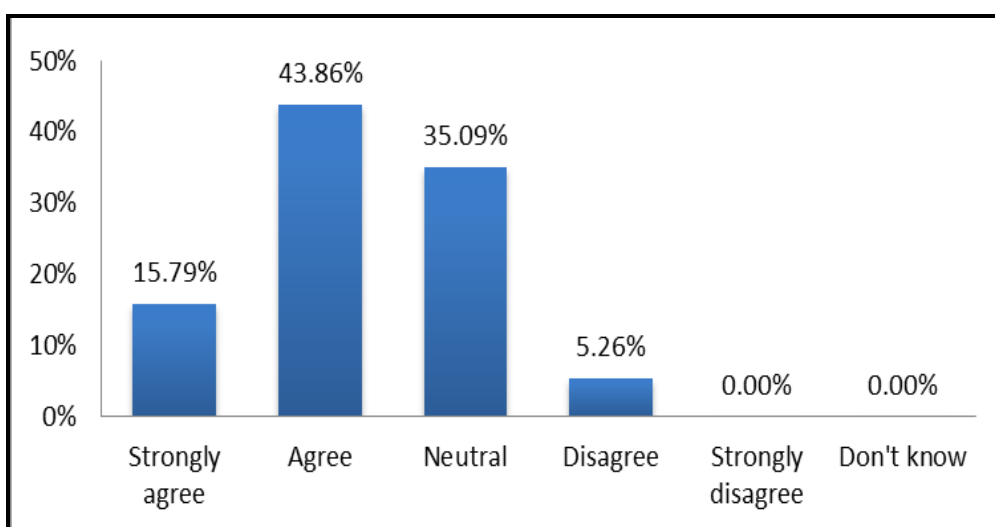
Graph 10: Preparedness of students during SDL and PBL sessions.



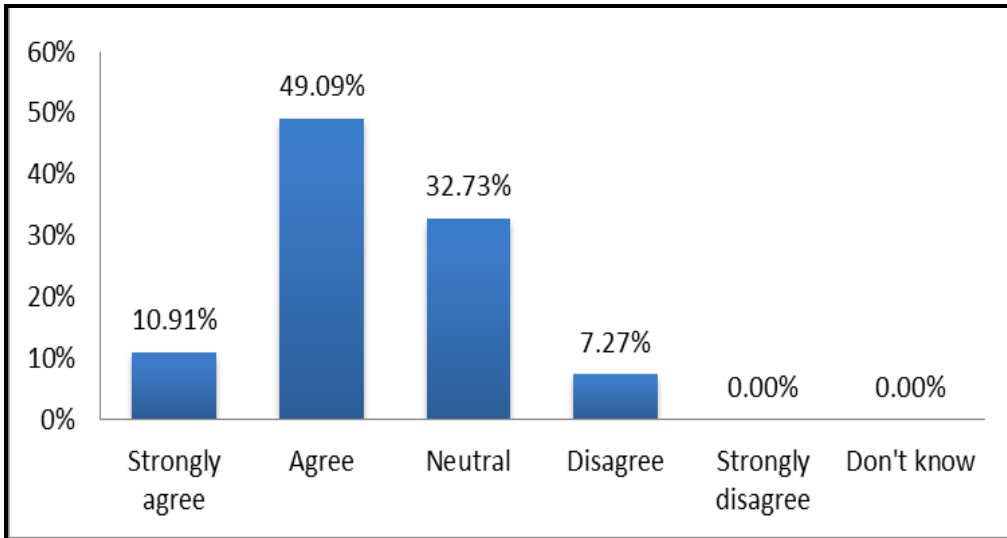
Graph 11: Teamwork strategy among students in SDL and PBL sessions.



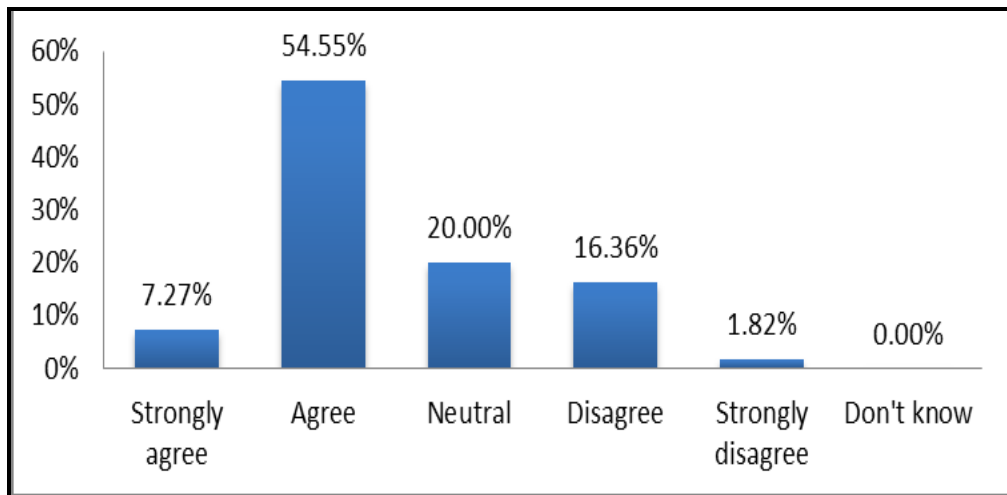
Graph 12: Ability of students to express good ideas in PBL discussions.



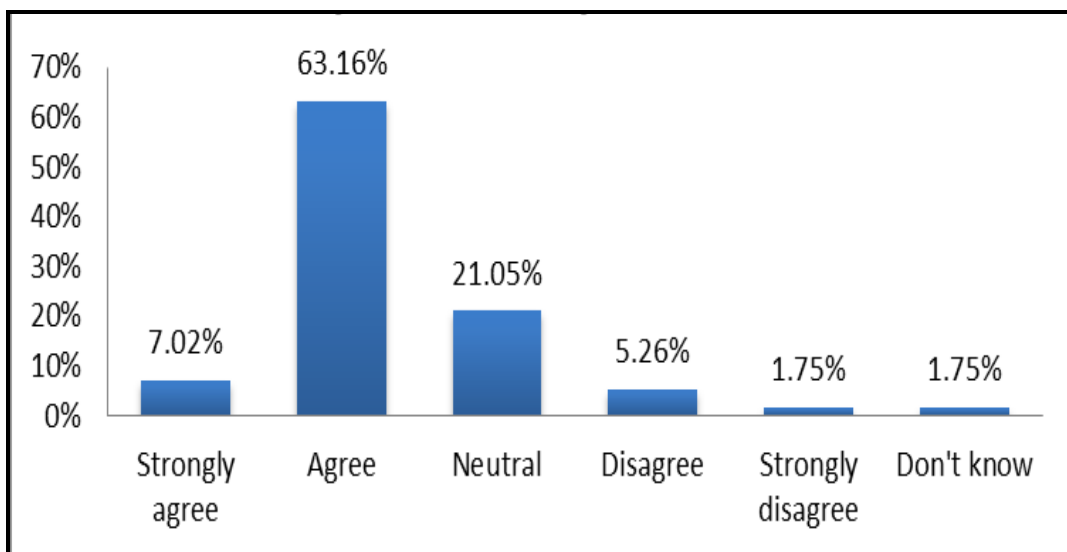
Graph 13: Teachers opinion on presentation skills of students in PBL sessions



Graph 14: Quality of presentations in PBL sessions.



Graph 15: Active participation of students in PBL presentation.



Graph 16: Ability of students to correlate issues to the resolutions in PBL sessions.





## DISCUSSION

Formal education takes place in a school environment with classrooms of multiple students learning together with a trained, certified teacher of the subject. Most school systems are designed around a set of values or ideas that govern all educational choices in that system. Such choices include curriculum, physical classroom design, student-teacher interactions, methods of assessment, educational activities etc.

From the data collected from the current analysis, diverse interpretations and varied inferences were comprehended with respect to students' process of learning. Majority of teachers (75%) were in favour of students' positive professional conducts. Professional conduct is always emphasized in the career of a doctor and these ethical and moral obligations are to be maintained at all times.

The preparedness of a student for either lecture or practical sessions might refer to the completion of assignments and the ability to follow lessons in the class by previewing the topic being taught beforehand. However, 40% of teachers expressed their unhappiness in this regard which is worth to be noted.

Regular and active participation in academic sessions enables students to interact more effectively with their teachers. In regard to teacher-student interactions, as many as 70% of teachers felt that students are communicating with them effectively. Communication is an integral part of learning and has to be practiced regularly to enhance their understanding of lesson. The interaction between the students and teachers does not only improve the successful learning process and also enhances the enthusiasm of teacher in teaching process. This aspect was greatly appreciated from the results of the current study as majority of teachers were in agreement.

Learning beyond the syllabus is important, especially in the field of medicine as it is a rapidly developing field with many new medical advances and breakthroughs yet to be unveiled. Unfortunately 43% teachers opined that students not willing to study beyond the syllabus. This is quite alarming message and need to be concerned about it.

Performance skills as learnt during practical sessions are of great significance in the medical carrier. Skills to perform various clinical procedures in future are learnt right from pre and Para clinical stages of medical under graduation. When it comes to understanding and performing practical skills, 64% of teachers agree that the students are able to learn the skills effectively.

### **In self-directed learning (SDL) and problem-based learning (PBL) sessions:**

PBL and SDL are two methods of learning that lie in par with the other teaching strategies. Both PBL and SDL serve an educational tool that provide self-motivation in the students and train them to be confident enough to tackle the situations. It also test the abstract thinking capacity of the student that helps them in their future carrier. Present study emphasizes the students' eagerness and interest in conducting these independent learning sessions, especially in PBL discussions. Correspondingly, it is also obvious that majority (82%) of the teachers agree that the students offer good ideas and hypotheses to the problems in PBL sessions. This shows that the students possess good critical thinking and problem solving skills. Present study also witness the teachers' positive perception towards the students' good presentation skill and good quality of content in the presentation. Further, their active participation, team work, collaboration skills were highly appreciated. These qualities would help them in better correlation of their knowledge with clinical scenario given in the PBL and SDL sessions.

## CONCLUSION

Despite of few negative feedback from the teachers, as pointed to students' non preparedness attitude in learning perspectives, their interactions and regular consultancy with the concerned faculties, active participation in performing practical experiments and involvement in PBL, SDL sessions were well appreciated. Curricular interaction does not only benefit the students learning process, it also makes the concerned teacher to be more enthusiastic for teaching.



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