

Students Feedback Regarding the Effectiveness of Think Pair Share Strategy in the Anatomy Class

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ABSTRACT

Lectures are a major part of a university student's learning experience and are an effective means of transferring knowledge and concepts to large groups in less time and with minimal resources.

Objectives: To find the effects of lectures alone and when lectures are combined with strategy of think-pair-share, on the 1st and 2nd year medical student's participation, confidence, critical thinking and involvement in learning activities during the Anatomy class.

Study Design: Descriptive Cross sectional study.

Methodology: Present study enrolled 200 participants involving both genders. Online feedback Performa based on 5 questions was developed and collected data from students before and after the 10-week treatment program. **Statistical analysis:** Data was analyzed by SPSS software, version 19 as qualitative variables were expressed as percentages. **Results:** There was a significant benefit to majority of students by applying think-pair-share technique during their Anatomy lectures.

Conclusion: We concluded that think pair share strategy in lectures kept the students more actively involved in the class discussion and they felt more confident in sharing their ideas with the peers. It also promoted critical thinking among the students and they received feedback more frequently from the teacher.

Keywords: Lectures, Think Pair Share Strategy, Critical Thinking and Anatomy Class.

INTRODUCTION

Lecturing is one of the oldest methods of teaching. Lectures are a major part of a university student's learning experience and are an effective means of transferring knowledge and concepts to large groups in less time and with minimal resources¹. But teaching in large groups poses several challenges like: keeping students attentive, interested and engaged, making sure all students have an equal opportunity to learn, very less time to address the questions and almost no feedback is provided to the students². After attending my sessions of course of medical teaching, I realised the importance of planning my teaching sessions, so I can help my students to learn during my lecture. I decided to begin with a small innovative yet an interactive technique of think-pair-share (TPS).

The practice of this strategy ties the cognitive and shared aspects of learning, encouraging the development of thinking and the construction of knowledge³. Think-pair-share strategy has many advantages over the traditional questioning structure. The "think time" unites the significant concept of "wait time." It allows all students to develop elaborate answers which will have reasons and explanations because they have been thought about and discussed. Medical students are required to have capability to reason, create, analyze and evaluate and apply their knowledge in clinical practice. Critical thinking is one of the competencies that can be achieved by using strategies like think pair share⁴. Therefore, the aim of this study was to address student's opinion on applying TPS strategy and its effect on Anatomy students learning, participation and confidence to participate in anatomy class discussion.

Objectives: To find the effects of lectures alone and when lectures are combined with strategy of think-pair-share, on the 1st and 2nd year medical student's participation, confidence, critical thinking and involvement in learning activities during the Anatomy class.

METHODOLOGY:

Informed written consent was taken from all the participants prior to participating in this research. Identities of the participants were kept anonymous and confidentiality was maintained. There was no breach of professional ethics at all. Present study enrolled 200 participants involving both genders. Online feedback Performa based on 5 questions was developed and collected data from students before and after the 10-week treatment program. After 10 weeks, a post survey analysis was performed. For this quantitative study, data were collected using an online survey consisting of 5 questions (Table-1) to address student's opinion on applying TPS teaching learning strategy in Anatomy classes. Again the data was analyzed and the results of pre and post surveys were compared.

Statistical Analysis: After the data collection, the data was entered into Statistical Package for Social Sciences (SPSS) version 19.0 for analysis in terms of percentages.

RESULTS

The results of pre-survey conducted before implementing TPS during Anatomy lectures showed that only 9% (19/200) students enjoyed sharing their knowledge in the class whereas 19% (38/200) almost never liked to share observations with the class as shown in table-1. However,

in the post-survey the percentages improved to 16% (32/200) who always, 33% (67/200) frequently and 23% (48/200) sometimes (Figure-2a) enjoyed sharing their knowledge with the class. Only 11% students felt confident and 32% rarely and 15% never felt confident in their abilities in anatomy in pre-survey, whereas in post-survey 19% always, 30% frequently, 14% rarely and 8% almost never felt confident in their abilities in anatomy.

Table-1: Pre-survey Assessment of Students

Questions	Almost always	Frequently	Sometimes	Rarely	Almost never
I enjoy sharing my knowledge during class	9%	12%	32%	28%	19%
I feel confident in my abilities in anatomy	11%	16%	21%	37%	15%
The lecturer promotes critical thinking	10%	8%	43%	18%	21%
Lecturer maximizes the use of time and all students are involved in meaningful learning activities.	17%	21%	39%	14%	9%
Lecturer provides appropriate and prompt feedback to the students	8%	13%	19%	33%	27%

Table-2: Post-survey Assessment of Students

Questions	Almost always	Frequently	Sometimes	Rarely	Almost never
I enjoy sharing my knowledge during class	16%	33%	24%	18%	9%
I feel confident in my abilities in anatomy	19%	30%	29%	14%	8%
The lecturer promotes critical thinking	26%	23%	29%	15%	7%
Lecturer maximizes the use of time and all students are involved in meaningful learning activities.	28%	26%	31%	12%	3%
Lecturer provides appropriate and prompt feedback to the students	20%	26%	35%	10%	09%

The results of pre and post-surveys indicated that the percentage of students increased from 17% to 28% who think that lecturer always and from 21% to 26% who think that lecturer frequently makes best utilization of lecture time

and involve them in meaningful learning activities as shown in table-2. The results of pre-survey also showed that only 8% suggest always, on the other hand 33% rarely and 27% suggest that almost never the lecturer provides feedback to the students. But in post-survey 20% says always, 26% frequently and 35% sometimes think that lecturer provides them with appropriate and prompt feedback.

DISCUSSION

Think-pair-share (TPS) instructional strategy promotes conceptual learning and critical thinking among the students in large group sessions⁵. The results of pre and post-surveys suggest that think-pair-share had a positive impact on students. The students were actively engaged and were involved with the learning material rather than just listening to it⁶. They were more confident in sharing ideas with peer in a group and then with the whole class students⁷. It provided them with the opportunity to talk over new ideas and critically think about concepts presented in the lesson. According to one author communication skill among the students and interaction between student and teacher is also improved when using think-pair-share⁸.

Many researchers showed the effectiveness and success of think-pair-share technique in achieving better and significantly higher post-test mean scores than the conventional groups. Moreover it enhances students' self-confidence as reluctant students in the early stages express themselves in later stages of the study themselves better. Moreover, they learnt how to organize their ideas thus consumed less time in thinking while solving situation and task. Hence, they enjoyed learning in later stages thus improved their learning process as they appeared more active and enthusiastic^{9,10}.

Although it seems easy to use this technique in the classroom, but there were many factors and limitations related with it to ponder while accomplishing learning objectives. One important contributing factor was discussion as the pairing and sharing parts of think-pair-share emphasizes on discussion. Proper plan for how to present the question and how to facilitate students while sharing their knowledge and ideas with the whole class is the other important task. It is a great technique for teachers as well as it gives chance for making formative assessment^{11,12}.

Limitations: The study has few limitations as well. First the questionnaire needs time to fill however, during working hours the hustle of students could intervene the results. The size of the sample is not enough to generalize the results over all students. It involved only one college.

CONCLUSION

We concluded that think pair share strategy in lectures kept the students more actively involved in the class discussion and they felt more confident in sharing their ideas with the peers. It also promoted critical thinking among the students and they received feedback more frequently from the teacher.

Authors' Contribution:

FM & MSA: Conceptualized the study, analyzed the data, and formulated the initial draft.

KN & AQ: Contributed to the histomorphological evaluation.

HA & AC: Contributed to the analysis of data and proofread the draft.

TL: Contributed to the proofreading the manuscript for intellectual content.

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