

Original Research Article

# Study of innovative teaching methods to enhance teaching and learning in Forensic Medicine

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## Abstract

**Background:** Didactic lecture is the current method of choice but it is not effective way of teaching. Interactive lecture with various innovative teaching methods is the best proven way for teaching and learning.

**Material and methods:** Cross sectional study was conducted in Department of Forensic Medicine for period of 1 year by voluntary participation of 100 students of 2<sup>nd</sup> MBBS. Three topics of Forensic Medicine were taught by jigsaw, think-pair-share and team project to three equal number groups of students and they were subjected to pre and post intervention questionnaire.

**Results:** There was significance increase in mean post test score for all the innovative teaching methods for all topics. There was no significance difference in mean post test scores of all three innovative teaching methods which indicated that all three innovative teaching methods were effective and good to practice.

**Conclusion:** Instead of didactic lecture, interactive lecture with innovative methods like think-pair-share, team project, and jigsaw is very helpful and essential for effective teaching and learning.

## Key words

Forensic Medicine, Teaching, Learning, Innovative methods, Think-Pair-Share, Jigsaw, Team project.

## Introduction

Medical education and delivery of it to students are vary across the globe in one or other aspects.

Didactic lecture is the current method of choice to cover large portion of syllabus in classroom of 100 to even 250 students [1]. Non-participation

and lack of interaction by students, lacking of student-teacher bond and increasing number of students in one class make didactic lecture an ineffective tool for teaching [2]. As the students shift from school to college, teaching methods should be changed from pedagogy to andragogy by active involvement of students in teaching. Teaching must be in such a way that students enjoy, listen, retain, recall and develop critical reasoning with proper in depth understanding. Innovative teaching methods like think-pair-share, jigsaw, team project etc. are for enhancement of teaching and learning to improve current scenario [3].

### **Material and methods**

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Cross sectional study was conducted in Department of Forensic Medicine for period of 1 year. Total 100 students of 2<sup>nd</sup> MBBS were included in the study that was willing to participate. Modules were prepared for innovative teaching methodologies for three topics of Forensic Medicine like medico-legal autopsy, mechanical injury and thanatology. Students were subjected to questionnaire twice – pre and post intervention phase. Students were divided into three equal group and innovative teaching methods like jigsaw, think-pair-share and team project were implemented in such a way that all the students were covered by all the methods.

### **Results**

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Comparison of pre and post test scores of various innovative teaching methods showed that there was significance increase in mean post test score for all the innovative teaching methods for all topics by analyzing results of paired t-test. Comparison of post test scores by using repeated ANOVA showed that there was no significance difference in mean post test scores of all three innovative teaching methods which indicated that all three innovative teaching methods were effective and good to practice. Analysis of perceptions of students on innovative teaching methods showed positive feedback.

### **Discussion**

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As per the Carpenter, active, constructive and collaborative teaching is very much popular by the students and produce significant upgrading in their learning outcomes [1]. Active learning is far better than passive learning for adults which promotes interactivity of students and makes them self learners [4, 5]. Think-pair-share, team project and jigsaw are commonly used innovative teaching methods.

Team project is a good tool of teaching which improve active learning, group work, generate interest in the learning topic, improve skill of discussion, communication and co-ordination, everyone get involve and get chance to put their view with better understanding of concept but on the other way it is time consuming and need prior planning and preparation.

Think-pair-share is the method of learn with fun in which discussion with the partner in the continuation of topic which make student to understand the view point of other, generate interest and make them to withstand in viva in front of others. It is one of the fine methods for quick remember and retain of topic for long time and improve active effective learning.

Jigsaw method is very good way of group discussion which encourage students to participate in active process of learning in which they gather and discussion information to clear their doubts via sharing of knowledge. On the other hand, this method is time consuming and give students crisp knowledge about the topic discussed.

Srivastava, et al. studied effect of interactive intra group teaching, where they found significant difference in the post-test scores by interactive method as compared to traditional teaching method [6]. Saleh, et al. compared didactic lectures with interactive sessions in small group teaching and found that students in interactive sessions, performed better. They also

found a positive attitude among students toward interactive sessions [7].

### **Conclusion**

Instead of didactic lecture, interactive lecture with innovative methods like think-pair-share, team project, and jigsaw is very helpful and essential for effective teaching and learning. Instead of passive learning and spoon feeding of knowledge, active learning via active participation is more enjoyable by students and such methods should be included in curriculum for betterment of medical education.

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