



## USE OF ROLE PLAY AS AN EDUCATIONAL TOOL IN PATHOLOGY

## Community Medicine

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## ABSTRACT

In this cross-sectional educational study, second-year MBBS students and teachers were oriented about the study. 62 students (30 females: 48.38% and 32 males: 51.62%) gave written informed consent for participation in the study. Question bank, check lists and script for role play were prepared and validated by the participants, faculty members and experts. The lottery system was used to randomly allocate students into two groups comprising 31 students each – Group A and Group B. Participants in Group A witnessed a role play (mock viva voce examination) before they themselves faced a viva voce examination; while those in Group B faced conventional viva voce examination by the same examiner, who used the same 5 gross pathology specimens. After one month, a formative assessment examination was conducted, wherein Group A students obtained significantly higher scores ( $Z=2.055$ ;  $p=0.039$ ) in the viva voce examination as compared their Group B counterparts.

## KEYWORDS

Examination, Pathology, Role play, Viva voce

## INTRODUCTION

The viva voce examination is an oral method of assessment of medical students, which helps to evaluate the level of knowledge, communication skills and professional attitudes which are essential for a medical graduate. The viva voce examination helps develop oral form of communication skill that almost surpasses other skills required for professional medical practice. The process of the presentation is more important for passing the viva voce examination than just knowledge and skills. The medical student can work on many facets of the presentation in order to improve his/her scores. Guidelines for improving viva voce performance have been published. [1] The performance of role-play and non-role-play students at a mock viva voce examination has been compared and the value of role-play in radiography student training has been reported. [2] It has been reported that anxiety scores of pre-clinical students were substantially raised, when measured just prior to their taking a viva voce examination. [3]

As a consequence of elevated anxiety and depleted confidence, medical students facing viva voce examination develop examination phobia and communication problems due to which, they are unable to express themselves adequately, leading to their poor performance. In a role play enacting the viva voce examination, students observe the mock viva, in which, frequently-asked questions are asked by teacher-actors to student-actors. This enables the observing students to familiarize themselves with the process involved in the conduct of a viva voce examination. The present study was conducted to evaluate effectiveness of role play of viva voce as a teaching methodology in Pathology and to assess the students' perceptions using validated feedback questionnaires about the role play of viva voce.

## MATERIALS AND METHODS

This cross-sectional educational study was conducted over a period of four months, in the year 2019, on second-year MBBS students in the Department of Pathology of a Municipal Medical College in Kalwa, Thane. This institution is located about 30 km from the metropolis of Mumbai, in Western India. After obtaining prior permissions from the Institutional Review Board & Institutional Clinical Ethics Committee, students and teachers were oriented about the study in separate sessions. After orientation, written informed consent was obtained from students who were willing to participate in the study. Question bank, check lists and script for role play were prepared and validated by the participants, faculty members and experts.

The participants were randomly divided into two groups comprising

31 students each – Group A and Group B – using the lottery system. Participants in Group A were told about the Do's and Don'ts of facing a viva voce examination before they took part in role play of viva voce in which, 5 gross pathology specimens were used. Participants in Group B faced conventional viva voce examination by the same examiner using the same 5 gross pathology specimens.

During the role play, questions from the pre-validated Question Bank were asked to each participating student from Group A. The pre-validated check list was filled in by a teacher who acted as an observer. Marks were awarded in the checklist for positive attribute such as, greeting the examiner, asking permission to take a seat, suitable attire, appearing confident, smiling when required, appropriate gestures when required, eye contact with examiner, relaxed body posture, involuntary movements of extremities, stimulating the examiner to ask more questions on the topic. Negative marks were awarded in the checklist for bluffing or answering vaguely, answering only after giving hints, arguing to defend wrong answers, taking a long pause before answering, misleading the examiner by diverting the topic. To prevent bias, the examiner and the observer using the checklist were kept constant throughout the study. Subsequently, the Group A participants submitted written feedback about the role play session. To avert possible denial of educational experience to Group B participants, the activity was repeated (after formative assessment) for Group B participants followed by discussion on Do's & Don'ts in facing a viva voce examination.

After one month, a formative assessment was conducted wherein each participant faced a viva voce examination by the same examiner. The scores of participants in Groups A and B were entered in Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and analyzed using SPSS statistical software Windows Version 25.0 (IBM Corporation, Armonk, NY, USA). The mean and standard deviation of scores and the standard error of difference between two sample means were calculated. The statistical significance was determined at  $p<0.05$ .

## RESULTS AND DISCUSSION

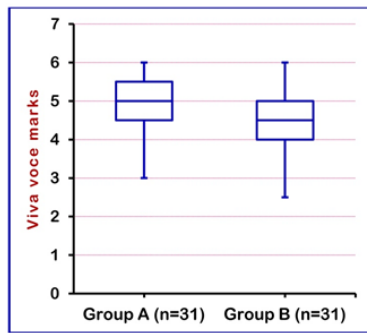
A total of 62 students (30 females: 48.38% and 32 males: 51.62%) gave written informed consent for participation in the study. In the present study, second-year MBBS students witnessed a role play (mock viva voce examination) before they themselves faced a viva voce examination. In a subsequent formative assessment conducted after one month, the difference between mean scores of participants in Groups A & B was statistically significant (Table-1).

**Table-1: Mean formative assessment scores of students in Groups A & B**

	Group A	Group B
Mean	10.13	6.52
SD	6.58	7.24
Z value	2.055	
p value	0.039 *	

SD = Standard deviation; n=31 in both groups; \*Significant at p<0.05

Though the maximum marks in formative assessment were identical for students in Groups A and B, the third quartile, median, first quartile and minimum marks were lower for students in Group B, as compared to that obtained by their counterparts in Group A (Fig-1).



**Fig-1: Box plot depicting formative assessment scores of students in Groups A & B**

The students were satisfied with the role play activity, recommended this activity for their juniors and felt that role play (mock viva) should be part of the University curriculum.

**Table-2: Feedback from participants**

S. N.	Parameter	Responses
1	Feeling of lowered confidence before mock viva	81%
2	Experiencing fear / anxiety before mock viva	100%
3	Require a preparatory mock viva	81%
4	Satisfied with mock viva	94%
5	Confidence was boosted after mock viva	94%
6	Reduction in fear / anxiety after mock viva	87%

Most of the students reported increased confidence levels and reduced anxiety levels after knowing the Do's & Don'ts during a viva voce examination (Table-2).

Role plays have been used as an effective teaching-learning tool in medical educations in clinical rotations [4] and for teaching communication skills. [5] The role play should follow the principles of adult learning (self-directed, drawing on diverse experiences, with the learner having internal motivation to learn) and the learning should be problem-centred. [6]

The challenges in conducting regular role play (mock viva) sessions include shortage of manpower, time constraints, the need to train good student-actors and the need to prepare and validate observer's checklist and question bank. Despite these shortcomings, it is planned to conduct at least one role play (mock viva) session before examination for each batch of students and to include other practical exercises in Pathology.

**CONCLUSION**

Prior orientation for viva voce examination using the role play method increases the confidence and scores of students. Thus, role play is a potential educational tool for preparing students for viva voce examination.

**REFERENCES**

- Selzer, R., Ellen, S., Rotstein, L., & Roseby, R. (2015), "Twelve tips for performing well in vivas." *Med Teach*, 37(5), 428-432.
- DeCann, R. W., & Hegarty, J. R. (1987), "A comparison of the performance of role play and non-role-play students at interview." *Radiography*, 53(611), 219-221.
- Arndt, C. B., Guly, U. M. V., & McManus, I. C. (1986), "Preclinical anxiety: the stress associated with a viva voce examination." *Medical Educ*, 20(4), 274-280.
- Joyner, B., & Young, L. (2006), "Teaching medical students using role play: twelve tips for successful role plays." *Med Teach*, 28(3), 225-229.
- Nestel, D., & Tierney, T. (2007), "Role-play for medical students learning about

- communication: Guidelines for maximising benefits." *BMC Med Educ*, 7, 3.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005), "The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development." New York: Elsevier.