Viva Voce: Has It Outlived Its Utility?

Surbhi Wadhwa¹*, Veena Bharihoke²

¹Assistant Professor, Department of Anatomy, Maulana Azad Medical College, New Delhi, India.
²Professor & Head, Rama Medical College Hospital & Research Centre, NH-24, Uttar Pradesh, India.

ABSTRACT

Introduction: Undergraduate teaching and assessment is under the scanner for a makeover. There is a need to change. Medical schools all over the world are advocating the need to move from the traditional methods to newer instruments of learning. But is the new better than the old? Materials & methods: We compared the performance of the students in viva voce and spotter examination using paired t test. We also correlated the marks obtained in written structured theory and practical examination with their viva voce and spotter examinations using regression test. Results: Our results show a better and significant correlation between the viva voce and theory and practical examination. Conclusion: Efforts must be made to make viva voce a better tool of assessment.

KEYWORDS: Assessment, Orals, Viva -voce

INTRODUCTION

Assessment is an important exercise and is undertaken to prove and improve learning and to assess whether the learning outcomes have been achieved and to what extent. Several instruments of assessments are in practice in modern medical education. These wide range of assessment tools vary from the traditional long case, short case and viva – voce examinations to the modern and newer OSLER (Objective Structured Long Case Examination Record), OSCE/OSPE (Objective Structured Clinical Examination/ Objective Structured Practical Examination). Of the traditional methods viva-voce or oral examination is still in practice in large number of departments both as a formative and summative form of assessment.

Viva voce is an integral part of assessment practiced in medical colleges in India. Viva voce traditionally is an unstructured, non-patient based oral examination between the student and the teachers (experts - external/internal) [1]. It involves usually one or more examiners. The examiners ask questions usually using a variety of visual aids. For example, in anatomy we use embryology models to elicit development, radiographs and bones to evaluate gross “normal” anatomy, and histology slides to discuss microstructure of tissues. The idea is to cover a wide range of topics and thereby assess the depth of candidate’s knowledge. Although it is a simple way to assess knowledge and comprehension, the practice of viva-voce has been abandoned by a number of institutes in North America [2].

The objective of this article is therefore to further discuss the merits and demerits of using viva voce as a tool of assessment. To do this we evaluated student’s performance in viva voce and compared it to their performance in other forms of assessment to ascertain whether the viva marks correlated well with the other tools of assessment.

MATERIALS AND METHODS

The pattern of anatomy examination in the Department of Anatomy, University College of Medical Sciences involves a theory paper and a practical examination. The practical Examination includes a spotter/ bell ringer/ objective in which the student moves from one spot to another, wherein
On a prescribed syllabus, 148 MBBS students of a batch underwent anatomy theory and practical examination on the above mentioned formats. In the practical examination, each student faced a viva where the questioning ranged from factual recall to analysis and problem solving involving prosected gross specimens. They were graded for their performance out of 10. The viva was conducted by the examiners over a period of 5 days to ensure uniformity. In the spotter exam of gross anatomy, the student first had to answer a pass question and then a related analytical question. Model answers were created and the answer sheets were then evaluated and graded out of 10 by a different examiner.

The theory papers were checked by different set of examiners. The paper involved 3 parts. Each part was evaluated by the same examiner for 148 students. The papers were marked out of 100 and the total marks were then scaled down to score of 10 for the ease of statistics. The performances of the students in viva voce was thereafter analyzed with the spotter examination using paired ‘t’ test. Their performance in viva voce and spotter test was also compared with their total theory (structured long questions + short answer questions + objective enumerate questions on gross anatomy, histology and embryology) and practical examination (which included histology, embryology, prosected specimen, spotter examination and gross bone examination) to see which of the two correlated better with the end result using regression test.

RESULTS
The mean marks obtained by the students in the viva format were 4.43± 2.082 and the mean in the objective examination was 5.01 ± 1.938. On applying paired ‘t’ test, the p value obtained was <0.001(significant). Thus indicating a better performance of the batch in the spotter test, as compared to the viva-voce batch (Table 1). The association between the total practical marks and the spotter test marks was also significant (p< 0.001, R² =0.466 and r value = 0.683). Similarly the association between theory and spotter examination was also significant (p<0.001, R²=0.356, r value =0.597). However the viva marks demonstrated a stronger correlation with the total practical (p < 0.001, R² = 0.621, r value= 0.788) and the theory (p < 0.001, R² = 0.421, r value = 0.649) as compared to the spotter test (Table 2).

DISCUSSION
The comparison of the student’s performance in the viva and spotter examination illustrates that the students significantly (p<0.001) fared better in the spotter exam as compared to the viva. However it was their viva marks which were better indicators of their final performance both in theory and practical as compared to their scores in spotter examination. Our results show that there was a highly significant correlation between the viva marks with the theory and practical marks i.e. for 64% of our students their performance in the viva examination correlated significantly with their final score in theory and for 78% students in practical examination. Hence students with a good performance in viva also scored well in their theory and practical and vice versa. In comparison the marks of only 59% of the students in the spotter examination correlated with their marks in total theory as well as for 68% in practical too. Though these values were also significant but weaker as compared to viva.
Institutions all over the world are abandoning viva-voce as it provides a scope for accruing credit not necessarily related to competence. This lack of reliability in scoring emerges from the various biases associated with it, such as the ‘halo effect’ wherein the examiner gets influenced (positively or negatively) by miscellaneous factors such as the physical disposition of the candidate, family or ethnic background of the student in adjudging the candidate. Examiners tend to cluster the individuals in a narrow range, avoiding extremes of grades. Thus the good candidates tend to be at a disadvantage as the scoring tends to be average what is referred to as the phenomenon of central tendency. Moreover poor performance of the preceding candidates brings in an error of contrast, thus benefiting the subsequent average student. To remain objective and also due to paucity of time the examiners tend to examine at low taxonomic levels [3, 4, 5].

The questions are often factual recall based leading to limited course coverage, thus decreasing it’s validity as an assessment tool. Reliability becomes poor as the scoring varies at inter-examiner levels. The examiner tends to question from their areas of interest raising standardization issues [6, 7]. In the current scenario of pleas and RTIs an oral examination involves justifying marks without any written evidence. This is one of the reasons of oral examination being abandoned in the United States [7]. To the student sitting for a viva voce causes a lot of stress [8]. Excessive fears interfere with performance.

However, despite all its shortcomings the viva voce needs to be retained because of its advantages. It reflects the predominant form of communication in the practice of medicine. It is a good tool to assess the individual’s analytical abilities in real time, allowing the examiner to assess the individual’s capacity to “think on his feet” [9, 10]. The students’ ability to triage options in emergency situations, as well as defend his /her management options in controversial cases can be assessed. Also tested are the student’s alertness and ability to think coherently under pressure [11]. The flexibility provided by the viva voce to the examiner helps him to distinguish between superficial and deep knowledge by in depth probing [10].

It gives the examiner liberty to move from the candidates’ stronger to weaker areas and thus tailor questions according to the need. The viva voce examination is also an appropriate tool to discriminate among the top students where higher order cognitive skills can be tested by an in-depth questioning. It is also valuable tool to assess the passing status of borderline cases [7]. The viva also assesses whether the general appreciation of the subject by the candidate is compatible with a sense of responsibility and safety, which is a need of our profession.

Reasoning and decision making are two important skills that have to be acquired by medical graduates. Skills like this are not inherent but developed over the years with practice. So starting early in basic sciences is important. These are tricky subjects to assess. However viva voce is a form of assessment which, if used correctly, can assess it.

A single examination cannot test all the domains of knowledge. Assessment can be an unpleasant experience for students but is a necessary evil. It is important to embrace the newer forms of assessment and to move with times. But it is also equally essential to retain a few earlier forms of assessment like oral examination. Viva voce tests a few domains like reasoning and on the spot decision making, which a medical graduate needs to inculcate in him. Viva-voce is a good tool to assess the candidate’s factual recall as well as understanding of concepts. Thus viva voce if used correctly can be an advantageous tool. Our results show that it correlates significantly better with the other formats of assessment giving a better indication of the students’ knowledge.

To make viva-voce fair, reliable and valid steps need to be taken to improve its conduct. Thus one of the changes required in medical education is restructuring of the format of viva voce and formal training of the examiners.

Our current system trains us to be doctors and not teachers. The faculty needs to be trained and made aware of its shortcomings. Steps have been taken in this regard by the Medical Council of India, by making it mandatory to have medical education units in all medical colleges for the development of teaching and assessment skills amongst their faculty [12]. The postgraduate students also need to be trained to develop necessary attitude and skills to take active part in the teaching learning activities. The importance of the study skills course in medical education early on as part of their training is obvious.

One of the other problems with the viva is that the examiners at times tend to focus questioning around their areas of special expertise and neglect other important areas. In order to address this concern a structured format of viva or a blue print can be prepared in advance to ensure that a range of questions is asked. This will also ensure that the questions are not factual recall type only. Since in Indian Medical colleges the number of students is very large this process could be time consuming. Hence it is suggested that each candidate be asked about 4-5 questions each which range from factual recall to problem solving and clinical reasoning. To avoid repetitions five or six such blueprints can be prepared by the examiner in advance. The marking of the viva should also be structured to improve the reliability of the viva and bring it nearer to the essay type and multiple choice questions [13].

In conclusion, there is sufficient merit in continuing to use viva voce as an assessment tool. However, efforts need to be put to structure and make it objective as well as a friendly mode of evaluation of the student.

REFERENCES


*Corresponding author: Dr Surbhi Wadhwa E-Mail: wadhwa.surbhi@gmail.com