Assessment, Evaluation and Examinations; Points to Ponder

Dr.K.Krishnamurthy¹, Dr.K.S.V.K.Subbarao²

¹Professor and Head, Department of Psychiatry  ²Professor of CTVS & Hospital Administrator
Narayana Medical College and Hospital, Chintareddypalem, Nellore -524003 (Andhra Pradesh) India
Corresponding author Dr.K.Krishnamurthy
Email ID: krishnamurthykdr@gmail.com

ABSTRACT

The best method to select a candidate either for a promotion or to next grade or for a job is examination and there are many ways a candidate can be examined. Examinations are known to be there since 13th century but every method has its own merits and demerits and one system does not suit all, essays, short essays, MCQs, OSCE, OSPE are some of the methods that can be used in an academic setting. The article deals with the merits and demerits of all these methods. Increasing fraud in various examinations is a matter of concern since a less meritorious or undeserving candidate gets selected by unfair means. It is essential to eradicate it by all means by adopting various methods which are also discussed. With the advancement in technology fool proof methods of examinations are to be developed. On line examination using computers may be effective to some extent.

Key words : Examinations, Evaluations, Fraud.

Introduction:

Evaluation or Examination is an assessment intended to measure a test-takers knowledge or skill, aptitude, physical fitness or classification in many other topics (e.g. beliefs). A test may be administered orally, on a paper, on a computer or in confirmed area that requires a test taker to physically perform a set of skills. There should be a method by which at the end of studentship an individual has to be declared that proper knowledge has been acquired to be qualified for higher education or to take up a job making use of the skills one has acquired during studentship, Examinations are a necessary method to assess a candidate’s knowledge at the end of study period, before a person is sent into the larger community to practice what one has learned during the period of study. What ever method that is followed is meant to test the skills of the student. Examinations are one of the most important educational methods in the university

Examinations that are conducted these days were supposed to have started in 13th century. Prior to 13th century there was an open debate system called “Disputation where a student has to defend his theory and convince the teachers a process that
used to last more than a week, All this was done and the successful candidate was given a “Kiss of benediction” or was being taken on a procession indicating success in the process, at best the candidate was offered an Olive crown\(^1\). There were no annual or periodic examinations in Ancient India. New lessons were given to students only when the teacher was satisfied after a searching oral examination after the old one was thoroughly mastered. Examinations were like heated arguments and discussions before a learning assembly. The education system was ministered to the needs and individual capacity of individual students\(^2,3\).

Ever since they were instituted, with the establishment of the Universities of Calcutta, Madras and Bombay in 1857, examinations have been under criticism. Their effectiveness, the purposes they serve, and their relevance, have remained controversial issues. (Even the earliest of the reviews of education in India, dating from 1886, points out that the university entrance examination ‘matriculation’ has apparently stimulated the holding of at least six external examinations extending down to the lower primary stages. (Examination reforms in India H . S. Srivastava Head, Examination Reform Unit, NCERT , Ne w Delhi Study prepared for the International Educational Reporting Service (IERS) UNESCO — Paris 1979 ) emphasis on memorization. Until quite recently memorization occupied a dominant place in all written examinations, which almost completely overlooked the testing, of higher objectives like understanding, and the application of knowledge and skills. This, in turn, reflected very badly on the instructional programmes where the development of these higher abilities on the part of the students was also invariably overlooked. The following corrective Test questions should be designed to test knowledge, and not memorization of the material. Knowledge means you can apply the concept to other ideas other than the examples in the textbook. Memorization means you can give the definition, but do not know what it means or how it applies to life. Knowledge is power it will open many doors, people with knowledge are respected and sought after for advice. When we learn to obtain knowledge, we are sharpening critical thinking skills. This is what the employer of today wants and the market demands. Critical thinking allows a person to assess a situation and ask yourself is this reasonable? why or why not? Decide what should happen next; what is the most important task I need to do in order to fix a situation. Then what should I do, and so on. Lastly assess if the problem is resolved; are the steps you took a permanent or temporary situation? Should this be reported? why or why not? To whom? Every situation will have different steps. Academic competence and intelligence are not straightforward to measure and no method will fully capture the scope of a student’s ability, but the fact remains that we need at least some formal system, otherwise the academic system will not work. We need divisions between ability levels and the amount of experience and knowledge students actually possess, otherwise students will be in environments unsuited to them and won’t be able to learn properly. There is no other way to divide them than by testing them in a fair and impartial manner. Exams are good at this because they are not vague - they have clear, measurable guidelines.
Tests do not encourage the pursuit of knowledge so much as the pursuit of great grades. Education should free the mind not restrict it to guidelines that are NOT transparent (As the pandemic of misunderstood Andagogy (opposite of pedagogy) keeps teachers from spoon-feeding or spelling things out).

Subjective/qualitative papers with essay questions are not as easy to measure as mathematics or other quantitative papers. There are times when different examiners grade the same paper by the same student/pupil very differently. An attempt is being made to correct this error by getting the answer sheets corrected by 2 different examiners with at least 85% concurrence, still there is scope for errors in the present day evaluation system. Marks on tests are frequently altered on students’ coercion or a teacher/examiner’s admittance of human error on his/her part. Pushier/convincing students can push examiners/tutors into raising their grades and exercise this talent frequently. Tests simply require students to cram when studying, and after the test is taken, the information studied is almost immediately forgotten, so the purpose of the test in the first place is gone.

Tools for evaluation:

As it is necessary to assess skills acquired by a candidate, there should be a scale or unit of measure which fits all for an unbiased assessment. Since it is not possible there are various measures that are being used now a days

1. Essay type explanatory questions which will encourage a candidate to by heart a topic and be successful

2. Short essays

3. MCQs (Multiple Choice Questions): which test the memory of a candidate but tests the recognizing capacity and not recall memory as do Essay type questions

4. Oral examinations or viva voci

5. Conducting pedagogy to assess the teaching skills

6. On line examinations; It is not sure during such examinations the candidate may be referring to books or has an access to copy

7. OSCE (Objective structured clinical Examination)

8. OSPE (Objective structured practical examination)

Giving grades instead of marks after assessment to avoid bias and give the candidate an advantage.

Whether assessment should be made once in a year or end posting assessment is a matter of debate. However there could be periodic and summative assessments.

Evaluation in Medicine:

In medical examinations, the candidate’s clinical skills and the decision making capacity to deal with a case in clinical setting has to be tested using different modalities.

What we need to examine in medical students:

A competency-based curriculum rests on sound practical, time-tested principles of good educational practice. In 1996, the Association of
American Medical Colleges (AAMC) endorsed this approach and encouraged all medical schools to follow suit. In 2003, the Accreditation Council for Graduate Medical Education (ACGME) adopted six competencies as outcomes for their residency training.

There are Nine Abilities which constitute a competency-based curriculum that defines the knowledge, skills and personal and professional values. Students are evaluated in the Nine Abilities by multiple methods of assessment: Written exams and participation in Problem-Based Learning, small-group sessions are the principal assessment methods in preclinical basic science courses. National standardized subject-based exams are also used. Following are the nine basic skills which a medical graduate is expected to master during their curriculum. They are

1. Effective Communication,
2. Basic Clinical Skills,
3. Use of Basic Science in the Practice of Medicine
4. Diagnosis, Prevention and Treatment,
5. Life long Learning, Professionalism,
6. Community Health Promotion and Advocacy,
7. Moral Reasoning and
8. Clinical Ethics
9. Clinical Decision Making

**M.C.Q’s - Multiple Choice Questions:**

These are commonly used in various entrance examinations where in large number of candidates are to be assessed and grades are to be given and based on the rank seats are allotted.

Multiple choice questions is a form of assessment in which respondents are asked to select the best possible answer (or answers) out of the choices from a list. It is more a test for recognition than a test for recall. There is chance for guess work, there’s usually a 25 percent chance of getting it correct on a 4 answer choice question.

The items of a multiple choice test are often colloquially referred to as “questions,” but this is a misnomer because many items are not phrased as questions. For example, they can be presented as incomplete statements, analogies, or mathematical equations. Thus, the more general term “item” is a more appropriate label. Multiple choice items consist of a stem and a set of options. The stem is the beginning part of the item that presents the item as a problem to be solved, a question asked of the respondent, or an incomplete statement to be completed, as well as any other relevant information. The options are the possible answers that the examiner can choose from, with the correct answer called the key and the incorrect answers called distractors. Only one answer can be keyed as correct. Usually, a correct answer earns a set number of points toward the total mark, and an incorrect answer earns nothing. However, tests may also award partial credit for unanswered questions or penalize students for incorrect answers, to discourage guessing. For example, the SAT removes a quarter point from the test taker’s score for an incorrect answer. For advanced items, such as an applied knowledge item, the stem can consist of multiple parts. The stem can include extended or ancillary material such as a vignette, a case study, a graph, a table, or a detailed description which has multiple elements to it. Anything may be included as long as it is necessary.
to ensure the utmost validity and authenticity to the item. The stem ends with a lead-in question explaining how the respondent must answer. In a medical multiple choice items, a lead-in question may ask “What is the most likely diagnosis?” or “What pathogen is the most likely cause?” in reference to a case study that was previously presented.

**Advantages**

There are several advantages to multiple choice tests. If item writers are well trained and items are quality assured, it can be a very effective assessment technique. If students are instructed on the way in which the item format works and myths surrounding the tests are corrected, they will perform better on the test. On many assessments, reliability has been shown to improve with larger numbers of items on a test, and with good sampling and care over case specificity, overall test reliability can be further increased.

Multiple choice tests often require less time to administer for a given amount of material than would tests requiring written responses. This results in a more comprehensive evaluation of the candidate’s extent of knowledge. Even greater efficiency can be created by the use of online examination delivery software. This increase in efficiency can offset the advantages offered by free-response items. That is, if free-response items provide twice as much information but take four times as long to complete, multiple-choice items present a better measurement tool.

Multiple choice questions lend themselves to the development of objective assessment items, but without author training, questions can be subjective in nature. Because this style of test does not require a teacher to interpret answers, test-takers are graded purely on their selections, creating a lower likelihood of teacher bias in the results. Factors irrelevant to the assessed material (such as handwriting and clarity of presentation) do not come into play in a multiple-choice assessment, and so the candidate is graded purely on their knowledge of the topic. Finally, if test-takers are aware of how to use answer sheets or online examination tick boxes, their responses can be relied upon with clarity. Overall, multiple choice tests are the strongest predictors of overall student performance compared with other forms of evaluations, such as in-class participation, case exams, written assignments, and simulation games. Another advantage is if a large number of students have to be examined like Entrance examinations for professional courses where lakhs of students have to be tested for admission.

**Disadvantages**

The most serious disadvantage is the limited types of knowledge that can be assessed by multiple choice tests. Multiple choice tests are best adapted for testing well-defined or lower-order skills. Problem-solving and higher-order reasoning skills are better assessed through short-answer and essay tests. However, multiple choice tests are often chosen, not because of the type of knowledge being assessed, but because they are more affordable for testing a large number of students. This is especially true in the United States where multiple choice tests are the preferred form of high-stakes testing.

Another disadvantage of multiple choice tests is possible ambiguity in the examinee’s interpretation.
of the item. Failing to interpret information as the test maker intended can result in an “incorrect” response, even if the taker’s response is potentially valid. The term “multiple guess” has been used to describe this scenario because test-takers may attempt to guess rather than determine the correct answer. A free response test allows the test taker to make an argument for their viewpoint and potentially receive credit.

In addition, even if students have some knowledge of a question, they receive no credit for knowing that information if they select the wrong answer and the item is scored dichotomously. However, free response questions may allow an examinee to demonstrate partial understanding of the subject and receive partial credit. Additionally if more questions on a particular subject area or topic are asked to create a larger sample then statistically their level of knowledge for that topic will be reflected more accurately in the number of correct answers and final results.

Another disadvantage of multiple choice examinations is that a student who is incapable of answering a particular question can simply select a random answer and still have a chance of receiving a mark for it. It is common practice for students with no time left to give all remaining questions random answers in the hope that they will get at least some of them right. Additionally, it is important to note that questions phrased ambiguously may cause test-taker confusion. It is generally accepted that multiple choice questions allow for only one answer, where the one answer may encapsulate a collection of previous options. However, some test creators are unaware of this and might expect the student to select multiple answers without being given explicit permission, or providing the trailing encapsulation options. Of course, untrained test developers are a threat to validity regardless of the item format. Despite being sometimes contested, the format remains popular due to its utility, reliability, and cost effectiveness.

**Objective Structured Clinical Examination (OSCE):**

A modern type of examination often used in health sciences is a test for clinical skill performance and competence in skills such as communication, clinical examination, medical procedures / prescription, exercise prescription, joint mobilization / manipulation techniques, radiographic positioning, radiographic image evaluation and interpretation of results etc. An OSCE usually comprises a circuit of short (the usual is 5–10 minutes although some use up to 15 minute) stations, in which each candidate is examined on a one-to-one basis with one or two impartial examiner(s) and either real or simulated patients (actors or electronic patient simulators). Each station has a different examiner, as opposed to the traditional method of clinical examinations where a candidate would be assigned to an examiner for the entire examination. Candidates rotate through the stations, completing all the stations on their circuit. In this way, all candidates take the same stations. It is considered to be an improvement over traditional examination methods because the stations can be standardized enabling fairer peer comparison and complex procedures can be assessed without endangering patients health.
its name suggests it is objective- all candidates are assessed using exactly the same stations (although if real patients are used, their signs may vary slightly) with the same marking scheme. In an OSCE, candidates get marks for each step on the mark scheme that they perform correctly, which therefore makes the assessment of clinical skills more objective, rather than subjective. It is structured - stations in OSCEs have a very specific task. Where simulated patients are used, detailed scripts are provided to ensure that the information that they give is the same to all candidates, including the emotions that the patient should use during the consultation. Instructions are carefully written to ensure that the candidate is given a very specific task to complete. The OSCE is carefully structured to include parts from all elements of the curriculum as well as a wide range of skills. It also measures the candidate’s skill in clinical examination - the OSCE is designed to apply clinical and theoretical knowledge. Where theoretical knowledge is required, for example, answering questions from the examiner at the end of the station, then the questions are standardized and the candidate is only asked questions that are on the mark sheet and if the candidate is asked any others then there will be no marks for them.

**Fraud in examinations:**

Fraud can be defined as “all multifarious means which human ingenuity can devise, and which are resorted to by one individual to get an advantage over another by false suggestions or suppression of the truth. It includes all surprises, tricks, cunning or dissembling, and any unfair way which another is cheated” (Black’s Law Dictionary). (Black’s Law Dictionary, 5th ed., by Henry Campbell Black, West Publishing Co., St. Paul, Minnesota, 1979.)

Unintentional fraud does not exist. What separates error from fraud is intent, the accidental from the intentional (Peterson, 2004). (Peterson, B. (2004). Interstate Business College: A Case Study in Fraud Examination [Electronic Version]. American Accounting Association)

Fraud will likely never be eradicated in its entirety. It should help promote an understanding as to who fraudsters are and why they commit fraudulent acts, which will hopefully help to detect, deter, and prevent these acts. 

The causal factors that should be removed to deter fraud. The Fraud Triangle describes three factors that are present in every situation of fraud:

1. **Rationalization** – the mindset of the fraudster that justifies them to commit fraud;
2. **Opportunity** – the situation that enables fraud to occur (often when internal controls are weak or nonexistent and
3. **Motive** (or pressure) – the need for committing fraud (need for money, etc.);

it is violative of Article 14 and 21 of the Indian constitution if a seat is obtained in a competitive or other exam by by dubious means.

**Examination malpractices, causes, effects and solutions:**

Malpractice is defined as any deliberate act of wrong doing, contrary to the rules of examinations designed to give a candidate an unfair advantage or able frequently, to place a candidate at a
disadvantage. Malpractice therefore introduces equities into the examination system. Malpractice severely undermines the credibility of the examination system. With increasing technology and dehumanizing attitudes malpractice in examinations are on the increase inspite of best efforts of a few to curb them. Malpractice is not possible with out the assistance of examiners or of the system itself.

Following are the forms of malpractice

1. Leakage
2. Impersonation
3. External assistance
4. Smuggling of foreign material
5. Copying
6. Collusion (Exchange of papers, notes etc…)
7. Intimidation
8. Improper assignment
9. Ghost centres
10. Makers malpractice (Deliberate alteration of marks etc..)

10. Technological (using highend technology like blue tooth, Embedded Sim cards etc…)

All of the above mentioned malpractices are (for Ex; 2,7,8,9 of the above list) are not possible without the connivance of external inputs like teachers or of the system itself.

High Stakes of Examinations, protecting the reputation of the educational institution, inadequate facilities for teaching, lack of student interest and motivation, parental pressure, threats and intimidation to get high marks, disinterested teaching system, premium placed by the society for some degrees and certificates, low salaries and poorly motivated teaching system are some of the causes for malpractice in examinations. A student is expected to work hard, learn the subject and pass the examination but malpractice in examination may have catastrophic consequences if not checked.

The candidates produced inthis manner will grow into adults and teachers or examinations officials who willnot see anything wrong with such sophisticated and high class examination fraud, thus defeating the goals of education by turning out certificated illiterates. Examination malpractice increases lack of confidence among students. Students who would have ordinarily passed an examination feel disappointed and loss of confidence when less intelligent ones perform better than them. cheating, thus leading to loss of confidence in themselves and in the examination and the system at large. Examinations malpractice may lure some students into others areas of misconducts such as prostitutions and or armed robbery, female students who lack money to fund external assistance or pay for scores may take prostitution while males may as well take to stealing or armed robbery in a bid to make money to pay for scores. Other general effects of examinations malpractice can be summarized as follows:-

The products of examinations malpractice are square pegs in round holes.

They lack the required knowledge and experience to carry out their assignment and professional duties effectively.-

Examinations malpractice produce candidates with low moral and academic values. The products of examination malpractice always end up with
unfulfilled dreams in their chosen career - Examinations malpractice is a negative orientation for future leaders who may end up being fraudulent and corrupt in their various offices. Anyone who engages in examinations malpractice is building on a false foundation which can lead to serious professional errors.

So, Examination malpractice should be prevented for several short term as well as long term gains for the betterment of education and the future of the nation

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Dr. Malami umar tambawal, mcasson, lpcn, ccn, mnisep, pen

Department of Educational Foundation, Faculty of Education & Extension Services. Usmanu Danfodiyo University, Sokoto

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