



## **OBJECTIVE EVALUATION OF CLINICAL PERFORMANCE OF NURSING STUDENTS - A TOOL IN ENSURING COMPETENT HANDS IN NURSING PRACTICE: EDUCATORS' ROLE**

**Mary Idowu Edward (Ph.D)**

Faculty of Nursing Sciences, University of Medical Sciences Ondo, Ondo State, Nigeria

**ABSTRACT:** *Evaluation in an educational setting is the process of finding evidence about the effectiveness of learning experiences designed for students. In order to improve the quality of clinical evaluation procedures, there is need to be more precise in defining the aim of what to assess and should ensure that methods of assessment which are both valid and reliable are utilized. Users of evaluations should be aware of various rating biases, which can affect both an instrument's reliability and validity. In order to ensure provision of quality nursing care to the society, the educators should relentlessly ensure that they objectively assess, pass and present student nurses who are indeed fit to practice for certification.*

**KEYWORDS:** Quality, Clinical Performance Evaluation, Reliable Assessment, Quality Nursing Care, Nurse Educators' Roles, Fit to Practice

### **INTRODUCTION**

Clinical evaluation is one of the important and challenging nurse educators' roles. Effort is made to address the challenges of subjectivity and inconsistency in clinical evaluation. In clinical evaluation, educators need to minimize students' anxiety within the complex clinical, provides atmosphere that will promote student's confidence during evaluation. According to Billings and Halstead (2009), nurse educators must discern whether students can think critically within the clinical setting maintain an appropriate demeanor, interact appropriately with patients prioritize problem, have basic knowledge of clinical procedure and complete care procedure correctly.

Students' evaluation must follow established guidelines so as to prepare them to cope with the challenges that could be posed by evaluation procedures. It is of importance that instruments for clinical evaluation are valid, reliable, practical and objective with acceptable level of difficulty and discrimination. In situation when the students failed or have marginal scores, opportunities should be available to establish inter-rater values. Objective evaluation of clinical performance plays an important role in students' lives and their careers; therefore, nurse educators should make every reasonable effort to ensure that the evaluation of student reflect each student's true merit or performance.

### **Evaluation**

Evaluation is the systematic determination of merit, worth, and significance of a learning or training process by using criteria against a set of standards (Clark, 2010). Evaluation in an educational setting is the process of finding evidence about the effectiveness of learning experiences designed for students. Evaluation is the process of examining a program or



process to determine what's working, what's not, and why. Evaluation determines the value of programs and acts as blueprints for judgment and improvement (Rossett & Sheldon, 2001).

Evaluation is both a process and a product; the word 'evaluation' refers to the process of systematically and objectively determining the merit, worth and value of things and it also denotes the products of that process (Scriven, 1991). It is a process that includes data collection, the subsequent interpretation of the data, and the formation of judgments and conclusions about the meaning of data. Evaluation is described by Scriven as a professional imperative; all professionals are obligated to periodically participate in, and even arrange for, performance evaluations with the aim being to assess and maintain competency levels.

Evaluation is the process of observing and measuring a thing for the purpose of judging it and of determining its "value," either by comparison to similar things, or to a standard (Institute for teaching, learning and Academic leadership (ITLAL)).

Assessment is the process of measuring knowledge, skills, abilities and attitudes and documenting same. Assessment procedures should build directly on learning.

Evaluation is the process of making judgments based on criteria and evidence while Assessment is the process of documenting knowledge, skills, attitudes and beliefs, usually in measurable terms. The goal of assessment is to make improvements, as opposed to simply being judged. In an educational context, assessment is the process of describing, collecting, recording, scoring, and interpreting information about learning (ITS Training Services mobile page, 2012). Evaluations in education are normally divided into two broad categories: formative and summative.

### **Formative**

A formative evaluation is a method of judging the worth of a program while the program activities are forming (in progress). This part of the evaluation focuses on the process. They permit the designers, learners, and instructors to monitor how well the instructional goals and objectives are being met. Its main purpose is to catch deficiencies so that the proper learning interventions can take place that allows the learners to master the required skills and knowledge. In other words, Formative evaluation is conducted while the event to be evaluated is occurring and focuses on identifying progress towards purposes, objectives or outcome to improve the activities, course, curriculum, program, or teaching and student learning (Billings and Halstead, 2009).

Formative evaluation is also useful in analyzing learning materials, student learning and achievements, and teacher effectiveness. Formative evaluation is primarily a building process which accumulates a series of components of new materials, skills, and problems into an ultimate meaningful whole.

### **Summative**

A summative evaluation (sometimes referred to as external) is a method of judging the worth of a program at the end of the program activities (summation). The focus is on the whole event and emphasizes what is or was and the extent to which objectives and outcomes were met for the purpose of accountability, resource allocation, assignment of grades (students) and certification (Billings and Halstead, 2009).



Formative is used to refine goals and evolve strategies for achieving goals, while summative is undertaken to test the validity of a theory or determine the impact of an educational practice so that future efforts may be improved or modified (Saettler, 1990). It is used to help decide whether to continue or end a program and to help determine whether a program should be expanded to other locations.

### **Clinical Performance Evaluation**

Clinical performance evaluation is a process whereby students' psychomotor skills are judged as they relate to an established standard of patient care. Acceptable clinical performance involves behavior, knowledge and attitude that student gradually develop as they progress from novice to competent nurses.

The ultimate outcome for quality clinical performance evaluation is safe quality patient care. Clinical performance evaluation provides information to the student about performance and provides data that may be used for individual student development, assigning grade, and making decisions about the curriculum. Student has the right to a reliable and valid evaluation that assesses achievement of competencies required (Billings and Halstead 2009).

Clinical evaluation represents a particular application of the broader discipline of evaluation, specifically a combination of the fields of performance evaluation, that is, evaluation of student work and evaluation of students.

### **Historical Perspective**

The assessment of clinical performance has historically involved the direct observation of assesses by professional colleagues. This stems from traditional apprenticeship model which existed for hundreds of years ago. In the last decade, we have observed the rapid evolution of assessment methods used in medical education from the traditional ones towards more sophisticated evaluation strategies. Single methods were replaced by multiple methods, and paper-and-pencil tests were replaced by computerized tests. The normative pass/fail decisions moved to assessment standards, and the assessment of knowledge has been replaced by the assessment of competence. Efforts have been made to standardize subjective judgments, to develop a set of performance standards, to generate assessment evidence from multiple sources, and to replace the search for knowledge with the search for "reflection in action" in a clinical environment (Wojtczak, 2002).

Assessment tools such as the objective structured clinical examination (OSCE), the portfolio approach, and hi-tech simulations are examples of the new measurement tools. The introduction of these new assessment methods and results obtained has had a system-wide effect on medical education and the medical profession in general nursing inclusive. Recent developments of so-called "quantified tests", standardized patient examinations, computer case simulations, and the present focus on the quality of the assessment evidence and the use of relevant research information to validate the preferred assessment approaches have been impressive, initiating the birth of **Best Evidence-Based Assessment (BEBA)**.



However, the problem is that such performance-based assessments consume resources and require a high level of technology. They are not readily applied in developing countries or even in most developed ones, due to their high cost and logistical problems.

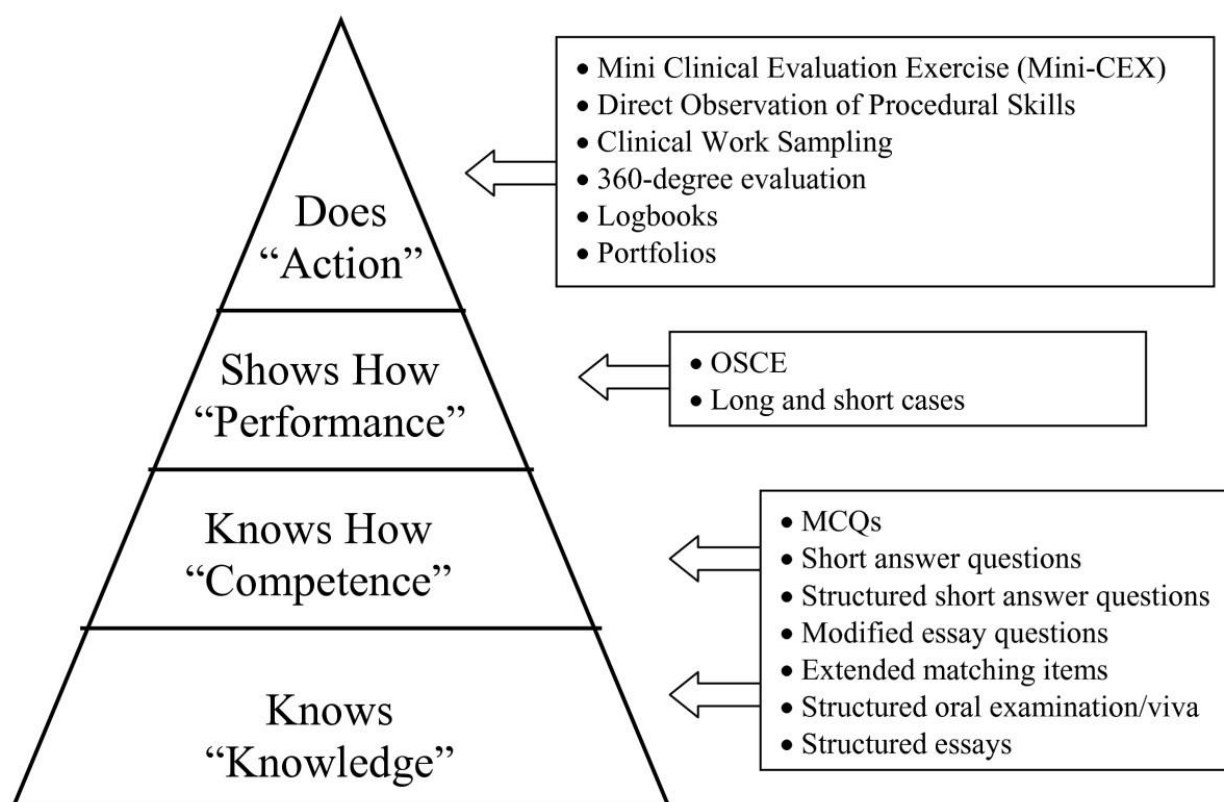
Patient safety health care is becoming increasingly litigious and the need to protect the patient and maintain patient safety is clearly paramount. Some educationalists feel it is more appropriate to allow the student time to learn practice and be assessed in a simulated environment prior to experience with patients in a clinical area. These educationalists acknowledge that there is a need for students to be assessed in clinical practice as well, but maintain that practice and assessment outside of the clinical area using simulation will enhance real clinical experience.

Recent educational studies by Duffy (2004) have identified some inconsistencies in clinical assessment. These inconsistencies according to Duffy have affected the objectivity of clinical assessments and it is argued that several students have passed clinical skills assessments where they perhaps should have failed. Other factors may also make objective assessment of clinical skills difficult. These include lack of time or resources for clinical assessment, interruption of the business of ward areas, increasing scarcity of appropriate clinical placements and the limited opportunity to assess some skills in some clinical areas. It is also acknowledged that care of the patient should always take priority over assessment of the student and in some very busy areas this does reduce the time professionals have for student assessment. The use of simulated examinations in health care requires extensive activities. The activities involve: setting up the examination, running the examination, providing feedback and post assessment counseling/developing action plans.

In the light of the above one cannot but emphasize the importance of all assessment methods, which recognize the primacy of evaluations by teachers and supervisors in the real health care environment.

### **Clinical Assessment Framework/Models**

Evaluation models can be used to help you define the parameters of an evaluation, what concepts to study, and the processes or methods needed to extract critical data. The model used for clinical assessment of student nurses is called Miller's model



**Miller's Framework of Clinical Assessment** (© Miller GE: The assessment of clinical skills/competence/performance. *Acad Med* 1990,

The demonstration of clinical competence is by assessment at levels 3 and 4 and this is more challenging. Level 3, 'shows how', is currently assessed by practical examinations, observed long or short cases, or OSCE style examinations. However, the only way to assess level 4, 'does', is to observe the practitioner at work in the real world. In other words, this measures our ability to perform (Cheek and Lamb, 2010).

### **Selection of Evaluation Tools**

Wojtczak (2002) opined that the first step in making choices of measurement instruments is to determine the purpose and desired content of evaluation, as it is important to choose the measurement methods that are congruent with the evaluation questions. The choice of measurement methods and construction of measurement instruments is a crucial step in the evaluation process because it determines the data that will be collected. If the assessment methods are inappropriate, or if there is imbalance between theoretical knowledge assessment and clinical assessment, unfortunate learning consequences for students and curriculum may occur. Equally of important, if the assessments are of low quality, improper decisions could be made which might be detrimental to the future of a student or to the welfare of the community.

Most evaluations will require the construction of specific measurement instruments such as tests, rating forms, interview schedules, or questionnaires. The methodological rigor with



which the instruments are constructed and administered affects the reliability, validity, and cost of the evaluation. It is also necessary to choose measurement methods that are feasible in terms of technical possibilities and of available resources.

With the emergence of complex performance assessment methods in general, there is a need to re-examine the existing methods to determine standards of performance, which separate the competent from the non-competent candidate. Setting standards for performance assessment is a relatively new area of study and consequently, there are various standard setting approaches currently available for both written and clinical performance tests.

In designing assessment tests, it is necessary to incorporate performance criteria designed to provide evidence that students have successfully completed the task, to demonstrate acquired competencies by responding correctly to the task criteria, and to achieve maximum scoring points. In reality, however, candidates may demonstrate a variety of performance profiles that range from non-competent, to minimally competent, to fully competent. Planners and users of evaluations should be aware of various rating biases, which can affect both an instrument's reliability and validity. A more careful specification of content, a proper number of activities performed and observed, and use of structured and standardized approaches such as checklists and rating forms for marking, improves the quality of clinical assessment.

### **Principles of Assessment**

When designing assessments/evaluation instruments the following principles should be considered:

#### **Validity**

Validity ensures that assessment tasks and the assessment criteria effectively measure the student's attainment of the intended learning outcomes at an appropriate level.

#### **Reliability**

Total reliability of a particular assessment would mean that different assessors using the same assessment criteria and mark scheme would arrive at the same results. This may be the case in some quantitative assessments. Complete objectivity is otherwise hard to achieve. With summative assessment it is, however, necessary that we aim for the goal of complete objectivity. This means that there need to be explicit intended learning outcomes and assessment criteria. Students should have access to them when the assessment task is set. Where there are multiple markers they should be discussed. In an ideal world they should be 'tested' on a sample of cases to ensure that all markers are applying the criteria consistently. Moderation and/or double marking are means of ensuring consistency between markers and internal consistency for an individual marker.

#### **Transparency**

It is important that all those involved in an assessment – students, tutors, external examiners – receive clear, accurate, consistent and timely information on the assessment tasks and procedures. Are they aware of the purpose of the assessment; the associated assessment criteria; and the assessment regulations? Do students receive detailed briefs on the task(s)?



---

## **Relevant**

Clinical performance evaluation should be about assessing **both** knowledge and skills. When devising assessment tasks, it is important that it addresses the skills you want the student to develop.

## **Manageable**

The scheduling of assignments and the amount of assessed work required should provide a reliable and valid profile of achievement without overloading staff or students.

## **Practicable**

Can the task(s) be done in the time available? Can the task(s) be achieved within existing constraints such as student numbers, accommodation facilities etc? Are the tasks achievable by the students at their level of study? It is important that the overall workload is examined from the point of view of both staff and students? Are students over assessed? Is it necessary for each intended learning outcome to be assessed separately? These are questions to be asked when assessing the practicality of a given assessment tools.

## **Range of Assessment Methods**

Are students exposed to a range of assessment methods across their program? Do they have opportunities to practice a new assessment method before a summative assessment?

## **Assessment Criteria**

It is important that students are aware of the criteria against which their work will be judged. This is part of transparency. Are students able to use the criteria to judge their own work? Are they involved in the formulation of assessment criteria? (Queen's University Belfast, 2013).

## **Types of Clinical Performance Evaluation**

According to James Cook University (2019), the followings constitute types of clinical performance evaluation:

### **Clinical Assessment**

A clinical assessment is an evaluation of a patient's physical condition and prognosis based on information gathered from physical and laboratory examinations and the patient's medical history.

### **Clinical Evaluation Exercise (CEX)**

A clinical evaluation exercise is an exam format that involves a relatively long, pre-planned single patient encounter in a clinical setting. A clinician observes the student taking a history and performing a physical examination. The student presents the findings and decides on the diagnosis and the treatment plan. Additionally, a written patient report is produced. The examiner gives feedback.



### **Directly Observed Procedural Skills (DOPS)**

Directly Observed Procedural Skills (DOPS), also referred to as Direct Observation of Procedural Skills or clinical skill competency, is designed specifically to assess practical skills in a workplace setting. A student is observed and scored by an assessor while performing a routine practical procedure during normal clinical work. The assessor uses a standard DOPS form to score the technique. For any particular skill, the student has to pass one or a number of assessments to be signed off as competent at that skill.

### **Long Case**

A long case, also referred to as a client interview, client assessment or client consultation, sees a student spend a period of time with a client, gather history, perform a clinical examination and then report the findings to the examiner. In some instances, the examiner is present throughout and will ask the student to 'think aloud' during the client encounter.

### **Mini-Clinical Evaluation Exercise (mini-CEX)**

The mini-CEX is designed to assess students' clinical competencies and facilitate feedback to drive learning. It involves an assessor/supervisor observing the student interact with a patient, in an unrehearsed clinical encounter. The assessor's evaluation is typically recorded on a structured checklist, which enables immediate provision of feedback to the student. The mini-CEX is used for both formative and summative assessment purposes.

### **Multi-Station Assessment Task (MSAT)**

A Multi-Station Assessment Task (MSAT) requires students to demonstrate core clinical competencies to examiners across a series of tasks.

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

An Objective Structured Clinical Examination involves students moving around multiple mini-stations in sequence, completing a variety of tasks that test a range of skills. The student reads the scenario, then enters the station and undertakes the task. The task is of typically short duration.

### **Evaluation Standards**

In the field of evaluation, and in particular educational evaluation, the Joint Committee on Standards for Educational Evaluation has published three sets of standards for evaluations.

- The Personnel Evaluation Standards" was published in 1988
- The Program Evaluation Standards (2nd edition) was published in 1994, and
- The Student Evaluation Standards was published in 2003.

Each publication presents and elaborates a set of standards for use in a variety of educational settings. The standards provide guidelines for designing, implementing, assessing and improving the identified form of evaluation. Each of the standards has been placed in one of four fundamental categories to promote educational evaluations that are proper, useful, feasible, and accurate. In these sets of standards, validity and reliability considerations are





covered under the accuracy topic. For example, the student accuracy standards help ensure that student evaluations will provide sound, accurate, and credible information about student learning and performance

### **The Student Evaluation Standards**

The Student Evaluation Standards are given under the following subheadings:

- Propriety Standards
- Utility Standards
- Feasibility Standards
- Accuracy Standards

#### **Propriety Standards**

The propriety standards help ensure that student evaluations will be conducted legally, ethically and with due regard for the well-being of the students being evaluated and other people affected by the evaluation results.

- **P1 Service to Students** Evaluations of students should promote sound education principles, fulfillment of institutional missions, and effective student work, so that educational needs of students are served.
- **P2 Appropriate Policies and Procedures** Written policies and procedures should be developed, implemented, and made available, so that evaluations are consistent, equitable, and fair.
- **P3 Access to Evaluation Information.** Access to student's evaluation information should be provided, but limited to the student and others with established legitimate permission to view the information, so that confidentiality is maintained and privacy protected.
- **P4 Treatment of Students.** Students should be treated with respect in all aspects of the evaluation process, so that their dignity and opportunities for educational development are enhanced.
- **P5 Rights of Students** Evaluations of student should be consistent with applicable laws and basic principles of fairness and human rights, so that students' rights and welfare are protected.
- **P6 Balanced Evaluation** Evaluations of students should provide information that identifies both strengths and weaknesses, so that strengths can be built upon and problem areas addressed.

#### **Utility Standards**

The utility standards help ensure that student evaluations are useful. Useful student evaluations are informative, timely, and influential.

- **U1 Constructive Orientation** Student evaluations should be constructive, so that they result in educational decisions that are in the best interest of the student.
- **U2 Defined Users and Uses** The users and uses of a student evaluation should be specified, so that evaluation appropriately contributes to student learning and development.



- **U3 Information Scope** The information collected for student evaluations should be carefully focused and sufficiently comprehensive, so that evaluation questions can be fully answered and the needs of student addressed.
- **U4 Evaluator Qualifications** Teachers and others who evaluate students should have the necessary knowledge and skills, so that evaluations are carried out competently and the results can be used with confidence.
- **U5 Explicit Values** In planning and conducting student evaluations, teachers and others who evaluate students should identify and justify the values used to judge student performance, so that the bases for the evaluations are clear and defensible.
- **U6 Effective Reporting** Student evaluation reports should be clear, timely, accurate, and relevant, so that they are useful to students, their parents/guardians, and other legitimate users.
- **U7 Follow-Up** Student evaluations should include procedures for follow-up, so that students, parents/guardians, and other legitimate users can understand the information and take appropriate follow-up actions.

### Feasibility Standards

The feasibility standards help ensure that student evaluations can be implemented as planned. Feasible evaluations are practical, diplomatic, and adequately supported.

- **F1 Practical Orientation** Student evaluation procedures should be practical, so that they produce the needed information in efficient, no disruptive ways.
- **F2 Political Viability** Student evaluations should be planned and conducted with the anticipation of questions from students, their parents/guardians, and other legitimate users, so that their questions can be answered effectively and their cooperation obtained.
- **F3 Evaluation Support** Adequate time and resources should be provided for student evaluations, so that evaluations can be effectively planned and implemented, their results fully communicated, and appropriate follow-up activities identified.

### Accuracy Standards

The accuracy standards help ensures that a student evaluation will produce sound information about a student's learning and performance. Sound information leads to valid interpretations, justifiable conclusions, and appropriate follow-up.

- **A1 Validity Orientation** Student evaluations should be developed and implemented, so that interpretations made about the performance of a student are valid and not open to misinterpretation.
- **A2 Defined Expectations for Students** The performance expectations for students should be clearly defined, so that evaluation results are defensible and meaningful.
- **A3 Context Analysis** Student and contextual variables that may influence performance should be identified and considered, so that a student's performance can be validly interpreted.
- **A4 Documented Procedures** The procedures for evaluating students, both planned and actual, should be described, so that the procedures can be explained and justified.
- **A5 Defensible Information** The adequacy of information gathered should be ensured, so that good decisions are possible and can be defended and justified.



- **A6 Reliable Information** Evaluation procedures should be chosen or developed and implemented, so that they provide reliable information for decisions about the performance of a student.
- **A7 Bias Identification and Management** Student evaluations should be free from bias, so that conclusions can be fair.
- **A8 Handling Information and Quality Control** The information collected, processed, and reported about students should be systematically reviewed, corrected as appropriate, and kept secure, so that accurate judgments can be made.
- **A9 Analysis of Information** Information collected for student evaluations should be systematically and accurately analyzed, so that the purposes of the evaluation are effectively achieved.
- **A10 Justified Conclusions.** The evaluative conclusions about the student performance should be explicitly justified, so that the students, their parents/guardians, and others can have confidence in them.
- **A11 Meta evaluation.** Student evaluation procedures should be examined periodically using these and other pertinent standards, so that mistakes are prevented or detected and promptly corrected, and sound student evaluation practices are developed over time. (Adapted from Joint Committee on Standards for Educational Evaluation, 2013)

### **The Role of Educators**

Educators of students have indispensable roles to play regarding objective evaluation of clinical performance nursing students to ensure realization of the goal of delivery of quality nursing care. The society is becoming more aware of their right to quality nursing care. The objective clinical performance evaluation can only be assured by adopting principles of evaluation instruments and by imbibing student evaluation standards as discussed in propriety standards, utility standards, feasibility standards and accuracy standards.

They need to develop a common understanding of the nature of students' evaluation including the range of activities and purposes associated with student evaluation, become acquainted with the content and organization of the student's evaluation standards and apply the standard in order to understand their relevance or applicability.

In addition, the educators should define clearly both knowledge and skills that students need to demonstrate. Use multiple sources of data for evaluation. Be objectives and consistent in the evaluation of all students. Use formative evaluation and suggest minor easy corrections when they are needed. Present feedback on evaluation in non-judgmental language confining comments to student behavior. The evaluator comments first on the strength then the weakness of student behavior. Carry an anecdotal record for each student maintaining privacy of data. Make specific note focusing on specific details of a student's behavior and document student pattern of behavior over time through compilation of record.

Invite student to complete self assessment and summarize what they have learnt. Help student prioritize learning needs and turn feedback into constructive challenges with specific goals for each day. Observe the performance of the student at a particular task. Score according to the marking schedule. Use clinical expertise to judge the candidate's performance.



## CONCLUSION

In order to improve the quality of clinical evaluation procedures, there is need to be more precise in defining the aim of what to assess and should ensure that methods of assessment which are both valid and reliable are introduced. No single method is adequate to appropriately measure all aspects of clinical knowledge, skills and problem-solving techniques; the multi-format assessment conducted in examination settings is essential.

It is also necessary to choose measurement methods that are feasible in terms of technical possibilities and of available resources. Users of evaluations should be aware of various rating biases, which can affect both an instrument's reliability and validity. A more careful specification of content, a proper number of activities performed and observed, and use of structured and standardized approaches such as checklists and rating forms for marking improves the quality of clinical assessment.

The educators should relentlessly ensure that they objectively assess, pass and present student nurses who are indeed 'fit to practice' for certification. This is the only way to ensure provision of quality nursing care that our society deserves.

## REFERENCES

- Cannon, R. and Grogan, K.2008: Evaluation Principles and Frameworks [www.sacoss.org.au](http://www.sacoss.org.au)  
Institute for teaching, learning and Academic leadership (ITLAL) University of Albany  
State University of New York [www.itlal.org](http://www.itlal.org)
- Clark, D. R. 2010. Evaluation in Instructional Design Retrieved May 6, 2013 from  
<http://nwlink.com/~donclark/leader/leader.html>
- Committee on Standards for Educational Evaluation. 2003. The Students Evaluation  
Standards: How to Improve Evaluation of Students \_ Newbury Park, CA: Corwin Press.
- ITS Training Services mobile 2012: Differences between Testing, Assessment, and  
Evaluation
- James Cook University (2019), the followings constitute types of clinical performance  
evaluation: <https://www.jcu.edu.au/learning-and-teaching/resources/subject-outline-guide-and-template/assessment-types/clinical-performance> Australia
- John L. Turner, MD; Mary E. and Dankoski, 2008: Objective Structured Clinical Exams: A  
Critical Review, Family Medicine pg 574
- Queen's University Belfast 2013, Academic & Student Affairs, Queen's University Belfast,  
BT7 1NN University Road Belfast, BT7 1NN, Northern Ireland, UK.
- Rossett, A. & Sheldon, K. 2001. Beyond the Podium: Delivering Training and Performance  
to a Digital World. San Francisco: Jossey-Bass/Pfeiffer
- Saettler, P (1990). The Evolution of American Educational Technology. Englewood,  
Colorado: Libraries Unlimited, Inc., p. 350.
- Wojtczak, A. 2002: Evaluation of Learning Outcomes -Assessment Methods and  
Measurement Instruments Working Review August 2001