Competency Based Medical Curriculum: Challenge or Opportunity? Neelam Anupama Toppo

Professor, Department of Community Medicine, Netaji Subhash Chandra Bose Medical College, Jabalpur **Correspondence:** Dr. Neelam Anupama Toppo, Email: neelam.philips2011@gmail.com

Let me start with an incidence recently I had and my heart was broken to know that my students are not referring the textbook of Community Medicine or any other subject rather using some easy to read notes and guide with objective type question answers. It made me to think again and again that how and what should we do to make them read the subject through textbook and develop deeper understanding of topics and its applications. As there is a saying "Once you get into the field of medicine you are a student forever" but today's students are focusing to clear NEXT and getting the subject for PG but are we really looking this? No, We are expecting Indian Medical graduates with certain qualities given by NMC i.e. Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion, Leader and member of the health care team and system with capabilities to collect, analyze, synthesize and communicate health data appropriately, Communicator with patients, families, colleagues and community, Lifelong learner committed to continuous improvement of skills and knowledge, Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession. In order to see such qualities in our graduates we faculty need to work hard to make our students understand and realize about these goals and objectives.

How can we do that?

We need to adopt system approach including Input, Process and output. In Input we need to identify smart system of Teaching Learning material and method which should involve students actively, we must develop in them reading habits through text books for deeper understandings of topics which will further develop analytic competency and generation of various questions regarding topics.

The Process should be based on three aspects i.e. AIMS and Objectives based Teaching and Learning, Planning and Implementing TL Process in order to achieve the Aims and objectives, Planning and implementation of a scheme of Assessment again based on Aims and objectives. These all process must keep students engaged and must be students' centric not Teachers' centric.^[1]

Then we need to work on our assessment process and need to develop the valid tools of assessment. And these valid tools must be used by all medical colleges of our country. Then only we would be able to see whether our medical graduates are competent for expected competencies or not. Our assessment tools should help to interpret the tests score of students. It should not only for pass or fail but beyond it.

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The Educational Spiral as teaching approach:

Jerome Bruner proposed the spiral curriculum as a teaching approach in which **each subject or skill** area is revisited at intervals, at a more **sophisticated level each time.** First, there is basic knowledge of a subject, and then more complexity is added, reinforcing principles that were first discussed. That is very important aspect to make our teaching Learning very effective and engaging not only through our traditional system of two internal assessment, Pre university examination and Summative examination. We need to find out whether the system of teaching learning is the effective or not or if efficiency is found to be below par, then we need to revise the whole process of education, so that the subsequent process cycles will perform better. This process is considered as the educational spiral where each cycle of input, process and output is an environment of the previous cycle, keeping the system dynamic. We as community medicine faculty need to work on that and find out the best model of teaching learning of our subject. We need to put various efforts to implement this kind of system thinking in educational contexts, and explore learning environments which could be expert presentation, simulation, and real-world. Many educationist advocated both real-world and simulated learning environments, which needs extra efforts and resources.^[2,3] If we could developed some valid tools that will make students to read, understand and applying the learning in real world. Because patients come to doctor with expectation that doctor will apply his knowledge in him/her and make them cure. Therefore its our responsibilities to make them competent, knowledgeable and clinician who can solve the problems of patients and community.

Whatever learning environment we will adopt we need to make sure that our students must go through various levels of learning process, these are:

- Signal Learning: This is the simplest form of learning which consists of diffuse and involuntary emotional responses associated with stimulus response learning. Signal learning is based on Pavlov's conditioned responses.
- 2. Stimulus-response Learning: It is a precise and voluntary response to a stimulus and it is based on Skinner's operant conditioning.
- Chaining (Motor): Chaining involves meaningful linking of multiple previously learned motor responses.
- Verbal Chaining: Verbal chaining involves association and linking of meanings represented by words.
- Discrimination Learning: Discrimination is the ability to distinguish between similar looking objects, ideas and stimuli. Distinctive features facilitate discrimination.
- 6. Concept Learning: Concrete concepts (e.g., cell, tissue) are identified by pointing out but abstract concepts (e.g., informed consent, compassion) must be defined for identification. Concept learning helps in classifying stimuli on the basis of their characteristics.
- Rule Learning: A rule is a statement specifying relationship of two or more concepts.
- 8. Problem Solving: It is the highest form of learning which involves learners to use several rules to solve a practical problem.^[1]

During this process of teaching learning we

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need to follow certain principles where The concepts embodied in various theories of learning have helped in evolving several principles of learning. These principles can be applied in teaching-learning activities to enhance learning. Some important principles are described below and their implications and applications are suggested.

1. Goal Setting

All human actions are guided by underlying goals. The goals are always present although they may be unclear and we may not be aware of them. The importance of goals or objectives in the teaching-learning process cannot be overemphasised. According to Mager, "if you help each learner to develop his/her learning objectives you may not have to do much else". Unequivocal learning objectives help both teachers and learners to play their appropriate roles in the teachinglearning process effectively.^[4] Specific educational objectives incorporating acceptable levels of performance or criteria facilitate evaluation and allow learning process to continue until each student achieves mastery or an acceptable level of performance (mastery learning). A teachinglearning process in which mastery-learning is the goal has a flexible time schedule to allow for different individual rates of learning. Such a curricular process is called a competency based curriculum.

2. Relevance of Learning Experience

Medicine is an applied science and the learning experience and the underlying learning objectives must have a direct or indirect relevance to the care of humans in health and disease. Medical students as adult learners need to know why they should learn something. Long-term relevance of the learning experience activates intrinsic motivation for learning. Hence, it is essential that the students understand the relevance of all learning experiences that are being Teaching Learning Principles provided to them. Life-oriented education is another term used to describe such teachinglearning experiences. As this is the big challenge before all of us due to the motive of students these days have been shifted.

3. Motivation

Motivation is a strong reason for doing something. It arises from the needs of a person. Maslow grouped the human needs into seven classes and arranged them in the following hierarchy starting from the most vital physio-logical needs.^[5]

- (a) Physiological needs (need for food, water, air, sex, activity, rest, etc.)
- (b) Safety needs (need for security, regularity, predictability, etc.)
- (c) Social needs (need for love, affection, belongingness, etc.)
- (e) Need for self-actualization (need for creativity, inter-personal relationship, social interest, problem- centred behaviour, etc.)
- (f) Need to know and understand
- (g) Aesthetic needs

According to this hierarchy, when a lower need (e.g., physiological needs) is satisfied, only then there is motivation to meet the needs of the next higher order (e.g., safety needs). Thus, motivation for learning (need for self-actualization, need to know

and understand and aesthetic needs) comes only after more basic deficiency needs (physiological needs, safety needs, social needs and esteem needs) are fulfilled. The teaching-learning activities should occur in an atmosphere where the basic deficiency needs of the students are met. There is the role of faculty as facilitator or motivator which is crucial. In present scenario where motive for study MBBS has been changed and we are observing the deterioration in academic performance. We need to find the ways to achieve the given GOALS by NMC. Motivation could be classified as intrinsic and extrinsic. In intrinsic motivation the students learn for learning's sake. Intrinsic motivation arises from the expectation of long-term utility of a learning task and depends on the relevance of learning experience to the future task of the learners. In extrinsic motivation the students learn for some extrinsic rewards such as completion of a course and getting the reward or a good performance in the examination which becomes the main motivating force.

Conclusion:

Competency based Medical education is an opportunity for all the Faculty of our Country. As of now our role is not teachers but more than that we are facilitators, mentors for teaching learning and we need to make plan for that in such a way where students must be involved actively throughout the process of teaching learning. Our examination system must evaluates the students for knowledge and skills needed for their future professional tasks as a best clinician, Public health specialist, Communicator, Leader, Life long learner. There should no difference in the intrinsic and extrinsic motivation, so that students pursue learning activities with optimum interest.

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