

Review article:

Learning and early clinical exposure

Dr Motilal C Tayade

Professor in Physiology, Department of Physiology, Rural Medical College, Pravara Institute of Medical Sciences (DU),
Loni, Council Member, Medical Education Unit, PIMS (DU) Loni

*Corresponding author: Email: drmcayade@gmail.com



Abstract:

The ECE's primary goal is to correlate actual sciences content with clinical sciences in a spiral integration model in real-time learning practices to establish the cognitive component of professional learning. ECE helps students to develop fundamental clinical skills as well as a moral attitude with active learning. It also aids students in overcoming their pressures and anxieties and motivates them to develop a better insight into the medical profession. It will undoubtedly lead to a positive influence on the student's attitude towards medical education, which will help them achieve social and professional satisfaction. As students face an eternally growing amount of information in the medical sciences, ECE will increase their exposure to clinical problems and prepare them to be up-to-date clinicians. The advantages of ECE are well documented in the literature.

ECE forms a crucial part of the initiation into medicine, smoothens the transition from layperson to student physician, provides them an opportunity to bring social relevance and contextualize essential science learning, provides teaching and learning of necessary clinical skills, enhances student motivation, and encourages the students to learn professional behavior.

Keywords : Early clinical exposure , learning

Introduction:

Learning is acquiring understanding, knowledge, behaviors, skills, values, attitudes, and preferences. It is the nervous system's fundamental property where the information is encoded, transformed, and processed in different forms. When molecular changes occurred at neuronal levels due to learning stimulations, these various sites amplified, processed, and transformed.

Our human brain processes information in complex networks of nerve cells. The cells communicate and excite one another through unique connections, called synapses.

There are several learning styles like visual, aural, verbal, physical, logical, social, and solitary. .

Cognition Process:

Cognition referring to the mental processes involved in gaining knowledge and comprehension.

Cognitive processes include:

1. Thinking
2. Knowing

3. Remembering
4. Judging,
5. And problem-solving.

These are higher-level functions of the brain and encompass language, imagination, perception, and planning.

Types of Cognitive Processes:

There are many different types of cognitive processes.

These include:

1. **Attention:** It allows people to focus on a specific stimulus in the environment.
2. **Language:** Language and language development are cognitive processes that involve understanding and expressing your thoughts through spoken and written words. It allows us to communicate with others actively and plays a vital role in the thought process.
3. **Learning:** It is involved in synthesizing information and integrating it with prior knowledge.
4. **Memory:** It is an essential cognitive process that allows people to encode, store, and retrieve information.
5. **Perception:** It allows people to take in information through their senses (sensation) and then utilize it to respond and interact with the world.
6. **Thought:** It is an essential part of every cognitive process.

Kolb's Learning Theory Mechanism:

Kolb states that learning involves acquiring abstract concepts that can be applied flexibly in a range of situations. In **Kolb's learning theory**, the impetus for developing new ideas is provided by new experiences.⁵⁷ He stated that "Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38).

Effective learning is seen when a person progresses through a cycle of four stages, as shown in the following types:

- (1) Having a concrete experience followed by
- (2) Observation of and reflection on that experience which leads to
- (3) The formation of abstract concepts (analysis) and generalizations (conclusions), which are then
- (4) Used to test the hypothesis in future situations, resulting in new experiences.

According to **Kolb (1974)**, learning is an integrated process, with each stage mutually supportive of and feeding into the next.

It is possible to enter the cycle at any stage and follow it through its sequence.

However, significant learning only occurs when a learner can execute all four stages of the model. Therefore, no one set of the cycle is useful as a learning procedure on its own.

Accordingly, **Kolb's Learning Theory**, a student's direct involvement in learning processes, develops their ability to possess and use analytical skills to conceptualize hospital-based experience. It also utilizes decision-making skills when presented cases during their clinical practice.

The ECE's primary goal is to correlate actual sciences content with clinical sciences in a spiral integration model in real-time learning practices to establish the cognitive component of professional learning.

ECE helps students to develop fundamental clinical skills as well as a moral attitude with active learning.

It also aids students in overcoming their pressures and anxieties and motivates them to develop a better insight into the medical profession.

It will undoubtedly lead to a positive influence on the student's attitude towards medical education, which will help them achieve social and professional satisfaction.

As students face an eternally growing amount of information in the medical sciences, ECE will increase their exposure to clinical problems and prepare them to be up-to-date clinicians.

The advantages of ECE are well documented in the literature.

ECE forms a crucial part of the initiation into medicine, smoothen the transition from layperson to student physician, provides them an opportunity to bring social relevance and contextualize essential science learning, provides teaching and learning of necessary clinical skills, enhances student motivation, and encourages the students to learn professional behavior.

Student's perception of ECE's advantages was that it provided important validation of the student's decision to go to medical school. It was a lifeline that helped the student stay focused on their studies and provided the opportunity to establish a link between the basic sciences concepts and actual patient cases.

Similarly, faculty perception of ECE's advantages was that it provided a more integrated approach to teaching basic sciences and clinical medicine increased excitement for learning by students provided better comprehension of basic science knowledge.

Clinical condition and clinical reasoning ability:

A concept that explicitly defines the context of a clinical finding or procedure is known as a clinical condition.

ECE plays an essential role in developing clinical reasoning in medical students.

Clinical reasoning is how doctors collect cues, process the information, come to an understanding of a patient problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process.

How is the clinical reasoning cycle used?

It can be developed by using the following strategies.

1. Consider the patient.
2. Collect cues/information.
3. Process information.
4. Identify problems/issues.
5. Establish goals.
6. Take action.
7. Evaluate outcomes.
8. Reflect on the process and new learning.

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