

## Learner's Role in Medical Education: Narrative Review

SHAHRAMYAZDANI<sup>1</sup>, MALIHEH ARAB<sup>2\*</sup> and BEHNAZ GHAVAMI<sup>3</sup>

<sup>1</sup>Associate Professor of Medical Education, Department of Medical Education, School of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

<sup>2</sup>Professor of Gyneco-oncology, Department of Medical Education, School of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

<sup>3</sup>Shariati Medical Center, Tehran University of Medical Sciences, Tehran, Iran.

\*Corresponding author E-mail: drmarab@yahoo.com

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### ABSTRACT

Nowadays, learner's role in medical education has deeply changed. This brief review has aimed to overview 5 main aspects of learner's role in medical education. These domains are as follow: active versus passive role, group-learning and communication, knowledge construction facilitative role of teacher and learning styles. In conclusion, curriculum planning and teaching in medical education needs careful consideration to different aspects of learner's role.

**Keywords:** Student, Medical education, Review

### INTRODUCTION

Review of medical education literature indicate five different and dependent aspects in medical education all leading to learning.

First: learning mechanisms

Second: learning methods

Third: environment, culture and language

Fourth: learner's role

Fifth: learning outcomes

In this review focus is on fourth aspect: learners role. Conventional learning- teaching was based on high responsibility of teachers to teach fixed subjects mostly in conference halls and large class rooms. Students were passive followers. These aspects of education are changed in favor of high responsibility of students.

This article is to summarize and review five aspects of learners role in medical education<sup>1</sup>.

#### Active versus passive learners role

Active learning consider student, most

involved in learning process. Deductive method and integrating new with existing knowledge is base of active learning. Modern learner is an active learner.

Active and meaningful learning happens in 3phases including the first, clarification of the lesson and relate it to before learned knowledge. In the second phase similarities and differences are highlighted. Finally in the third phase merging new and previous knowledge in the students mind result in active learning.

In arrangement of learning environment and effective curriculum planning, understanding the level of actual development is important. Zone of proximal development and level of potential development are next steps resulting from the first understanding. Student is active and high responsible to his/her own learning process. The highest learning efficacy is expected to occur in the zone of proximal development.

Student exposed to an experience, grasp it in two models: abstract conceptualization or

concrete experience. In transforming the experience, there are two models as well, including reflective observation or active experimentation. Every model is used, end result of any experience or exposure is grasping experience followed by transforming it. End result is experiential and active learning. Active learning is the main and the most effective learning approach. Curriculum planning and teaching – learning methods are all arranged to achieve this basic role for learners. Passive learning mentioned in behaviorism, is based on reinforcement to shape behavior. Reinforcement under the selected conditions might play role in classroom instruction and learning. Sometimes students with high degree of freedom in their background of learning can not accept this method. Reinforcement should be positive, intermittent, planned for small tasks and arranged from simple to complicated tasks, to be effective. Passive learning take a small place in learning process (2-23) .

#### **Group-learning and communication**

Development is nearly interrelated into social context: language and collaboration are central keys in learning. Language play a central role in development. Different mother language of learners Sometimes work as barrier.

Education as a lifelong activity is based on situation instead of subject. New experience has displaced curriculum planning. Discussion is favorite learning method. In this way, text books and conference halls are less important. Learning due to existing modern facilities is in favor of social networks. Goal of education is participation in social groups and coping with real problems.

Education might be considered as a method for social adaptation. Adult education and social education are regarded synonyms. Worldwide trend towards diversity in universities has resulted in a large number of medical students traveling abroad for post graduate education. Diversity is accepted in educational policy of universities in the world, and is encouraged. On the other hand many talented students are motivated to apply for special universities strong and famous in their favorite field.

History and culture of adults deeply influence their learning. Beliefs, values and pre assumptions should be considered in arrangement of collaborative learning groups. Teacher-learner beliefs are studied to be different in the world. For instance in Sweden, free discussion is common and teacher is not dominant. In Saudi Arabia teacher is believed such as boss or someone who know answers.

Sometimes different curriculums in the world terminate in a same certificate. Teachers should consider this matter and carefully follow prerequisites.

Deep learning by discovery learning and spiral curriculums are encouraged. Three main aspects of deep learning are society and culture background, understanding of others value and beliefs resulting in deep understanding in collaborative learning groups.

People in organizations and social groups are faced to personal and organizational questions. Coping to fast changes in organizations and society needs open environment with minimal political behaviors if learning and change must happen. When organizational or social efforts such as intervention or a problem solving activity happen, usually 6 phases are passed into this end-result. These 6 phases include: mapping the problem, internalization, test the model, invent solutions, produce the intervention, and study the impact and finally action. Learning is suggested by participation in problem solving in groups, organizations and society. Deep search of questions and problems is necessary in organizational learning. So, group learning make students ready to solve problems of organizations as units of the society (2-23).

#### **Knowledge construction**

Collaborative learning and in groups construct knowledge rather than receive it. Collaborative learning necessitate communication and its skills.

In expansive learning, completely new things are learned. Students construct something, not existing previously and learn in the process. Wide social, organizational communications via

internet in one side and new problems and dangers in other side are backgrounds necessitating this new learning activities.

Knowledge construction follows the aim of problem solving. Active problem solving in group follow trend of simple to complicated jobs.

Heteroglossia or multi voicedness is a process of discussion, communication and collaboration to learn in active movement towards new constructed system to solve problem. Performance surveillance and evaluation are following activities. Networks are more and more popular rather than persons, in this way borders are discarded.

Summary of learning movement from abstract to concrete happens by these steps: questioning, analysis, modeling, examining, implementing, reflection and evaluation. Learning cycles are passed intermitantly, data move towards groups and organizations in continuous learning movement. Content of learning is not clear in starting point and the aim is new concept construction. New concept result in new action<sup>2,23</sup>.

#### Facilitative role of teacher

Students need to learn how to learn. This is skill of meta- cognition. Learning how to learn is probably the most useful matter for someone to learn. Meta-cognition is described as connection of 3 domains including culture-society, understanding of other's beliefs and deep communication to other people. Conventional high responsibility of teachers has changed to high responsibility of students in process of active learning and construction of knowledge. Aim of learning and education in a broad prospect is facilitation of learning. Teacher is mainly facilitator. Teacher might follow 3 ways to facilitate learning including: real communication to student, acceptance and rely on student in addition to pay attention to his/her opinion, understanding without judgement. Human being is willing to learn. If learning is related to students practice, learning speed increase. Most of learning is by practice. That is, motivation of student in learning, ability to use learning methods and meta cognition and job relevance facilitate learning.

Activity of learner and proper arrangement of learning environment facilitate learning process<sup>2,23</sup>.

#### Different learning styles

At the first time in Harvard university different intelligence theory was planned. Each person potentially has a trend towards one type of learning. This model is helpful to determine capabilities, preferences and personality of every learner. Curriculum planning, selection and preparation of learning environment might be based on these findings. Consideration on potentially different intelligence guide teachers to plan teaching and evaluation methods individually.

#### Nine groups of intelligence are described

##### First group) Verbal and linguistic (word smart)

In these students words, sounds, graphic pictures and reading are favorite modalities in learning and evaluation.

##### Second group) Logical and mathematical (number and reasoning smart)

They do the best by numbers, logic discussions and numerical patterns best in learning and evaluation.

Third group) Spatial and visual (picture smart) :

Graphic charts, pictures and images are preferred for learning and evaluation.

Fourth group) Bodily and kinesthetic (body smart) : They are interested in physical experience, movement activities and law of body, to learn.

Fifth group) Musical (music smart) :

Songs, rhythms and pitches are their attention points. Learning and evaluation in these fields are more productive for them.

Sixth group) Interpersonal (people smart) :

They work excellent in collaboration and social experience. Learning and evaluation of them in these backgrounds result in best outcomes.

Seventh group) Intrapersonal (self smart) :

They are interested to be involved in values, inner feelings and thinking process. They are self aware. They learn best and succeed in these fields.

Eighth group) Naturalist (Nature smart):

They love animals, plants and law in nature. In these matters they learn and are evaluated well.

Ninth group) Existential (human existence smart): Meaning of life, deep questions and human existence are favorite fields for them to learn<sup>24-26</sup>.

teachers and different learning styles enable medical education planning and management to place learners in the best learning environment.

### CONCLUSION

Managers of curriculum planning in medical education and teachers are expected to strongly consider changes of learning methods and learners role.

Review of 5 aspects of learners role including active learners role, group learning and communication, knowledge construction, role of

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### Conflict of interest

The authors have no conflict of interest

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