

Editorial

Adult learning, are we there?

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INTRODUCTION

Let's examine a fundamental question: how do adults learn? Malcolm Knowles defined Andragogy as the "art and science of how adults learn."^[1] Knowles put forth a set of core principles that serve as a foundation for instructional design and training. The key drivers of adult learning are the motivation to learn, which is need-based and task-oriented, the learners must be provided with opportunities for doing or practicing and acquire problem-solving skills; and adult learners must be treated as being capable of taking responsibility for learning in an environment that is nurturing and non-threatening and non-judgmental.^[1] There is a paradigm shift in teaching-learning methods from pedagogy to andragogy. A paradigm shift refers to a drastic change. The word was first coined by Kuhn, a physicist, American historian, and philosopher-scientist of the 20th century, more about him later.^[2] The principles of adult learning [Figure 1] suggest the path to be taken to involve the learner and serve as signboards to achieve the goal. Adult learning is indeed the fulcrum on which rests the phenomenon of change or paradigm shift that occurs from being teacher-centric to learner centric.^[1]

PEDAGOGY, THE TEACHER, AND THE LEARNER

Pedagogy is teaching, it is the teaching method used to communicate knowledge, used in schools.^[3] Pedagogy is telling, giving information perhaps explaining. In today's world of revolution of information technology, "telling information" has become quite irrelevant for the medical undergraduate student. There are no takers. Teachers still want to teach and "tell" as that is how they learned. Unlearning has to occur first of the shifting role of the teacher from telling information to explaining concepts. A behavioral change to be learned, imbibed and practiced.^[3]

What has changed?

The learners have changed. The requirements for learning have changed. The learning styles have changed. What

works for the millennial may not work for the Gen zees.^[4] Is there a need to adopt different learning styles? The adult learners need to be empowered to learn, to be treated as being capable of taking responsibility for learning, which will create the opportunity for active learning and also provide an opportunity for self-assessment and feedback for improvement. If students are treated just as they were in school, then they will revert to passive learning.

Earlier medical education was about learning by humiliation by naming, blaming and shaming. Now, students question the received wisdom.^[5]

Naming, blaming, and shaming have enormous repercussions on the mental well-being of the medical undergraduate student.

What is unchanged?

The faculty's perception for the learning needs of medical students has, by and large, remained unchanged. Medicine as a field is extraordinarily hierarchical; introduction into this hierarchy, a requirement to access knowledge that is instant, creates a mismatch. Glorifying, rote knowledge, and reproduction of facts rather than assimilation of facts and application requires change. The strong hierarchical structure of medicine also creates a power imbalance with little scope for empowerment of the student toward self-directed learning.

Where faculty can make a change

The ability to sift through knowledge and learn the subtle nuances of science to identify inaccuracies in science, the ability to generate a debate, to question, and to learn. To question the risks versus benefits of a procedure to improve patient outcomes, to question the need for certain investigations in the resolution of a clinical dilemma, and to weigh the costs of investigations that assist in resolving the clinical dilemma are a few examples that can form the basis of problem-solving ability. Adult learning must be centered

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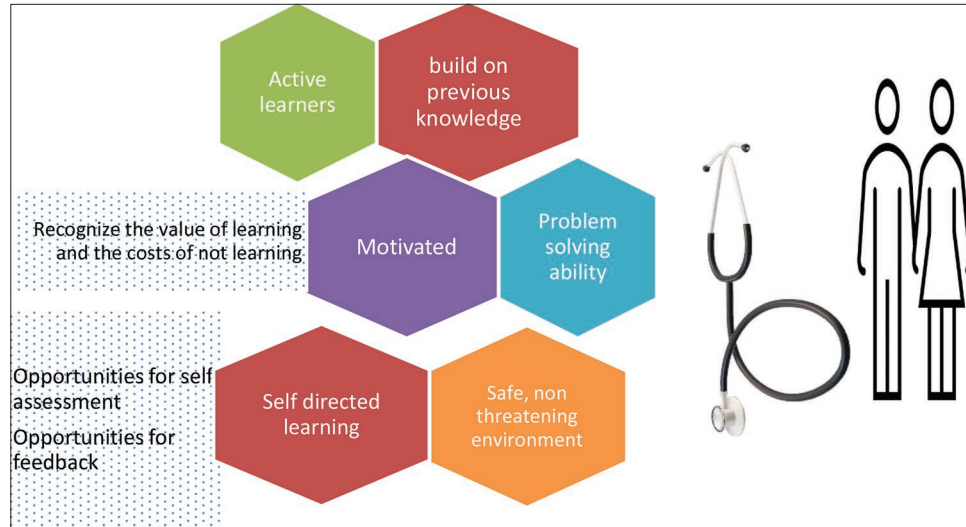


Figure 1: Schematic representation of principles of adult learning to apply in teaching learning methods.

on problem-solving skills to face real-life situations which are complex and require the ability to think on the feet to save lives.

While adult learners learn in a seamless manner; however, the “buy in” to learning is the critical part. “Buy in” is easy when the need for learning is perceived as benefits of learning, and above all the problem of not learning is clearly spelt and perceived as costs of not learning, thus creating a value for learning. The best way of approaching it is to think of it as “what is in it for me.” Then, the pieces of the puzzle fall together very well.

THE TEACHER AS A FACILITATOR FOR LEARNING

Andragogy also means stepping back, to provide the stimulus for learning, and to move away from being a content expert to a facilitator of learning. It is to draw on experiences and to make those experiences sharing so valuable that everyone is ready to learn. Experience sharing is like reading between the lines of a book. Experience sharing provides connections to words that are strung together as sentences into phrases. Mere words are meaningless to a generation that feeds on videos or, visual learning and kinesthetic learning. Experience sharing creates the context or need for learning and facilitates comprehension.

The paradigm shift is also to accept that learners learn differently and will require the teacher to adapt to their ways of learning. For a profession steeped in hierarchy driven with expertise and the compelling need to be the expert, this is totally a new experience. The expert has to let go of teaching as an expert, it is merely to concede to a new way to explain the expertise. Still tough on an expert to concede that there are different ways to impart knowledge.

Creating a non-judgmental and non-threatening environment

The bullied become the bullies. A study from Sydney explains elegantly that toxic workplace environments occur in medical universities and hospitals due to abuse of hierarchy, bullying and harassment are rampant and create power imbalances that affects the quality of patient care. There is a cyclical nature of mistreatment, and the study advocates the need for a structural change in the mistreatment institutionalized in medical culture and teaching.^[6]

Comfort zone versus growth zone or learning zone

As long as teachers are focused on content and teaching the content the “buy-in” is not going to happen. Hence, the paradigm shift has to occur in the minds of the teachers. Therefore, it is unlearning of a practice that has been cemented in the mind as the best way forward. It is so ingrained that it needs to be chiseled away. Not easy. The “buy in” must there to arouse interest sufficiently enough to open the mind to change and to chisel away at set practices. The unlearning aspect is so important, to accept the change and to relearn new behaviors. The only constant in life is change which is a famous quote by Heraclitus; however, the fear of change is also considered to be a constant since humans love a routine. The conflict is to break a habit as remaining in the comfort zone prevents progression to a growth zone and creates stagnation. The fear of change, the fear of losing relevance, creates the need to control, the ability to decide on whether the student is “fit to be passed” (vague, variable, and whimsical) versus an objective assessment of the competencies acquired (knowledge, skills, attitude, and communication skills) to recognize a clinical problem and provide solutions that are lifesaving.

When the target audience varies between 150 and 250 students as it is the case in most medical colleges in India, it is easy to slip into pedagogy mode; however, it will be a great disservice to competency-based medical education if competencies are taught with lip service to principles of adult learning instead of being learned with the complete commitment to the application of the principles of adult learning.

STRUCTURE OF A SCIENTIFIC REVOLUTION AND PARADIGM SHIFT

Thomas Kuhn wrote the book *Structure of a scientific revolution*, one of the most widely read nonfiction books of the 20th century in which he first introduced the word paradigm and the phrase paradigm shift. When communities of even less than a hundred are attracted to achievements that are unprecedented, who are enduring and adherent and who are open ended, with plenty of problems to resolve, then a paradigm shift emerges. The need of the hour is for such a shift to occur from pedagogy to andragogy in the interests of learning as learning “is the only thing which the mind can

never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting.”(T.H White).

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