

Pedagogy-andragogy-heutagogy: Towards transformative educational epistemologies

Dear Editor,

Education is essentially an *applied discipline*, particularly pertinent in the domain of teaching clinical medicine across the specialties. The present-day educators face a challenging task of sculpting learners who can thrive in the current global knowledge economy, aimed at inculcating capabilities for the most creative and effective application of competency and skills to mitigate the dynamic complicated real-world situations. Considering the aforementioned objective, the educational epistemologies mandate continuous sophistication, premised on the transformative learning theory.

This evolution materializes in close conjunction with the progression from pedagogy to andragogy to heutagogy, representing a continuum as the involved learners continue to mature in thought-process and become autonomous. This embraces the notion of a smooth transition from a dependent form of learning (pedagogy) to a more self-directed (andragogy) or self-determined (heutagogy) learning form, as we ascend the education-pyramid. Despite the dictionary definition of pedagogy as the ‘art and science of teaching’, Malcolm Shepherd Knowles, an American educator, envisaged pedagogy as the art and science of teaching children. He is credited for the adoption of the andragogy concept (term coined by a German teacher, Alexander Kapp) for the principles employed in adult education.^[1] He premised his theory on the distinction in the way adults learn with the refined assumptions that the adults are self-directed, internally motivated learners seeking a problem-based learning process.^[2] The incorporation of his invaluable propositions in faculty teaching can prove to be instrumental in the promotion of andragogy [Table 1].

The major tenets of this concept are heralded by the increasing incorporation of experimental strategies (collaborative-work, case-studies, simulation, work-field experience, etc.) in the modern categorical competency-based education (CBE) program with noteworthy exemplifications in the field of anaesthesiology. However, the current emphasis on *double-loop learning* has motivated the idea of heutagogy enterprising a process-based rather than a content-based learning.^[3] *Double-loop learning* transpires when the learners consider the problems, resultant action and outcomes in conjunction with the reflection on the problem-solving process and impact

Table 1: Steps aimed at the process of promoting the andragogy concept

Development of a cooperative environment for learning
Involving the learners in setting of the goals
Diagnosing the learners interests
Assisting the learners in the formulation of the objectives premised on interests and needs
Designing sequential learning experiences to augment the accomplishment of the objectives
Accomplishing objectives with the available resources
Evaluating the quality of learning with regards to the impact on future learning

on the learner’s beliefs. Hase and Kenyon elaborate that a heutagogical approach is a learner-determined, nonlinear process including, capability, professionalism and autonomy development, and action-learning attributes like self-reflection, meta-cognition, environmental-scanning and interaction.^[3] Heutagogy promotes ‘proactivity’ extending well beyond problem-solving. A true heutagogical approach is characterized by a decision of the students to affect the learning-process negotiation encouraging them to find solutions to their self-identified problems.

Advancements such as e-learning and the use of open-educational resources promoting a personalized learning environment are making indelible inroads into the paradigm shift towards a heutagogical learning model in the digital age.^[4] Nevertheless, to render the transition more holistic, technologically feasible, operationally viable and sustainable organizational implementation strategies enterprising a flexible and negotiated curriculum need to be operationalized aimed at scaffolding a sound CBE program. Moreover, assessment being often cited as the weakest link in CBE and given the fact that assessment potentially drives training, the importance of objectifying the former cannot be overemphasized.^[5] The recognition and mitigation of the aversion to this paradigm change, identification of the organizational internal resources and external regulatory influences and continuous effective feedback and audit can catalyze the entire evolution process.

To conclude, discussion of the pedagogy-andragogy-heutagogy continuum as the extension of the development of transformative education is in congruence with the reflection of increasing student involvement in the neoteric heuristic learning model. Along this spectrum, the locus of control centralizes towards the learners to achieve epistemic learner cognition in the background of a declining instructor control requirement, as Sir Albert Einstein most aptly articulated once: ‘*I never teach my pupils. I only attempt to provide them with conditions in which they can learn*’.

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