

**Editorial****ANATOMICAL SCIENCES IN THE EVOLVING HEALTH SCIENCES CURRICULA: THE JOURNEY CONTINUES AND CLINICAL RELEVANCE IS THE COMPASS****Cristian Stefan***Department of Cellular Biology and Anatomy, Georgia's Health Science University, Medical College of Georgia, Augusta, Georgia, USA.*

As a discipline steeped in tradition, anatomy is bound to have defined trends during its history and strong supporters of one direction or methodology over another among its ranks. Nowadays, there is no shortage of anatomical programs, courses, instructional modalities, and materials that incorporate the term “clinical” in their names. In fact, very few of them don’t. It’s tempting to consider that “clinical” anatomy, histology, embryology, or neurosciences are recent concepts. Although we live in a “golden era” of clinically oriented courses, as this idea has been more readily accepted by some or enthusiastically embraced by others, it is obvious that – regardless of personal opinions – any non-clinical version of anatomical sciences taught to students in the health professions could not

possibly present itself as an alternative that makes sense or could adequately prepare them for the future.

The difficulty is not to simply label a course as clinical or truly embrace this idea but to find more efficient ways to convey the information to the targeted audience, help the learners develop superior reasoning skills, and place the emphasis on long-life learning instead of passing the immediate set of exams.

Our natural intellectual curiosity combined with the mechanisms (associated with understanding, emotions, and reward) that facilitate the formation and consolidation of long-lasting memories are the driving factors that make us question the significance and crave for the practical relevance of the information we encounter. Yet, under the pressure of a heavy but poorly filtered / organized informational bombardment, educators and learners alike could be sometimes diverted from the quest for relevance by finding refuge in a compartmented and limited zone of pseudo-comfort. Moreover, this cluster could be inaccurately validated by examinations based mainly on the memorization of scattered facts and on pure identification of structures that may offer a misleading sense of achievement.

It is the contextual learning based on a proper understanding of the structure-function correlations that prevents dropping anatomical terms (even if they were correct) like Hansel and Gretel dropped breadcrumbs that did not help them find their way back or advance safely in the unfamiliar forest.

With so many areas of study and topics that populate the modern curricula in medicine, dental

medicine and various other health sciences, those who are so inclined, could either lament about anatomy losing its central role in the preclinical education or identify some of the numerous bridges between anatomical sciences and other disciplines as the basis for anchoring them in an efficient student-centered and patient-centered learning environment. From this perspective, the anatomical sciences offer indeed an ideal place for integration and improvement of knowledge, skills and attitudes at all levels (incoming students, students during their clerkships, interns and residents).

There have been sustained efforts to better integrate the anatomical sciences in the complex structure of the educational programs, including redesigning the frame and context as part of modules often based or not on a systemic approach; reallocating the number of hours for lectures, labs, small group sessions and self-directed study; and implementing various methodologies and technologies with respect to the delivery and testing of the material. There have also been some changes in coupling the anatomical sciences among them or with other disciplines. Among the most significant and beneficial of these interventions is strengthening the relation between anatomy and radiological imaging, which – when properly conducted – deeply enrich each other and place the emphasis on the anatomy of the living human being. Activities that incorporate the teaching or review

of anatomical sciences with OSCE and medical simulation also have a very powerful potential.

The time allocated to anatomical sciences in the curriculum, as well as the preference for dissection vs. prosection, microscopes vs. virtual microscopy or wet labs vs. predominantly computer-based instruction will continue to fluctuate from one institution to another and within the same institution. By themselves, neither the dissection, nor the newest electronic teaching tool, nor the number of contact hours assure that the content matches the desired clinical description of a course or session. As curricula continue to evolve, devotees of one instructional modality or another could see that the old saying used in radiology “one view is no view”, is perfectly applicable to the learning process in general. The key resides in a combination of instructional modalities carefully selected according to the goals and learning objectives and adapted to the particulars of each program.

Providing a clinically oriented education represents a major extrinsic component of the academic environment. This should facilitate the achievement of another important component: the learner’s intrinsic process of self-awareness and transition between the memorization of disparate facts and the ability to put together, interpret and apply the knowledge to concrete situations in the everyday medical practice.