

Editorial**THE MULTIPLE FACETS OF ACTIVE LEARNING AS A PREREQUISITE, INGREDIENT AND GOAL FOR THE EFFECTIVE INSTRUCTION IN THE CLINICAL ANATOMICAL SCIENCES****Ancuta M. Stefan**

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The early exposure to anatomical sciences in the traditional or integrated curriculum in the health care professions presents certain advantages. However, this status comes with multiple responsibilities. The most one is to set an example by exploring and adopting efficient ways of thinking and acting. In short, to provide a transforming experience that establishes a legacy for lifelong learning in particular and for viewing the profession and the world in general.

Because the students have so many responsibilities requiring so much from them in so many ways (and in a compressed period of time), there is often a widespread feeling among learners, instructors and administrators that the time

allocated to the anatomical sciences barely allows for the basic science material to be covered and tested. And while everybody formally agrees with the need for goals and learning objectives that are more clinically oriented, some may be too easily tempted to use them as a rather decorative part of a lecture, course or program instead of placing these principles at the core of the learning process. Moreover, the use or expansion of newer and diverse instructional methodologies and technologies often look (and are) promising but, unless implemented in a meaningful manner, they may only add to the decorative element and miss the target by not inducing deep changes in the educational landscape and outcome.

No one will successfully argue that this is an easy task. However, it is obvious that the active learning provide useful answers to many questions. Active learning and clinical / applied anatomical sciences do not meet in a place of "improbable togetherness" but they open the door to each other in various ways.

The two concepts have indeed much in common. Neither of them is to be taken lightly as an appendix of something else or an activity scheduled once per semester, month, module or block. They cannot be limited to a few slides in a lecture, a page or half page in a handout or several boxes in a chapter. These examples have their value and indicate a positive step forward. They often represent what is most likely immediately visible, easily documented and instantly gratified. This is why they are in danger

of remaining praised surface decorations unless the landscape itself is transformed to nourish the meaning of the word “clinical” in “clinical anatomy” not as a simple adjective but as the main reason why and how anatomical sciences are taught in the health care professions.

Active learning is not limited to a learning format or modality; instead it opens the door when the opportunity knocks, e.g. in small or large group activities, lectures, labs, bedside teaching or self-directed study. Indeed, any opportunity should be used to shift the focus from the simple memorization of isolated facts to explaining concepts, linking them across the disciplines and especially highlighting their functional and clinical relevance. This seems logical and far more interesting than focusing on a myriad of details without grasping their significance and/or artificially narrowing the study to a single example, be it a clinical case, histological slide, radiological image or pathological sample. Depending on how the exams are constructed, a rift may occur under these circumstances between the conceptual teaching and the factual testing.

Of course, it is the clinical setting that justifies the real reason for all the preparation, examinations and reflection. Sooner or later, the students are going to face the realities beyond and above the frames offered by handouts, lists of structures, and routine exams. The sooner they come to grips with who they need to become, the better they will be prepared and also accept an intellectually stimulating environment in which to look forward to encountering further challenges. In this respect, medical simulation and other

forms of experiential learning combine the value of hands-on experiences with the opportunity to apply the knowledge to practical situations in a safe environment and at the same time use the clinical context to review and consolidate key basic science concepts.

How long it takes to get there depends on many factors. Whatever it may be presented as an overnight sensation or something people have looked for along the history, the road could be at least a little rough. This may raise the occasional question why someone would deliberately take this road instead of adopting or maintaining methods that arguably have worked fine for a long time, may appear more popular at times and do not challenge the status quo.

And yet, the payoffs of a transforming experience are worth the effort it takes to expand the role of active learning into the clinically driven anatomical sciences. This powerful combination increasingly engage the students and faculty, sharpen their skills and mold their practical approaches to ensure a safe passage through the variable data of a problem. One has to use all mental faculties for these tasks and find ways to view the information from various angles, which brings us to emphasizing the distinction between “way” and “ways”. This distinction requires cognitive flexibility, willingness to seek exposure to various perspectives and respect for others. Developing a balanced approach that takes into consideration multiple solutions in problem solving represents both a skill and an attitude. It is an important prerequisite, component and goal of the active learning process.