



# Quarterly Newsletter

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## A Word From The Presidents

Happy Spring from the AOE. As the weather warms up, and the school year winds down, we look forward to some of the best events of the year from the AOE. We hope all of you can join us on April 23<sup>rd</sup> for the AOE Frank Wilson Professionalism Forum. Keynote speaker Alice Chuang will discuss what we know about professionalism at UNC, and Sue Estroff will divide us into groups and charge us with exploring and developing key elements of professionalism in our medical institution. Another event to mark on your calendar is the AOE Banquet on May 22<sup>nd</sup> at which time we will welcome new members, hold a medical education poster session, and celebrate the many accomplishments of our UNC educators. Finally, don't forget to attend 2 exciting Visiting Professor lectures: Julie Freishlag, Dean of SOM UC – Davis and first woman Chair of Surgery at Johns Hopkins, on May 2<sup>nd</sup>; and with Kathy Meacham, Bost Professor of Philosophy and Chair of General Studies at Mars Hill University on June 11<sup>th</sup> and 12<sup>th</sup>.

We are also excited to share other developments. Todd Zakrajsek, Ken Royal, and Anthony Viera will be launching the *Journal of Undergraduate Medical Education* from our own UNC SOM. Call for submissions will be going out very soon. Also, as the number of medical residents in the AOE continues to increase, we are excited to launch the AOE Resident Short Course on Teaching and Learning.

There is much to look forward to this spring within the AOE, and we look forward to sharing it with you all!

~Beat and Kevin



## AOE Frank Wilson Professionalism Forum and Spring Banquet



Please Join your fellow colleagues, residents and students for the Frank Wilson Professionalism Forum. The evening will begin with dinner and a keynote presentation by Alice Chuang, MD, who will discuss concepts of professionalism, as famed by a serious of focus groups on this topic last year. The keynote will be followed by breakout sessions titled *Assessing Professionalism*; *Teaching and Learning in the Clinical Environment*; and *Professionalism and Social Media Expectations and Implications*. The breakout sessions will be facilitated by Elizabeth Dreesen, MD, Ryan Madanick, MD, Sue Estroff, PhD, Beat Steiner, MD, MPH, Kevin Biese, MD, MAT and Todd Zakrajsek, PhD. This event is being designed as a participatory event whereby facilitated conversations will be used to inform the integration of professionalism into the TEC Curriculum.

To RSVP for the Professionalism Forum, please visit:  
<http://tinyurl.com/ProfessionalismForum>



Last year, for the first time, the AOE included a poster session at the Spring Banquet and changed the name of the event to "An Evening of Educational Scholarship." Based on the smashing success of the poster session, and numerous requests, we will be having the poster showcase once again. Thus far, 20 posters have been submitted from all over the school of medicine. The call for poster proposal submissions is still open, but will close on May 1. Please consider sharing your work in any area of medical education. Following the poster session showcase and reception, the evening will cap off with the awards ceremony, dinner, and the annual AOE Banquet Plenary Address. This year we are pleased to announce Julie Byerley, Vice Dean for Education, as our keynote presenter. Join your colleagues as the AOE shares and recognizes just a sampling of the extensive work being accomplished in the UNC School of Medicine.

All AOE members are encouraged to attend. To RSVP for the spring banquet, please visit: <http://tinyurl.com/BanquetUNC>



## Evidence Informed Teaching Tips

**Implications of Cognitive Load on Medical Education** | Todd Zakrajsek, PhD., Associate Professor, Family Medicine

Learning generally takes place in three “stages.” You are exposed to something (stage 1); you process that information (stage 2), and then you store the information in long-term memory (stage 3). Of course, you may also need that information later, but that is in the closely related area of memory. For this article, we will focus on learning. Two of the three learning stages (i.e., 1 & 3) have massive capacity. The amount of information you see, hear, smell, feel, or taste is limited only by your physiological receptors, which are able to process a lot. For example, you can glance at a football stadium and “see” thousands of people at once. Long-term memory storage also has massive capacity. It is relatively difficult to “fill” your brain with long-term memories. People swiftly think of things that happened decades earlier. The primary limiting factor in the learning process is stage 2, taking sensory stimuli and process that material to ready it for long-term storage. Cognitive load is a critical concept in this process. Cognitive load is the amount of information that can be held in one’s working memory at any given time. Exceed that limit and the capability to learn is seriously diminished. Think of a time in the past when you were really concentrating on a new concept and few individuals were having a distracting conversation near you. Their conversation drew a portion of your attention while you were processing the new concept, causing you to exceed your cognitive load. In learning, it is important to process as much information as possible, but in doing so, to not exceed current capacity, as doing so will hinder or even shut down your ability to learn. Although the concept of cognitive load is not readily found in medical education, it has many implications. In acquisition of expertise, it is a mistake to assume that someone with expertise has a more efficient working memory or that the expert can hold more chunks of information than the novice. Research time and again has shown that is not the case. Expertise comes from learning, and prior learning reduces cognitive load, which increases future learning. Doing something repeatedly (when correctly done) and a variety of experiences are good examples of ways to reduce cognitive load. When you first experience a new concept or a new environment there is a great deal for the brain to process. The more that is known, the better the brain can “chunk” that information and use it to reduce the cognitive load process in learning new information. Another way to think of this is to recall a time when you were overwhelmed in a new environment or learning something very complicated. Your brain, being in “overdrive” was really in “cognitive overload.” Cognitive load can also be decreased with effective teaching. Well-designed lessons, clear examples, and engaged learning removes extra energy needed to process new material.

There are several ways to reduce cognitive load: the learner can learn how to learn efficiently, practice concepts to reduce cognitive energy needed to process that information, learn how information fits together (i.e., see the big picture), and have material presented in an effective manner. As a side note, “flipping the class,” can be very effective at reducing cognitive load during class. This means class time can be a more effective learning environment for students. For a detailed explanation of cognitive load and implication for your didactic, preceptor, or other teaching, see: Young, J.Q., Van Merriënboer, J., Durning, S., & Ten Cate, O. (2014). Cognitive Load Theory: Implications for Medical Education, AMEE Guide #86, *Medical Teacher*, pp. 1 – 14. Of course, you can also contact Todd Zakrajsek, Executive Director, Academy of Educators, 919-636-8170.



## New in the AOE

### Kathleen Rao Mini-Grant Recipients

- *“Developing and Implementing Pathology and Basic Science Modules for Clinicians in Training”* by Yuri Fedoriw and Julie Hull (UNC Department of Pathology and Laboratory Medicine)
- *“Teaching a Standardized Method of Handoffs to Medical Students”* by Suresh Nagappan, Angela Hartsell, and Nichole Chandler (Greensboro AHEC Department of Pediatrics)
- *“Surgical Skills Feedback in the Operating Room: A Novel Web Approach to Facilitate Procedural Review and Resident Feedback”* by AnnaMarie Connolly (UNC Department of Obstetrics and Gynecology)

### The Mission of the Academy is:

1. to promote and support excellence in teaching and the work and career paths of excellent teachers;
2. to promote and fund curricular innovation, evidence-based curricular change and a scholarly approach to the education mission; and
3. to provide a forum for education leadership and advice for the Dean, Vice Dean for Academic Affairs, Vice Dean for Medical Education, and the leadership of the curriculum.



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For more information on these sessions and other AOE events, please visit:

[www.med.unc.edu/aoe](http://www.med.unc.edu/aoe)