WHEA EXPLORATIONS IN TEACHING AND LEARNING

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EDITOR'S NOTE

Ulemu Luhanga, MSc, MEd, PhD
Co-Director
Woodruff Health Educators Academy (WHEA)

One of the program deliverables for the WHEA Teaching Fellowship is a Small Teaching Report. Fellows are asked to pick a topic/concept that was covered during the program and use the Experiential Learning Cycle to 'test' out a small but powerful modification to their teaching design or practices. This newsletter represents a compilation of reports from the 2020 WHEA Teaching Fellows.

DIRECTOR'S REFLECTIONS

Taryn Taylor, MD, MEd
Co-Director
WHEA Teaching Fellowship

The WHEA Teaching Fellowship was developed to support the professional development of individuals who are passionate about teaching and learning.

In planning for this second WHEA Teaching Fellowship cohort, we eagerly anticipated implementing changes suggested by our inaugural participants. We were excited and fueled with innovative ideas! Alas, we precipitously had to pivot and make modifications to the program when we recognized the entire course would be delivered remotely. Will they still be interested and engaged? Will they be able to make practical application of the materials? These are just a few questions that plagued us as we continued to transition. Here we are, one year later and we are in awe of the tenacity, perseverance, and resilience of these WHEA Teaching Fellows. Their passion for education is palpable and will become quite evident as you read their submissions. Please join us in congratulating them on their success.

NOTE: Our fellows use the mnemonic "Hook 'em, Teach 'em, Assess 'em" to chunk and apply Gagne's Nine Events of Instruction model. This mnemonic was developed by Richard Ramonell, MD during his time as a learner in the EUSOM GME's Medical Education Track.

Written by Aimee Abide, MMSC
PA Program Director for ECCC NP
PA Critical Care Residency Program
Emory Healthcare

CONTEXT:

In addition to the bootcamp and core competency day didactic lectures for the ECCC NP/PA critical care residency program, the program utilizes clinical simulation twice a month for our APP critical care residents.

The APP residents are excused from their clinical bedside rotation to attend monthly clinical simulation experiences. Pre-COVID we used the School of Medicine (SOM) EXCEL sim center but since the early part of the year, the SOM SIM center has been closed. We have the use of a high-fidelity manikin, Hal, at EUHM. I now use a combination of the EUHM Sim Center which is smaller than and doese not have the same technology as the SOM SIM center but I also use an empty ICU room in 21 ICU at EUHM. These rooms are just a large ICU room without the two-way mirror and computer equipment to generate vital signal changes on monitors or change the software on the high fidelity manikin, Hal. I have received informal feedback from clinical simulation instructors and residents that the EUHM physical spaces are superior to the online platform for simulation which is what we used in the beginning of COVID.

SELECTED TEACHING & LEARNING TOPIC:

I considered the ADDIE Model approach but also used Gagne's 9 stepwise approach when it came to the implementation aspect. We used these 2 models of instruction to help me prepare and deliver the medical educational content.

Hook 'em, Teach 'em, Assess 'em:

Hook 'em- We introduced the clinical simulation structure during Bootcamp and outlined the clinical topics that would be covered during the 12-month program. We also asked residents to bring real life patient scenarios that they experience on rotation to replay/discuss during simulation to add to learner participation.

Teach 'em- We use hands-on clinical simulation time twice a month involving patient scenarios and we also utilize simulation equipment such as the ventilator, IV pumps and ultrasound. Additionally, previously graduated APP residents are integrated into clinical

simulation, to act as "standardized patients" to add another layer of realism to the simulation scenarios.

Assess 'em- In the past, we have used informal feedback, both on the spot and in the debriefing session at the end of the clinical simulation experience to ass the trainees. We have used that time to discuss what went right and what areas needed improvement. We added to this time a component of the debriefing that will help the trainee apply their learning experience into actionable items during their clinical bedside rotations. We have also implemented a technique by which we build on that clinical learning with questions, posed throughout the weeks following the simulation to reinforce those learning topics.

LESSONS LEARNED:

We have learned that by using a structured curriculum that includes objectives tied to outcomes followed by intentional teaching experiences helps promote comprehension and retention of the new material. I also learned that a dedicated assessment tool can provide valuable information to assess effectiveness of the teaching unit and provide guidance for improvements and future experiences.

IMPLICATIONS FOR FUTURE PRACTICE:

We will continue to use an organized technique for presenting the clinicalsimulation scenarios and an organized approach to the debriefing period. I would like to insert a more formal evaluation piece for the APP trainees to evaluate the experience. I would also like to develop a more formal process for collecting quantitative and qualitative data on how our trainees are learning in this environment and how they can apply this learning to real-life scenarios encountered on clinical rotation.

TEACHING TIPS:

I suggest that anyone applying clinical simulation experiences to their learning curriculum spend time with the stepwise approach and start with a needs assessment. It is also very beneficial to develop the goals and objectives and to understand the difference between objectives and outcomes. It is important to consider the educational strategy, including equipment needed and to identify those behaviors that should be demonstrated for adequate learning. I also would suggest a structured and formal process for evaluation and feedback to help gather feedback and information not only to assess the current process but to also identify any changes needed for the future.

Written by Sivan Ben-Moshe, MD
Assistant Professor
Department of Internal Medicine & Geriatrics
Emory University School of Medicine

CONTEXT:

Learners: M1 medical students participating in the Geriatrics module
Setting: Zoom/ Virtual

SELECTED TEACHING & LEARNING TOPIC:

Using Gagne's model, we focused on the assessment part of the model in order to change it from previous years.

Prior to this year, the assessment was a multiple choice and open question test. Questions from the test came from each lecture. We quickly realized that our outcomes did not align with our assessment which generally only tested

for knowledge and possibly some skills. We decided to eliminate the test and assess the students based on outcomes that would measure the students' knowledge, skills and attitude in the approach to an older patient. Therefore, we developed assessments to fit those outcomes more appropriately:

- For understanding a shift in attitudes, throughout the week, we decided to add a survey right after each lecture to let us know of one important lesson they learned to carry with them and whether to keep the session for next year. We also added a few reflections throughout.
- For knowledge, we integrated assimilation of knowledge into a skill via an assignment. We also added a short quiz at the end of the week.
- Finally, for all 3, knowledge, skills, and attitude, we developed a final group project which had each small group create a video based on some of the concepts they learned during the 1-week module. It integrated the newfound perceptions, knowledge, and skills they will need to take care of Geriatrics patients.

LESSONS LEARNED:

We learned that overall the students enjoyed a group project more than a test. This was expected. However, some of the concerns were that the group project required skills that we thought they already had (i.e. making a movie). We underestimated that some of the actual movie making work may fall on one person who was most knowledgeable. Some students felt they had to learn to make movies as well as the actual material. This of course was not our intention in terms of assessment. Also unexpected was that they

also enjoyed the small group bonding and felt like it created a team building activity. This was important as a new class in the beginning of the year.

In terms of the surveys for each lecture, the amount of students answering sort of dwindled toward the end. However, they were still a lot more beneficial than the surveys the medical school provides as we were able to extrapolate what was most meaningful to the students and what to focus on for future years.

In terms of the overall course, we always kept the test thinking that would motivate them to come to lecture and learn the material. However, not having the test actually increased participation and enjoyment. The stress of needing to study for a test and trying to figure out what was on the test clouded their experience in this course that focuses a lot on "the Art of Medicine." It was a surprise for me to hear the students actually say they felt they had learned so much more without the test, than if they had had a test. Hopefully, it will also leave a lasting change to their approach as future physicians.

IMPLICATIONS FOR FUTURE PRACTICE

We will continue a group project but will think of something utilizing the skills and knowledge without the

"extra" work involved in the process itself. We will continue the feedback directly after each session. We may take out a few of the activities.

TEACHING TIPS:
Although we are all very used to having a test as an assessment of knowledge, I found it particularly enlightening that you could actually engage and assess in other ways and bring about change in the learner without the test. When we reformulated what we wanted our outcomes and goals to be for the course, we realized that a test may actually not be the ideal assessment. The course changed significantly based on the assessments. It was almost as if previously, the course was designed around the test as an assessment and the outcome was inherently created because of the test, instead of the other way around. This was truly a learning point for me as I just realized this as I was writing it down. I would advise anyone taking over a course or considering a new one, to figure out the goals and then create an assessment to meet their goals and not the other way around.

Written by E. Britton Chahine, MD
Associate Professor
Emory University School of Medicine
Gynecology / Obstetrics

CONTEXT:

PGY 1 – 4 Gynecology & Obstetric residents
Hybrid
- asynchronous & synchronous learning
- online & in person

SELECTED TEACHING & LEARNING TOPIC:

Topic applied:
- Backward Design
- Fink's Taxonomy

Basic GYN procedures:
- Junior residents: hysteroscopy, LEEP & Dysplasia, Bartholin's gland abscess

- Senior residents: midurethral sling, anterior & posterior repair, cold knife conization.

Background:
Residents had less exposure to surgical cases due COVID because of the interruption in the operating room. The PGY 1 residents did not have an intern bootcamp, which incorporates instruction in some basic GYN procedures, when they entered residency this year. This created a need to cover many topics of basic GYN care, didactically and technically, in a focused manner. Using the Backward Design principle of focusing on student learning, the most critical aspects of each topic was identified. Fink's Taxonomy was used in the identified critical steps into online reading and videos that the students watched before the simulation (foundational knowledge) and the stations for each of the topics were designed to allow the integration and application of the didactic learning into the technical skills needed to treat patients with these pathologies (human dimension & caring). Directed feedback and the ability to practice the technical skill allowed the student to adapt and make adjustments as they learned. Going forward, they will be able to review these skills and knowledge as they encounter real patients with these diseases. (self-directed learning/ meta-cognition).

LESSONS LEARNED:

The task trainers were designed to teach the technical skills and did not incorporate a patient scenario. The residents enjoyed using the models to practice the technical skills, but this approach does not reinforce

the connection between a patient's clinical presentation and the critical thinking that may or may not lead to the specific procedure that was taught. It relies on the learner connecting these two aspects of the learning module.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

Consider incorporating clinical scenarios in future reading so that the learner will need to apply the didactic content to a clinical presentation.

Incorporate a clinical scenario during the task training to reinforce the clinical pathology and presentation with treatment options including the skill being taught during the simulation.

Written by Lauren Christiansen-Lindquist, PhD
Assistant Professor
Rollins School of Public Health
Emory University

CONTEXT:

In Fall 2020, I taught a 3rd semester epidemiologic methods course for mostly MPH & MSPH students in epidemiology. This was a large online course, with 170 students.

SELECTED TEACHING & LEARNING TOPIC:

I focused a lot on the "representation" part of learning – paying close attention to the details of sharing the course material to facilitate learning and strive for a course rooted in universal design. Some of these details included:

- Posting all asynchronous content using closed captions
- Color coding different parts of equations to help learners remember the role of different variables in a model
- Making use of Zoom's annotation feature to allow students to ask and answer questions, as well as to provide feedback on pace and clarity
- Building a Canvas page that was predictable in how material was presented each week, including embedding videos to allow all of the content to "live" in one easy-to-access place

LESSONS LEARNED:

These details made a huge difference in both teaching and learning this semester, and are things that I plan to carry forward when teaching future classes. Students largely appreciated the Canvas page, although there were some who still found it difficult to navigate. In future courses, I might spend a little bit more time at the beginning of the course orienting students to the Canvas page to prevent confusion.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

I highly recommend that other instructors consider applying some of these techniques to their context. Although it takes some planning on the front end, these relatively simple actions really do make a difference for both learners and instructors. My ability to gauge how my learners were reacting to the material may have been even better than in a traditional in-person class since they could anonymously note if they were struggling with the material.

At the end of the short (10-15 minute) presentation, participants will be able to:
• Identify unconscious biases that can be triggered by the virtual environment
• Apply this knowledge to the interview process
• Identify or re-assess their own unconscious biases

LESSONS LEARNED:

In preparation for a virtual interview season, I had conducted a fair amount of research of how it could be done and what to watch out for. I had ALOT I wanted to share with our Committees! I found it very helpful to have the formula to whittle down what I felt was most important. By having my objectives in front of me while putting together my presentation, I was able to stay on topic … and on time!

After careful reflection, I think that my presentation was a bit flat. I made the mistake in thinking that since the presentation was short, I didn't need to iron out additional steps (such as what teaching methods would I use, how to engage learners, and what feedback would I gather from participants).

While I know that my audience was certainly capable of learning from my mini-lecture, I think I may have missed out on an opportunity to learn from them, and for all of us to learn from each other.

IMPLICATIONS FOR FUTURE PRACTICE

In the future: I need to be sure to engage learners in more activities – even during a short presentation. I also need a plan to

Written by June Eddingfield
Associate Director for Admissions
Emory University School of Medicine

CONTEXT:

Learners: Admission Committee members
Setting: Online meeting/Interview season training

SELECTED TEACHING & LEARNING TOPIC:

Structuring Learning Objectives, using Bloom's taxonomy

What I Did
Using the formula [time frame] + [learner focus] + [action} + [product], I set the objectives for a new topic on unconscious bias in the virtual setting ("A New Unconscious Bias")

collect feedback, so that I can improve the curriculum and grow as an educator.

TEACHING TIPS:

Suggestions for others: Always leave room to learn from your learners. Be sure to give learners the opportunity to share/practice/teach each other whenever possible.

Written by Emilee Flynn, MD, MPH
Assistant Professor of Pediatrics
Emory University School of Medicine
Children's Healthcare of Atlanta
Department of Pediatrics
Division of Hospice and Palliative Medicine

CONTEXT:

The start of the WHEA Teaching Fellowship coincided perfectly with the start of the COVID-19 global pandemic. For so many reasons, the ways in which I always taught were no longer feasible. I, like so many other educators, was forced to adapt lectures and teaching sessions which had once been conducted in front of a room of eager learners into a format that would be conducive to our now virtual world and engaging for learners sitting behind a computer screen.

SELECTED TEACHING & LEARNING TOPIC:

- Principles of Instructional Design
- Learner Engagement and Reflection
- Techniques and Strategies for Teaching and Learning

LESSONS LEARNED:

I quickly learned that the lectures and teaching sessions I had led prior to the pandemic were not the best ways for teaching a virtual audience. With information covered in the sessions throughout the WHEA Teaching Fellowship, I was able to refine my goals and objectives to ensure that learners had a clear understanding of areas that would be covered in the session, integrate new instructional techniques that could target learners with different preferred learning styles, and utilize various tools built into virtual platforms to facilitate engagement and encourage active participation. I found this last point to be the most impactful. Tools including the annotate and stamping features in "Zoom" as well as various polling applications easily allowed for learners to actively participate in these sessions. Many learners commented that these tools were "fun" to use and helped to keep their attention throughout the entire session. Finally, using the polling feature provided great in the moment feedback to me as the teacher about areas where we may need to spend additional time reviewing key concepts.

IMPLICATIONS FOR FUTURE PRACTICE

The COVID-19 global pandemic has presented many challenges as well as many

opportunities for growth, innovation, and creativity. Teaching from behind a computer screen is a skill that I had never before considered mastering. Yet I now see the multitude of possibilities this teaching modality is capable of achieving and vast audiences that such sessions could reach. In addition to my local teaching responsibilities, I am also exploring ways to utilize similar techniques with my international colleagues throughout my ongoing Global Health collaborations.

Written by Wendy Gibbons, DNP
Clinical Instructor
Nell Hodgson Woodruff School of Nursing
Emory University

CONTEXT:

The learners in this case are pre-licensure nursing students attending Emory University's Nell Hodgson Woodruff School of Nursing. The learning setting is remote for introducing new concepts and material related to maternal/infant nursing. Generally, this material is taught in a large lecture setting where the instructor can pause for questions and comments during the presentation. Now, this learning must occur in a remote environment. In one remote lecture, there were 20 students present from a cohort of more than 80 students.

SELECTED TEACHING & LEARNING TOPIC:

The topic chosen was about was to teach and engage in a remote environment. Some students can experience distance learning as isolating and without the means to be an active participant in their own learning. To encourage further engagement, the following strategies were used:

- Taught students to use the annotate feature in Zoom. This enabled anonymous comments on the screen and a way to comment or question without using the chat.
- When asking a question, asked students to leave video on. For groups of 25 or less, requested students keep their video on.
- Pausing during a lecture or PowerPoint presentation, turning on video and encouraging comments or questions. Being comfortable with silence and pauses is key to making this intervention work.
- Calling students by name and just asking if they have any thoughts, comments, or questions.
- Posting videos in short (5-8 minute) segments arranged by topic rather than posting as one long lecture.

LESSONS LEARNED:

By far, the most effective technique was pausing during the lecture/PowerPoint and making a conscious effort to engage students. This pause encouraged students to ask questions, make comments, and share some experiences. Instructors are not immune to the effect of what is essentially teaching in a vacuum, lecturing to a laptop

in a room by themselves with no student interaction. Instructors were able to identify topics that needed further clarification and adapt their lesson to better meet the learning needs of the student. This 'pause' was initially undertaken to almost 'force' student participation and interaction. At the end of the course, students noted appreciation for instructors who sought out students' input and comments. Unanimously, the students stated this reinforced their learning.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

- After completing a lecture or PowerPoint presentation, go back and break it into shorter, 5 to 10-minute segments.
- Plan a video break after each segment, encourage students to turn on their cameras and engage by sharing thoughts, comments, experiences with the topic, or to ask questions.
- Encourage respectful comments and questions when annotating the lecture.
- Create polls for every lecture, any opportunity that encourages student participation.

Written by Sherita Holmes, MD
Assistant Professor
Emory University School of Medicine
Pediatric Emergency Medicine

CONTEXT:

As associate program director of the pediatric emergency medicine (PEM) fellowship, my core group of learners are the PEM fellows. In my role, I am responsible for their educational curriculum. For the purposes of this report, I will focus on how I applied Gagne's model in their "Introduction to Simulation" session that was held in the classroom setting with a virtual option for fellows that did not participate in-person. Due to the rise of COVID-19 during this time, fellows were given the option of attending the session either in-person or virtually. Out of the 9 fellows, only two opted for the virtual option.

SELECTED TEACHING & LEARNING TOPIC:

Gagne's model of "Hook 'em, Teach 'em, and Assess 'em" was instrumental in our approach for this educational session. In this session, we were teaching the fellows a specific method of debriefing in simulation.

In the "Hook 'em" phase, we used a video clip to provide some levity and as an example of what not to do. We established clear objectives and referred to their past experiences in simulation. In the "Teach 'em" phase, we discussed rapid cycle deliberate practice (RCDP) as a debriefing modality and then did a small group exercise. In this small group exercise, we taught the fellows how to place a tourniquet utilizing the principles of RCDP. The fellows received feedback and we repeated the simulation until they demonstrated mastery of this skill. Fellows then reflected on their own performance. For the last phase of "Assess 'em", we asked the fellows to create their own RCDP script where they would function as the facilitators and we would be the students.

In this exercise, the fellows used simulation to train us on the appropriate set-up for transtracheal jet ventilation for a difficult airway. This was a skill they had mastered the previous week. We did provide them with a blank script where they had to fill in the objectives and the steps themselves. In this activity, they were able to confer with their fellows watching the session virtually. After they created the objectives and steps, they facilitated us (the instructors) through the session. Through this exercise, they

were able to troubleshoot any issues with RCDP in real time and it served to further hardwire these skills. At the conclusion, the fellows reflected on what they felt went well with the exercise and what could be improved.

LESSONS LEARNED:

The fellows greatly enjoyed the ability to directly practice this debriefing modality in the simulation. They were very engaged throughout the session. While this was a great approach for in-person learning, it was clear that this format was lacking for our fellows joining us virtually.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

In the future, if we do have a hybrid classroom of in-person and virtual learners; I would plan to specifically engage the virtual learners by making them facilitate their own simulation session, rather than having them facilitate in conjunction with the fellows present in-person. I would plan for the fellows to have two separate groups for the flipped simulation. One simulation lead by the in-person fellows and another lead by the fellows virtually, to ensure that both groups received adequate teaching and engagement.

Written by Susi Hupp, MD
Assistant Professor of Pediatrics
Emory University School of Medicine
Cardiac Intensivist

CONTEXT:

As part of my role as fellowship director for the pediatric cardiology and pediatric cardiac intensive care fellowships, I was tasked with improving the CICU curriculum for the pediatric critical care fellows (PCCM, non-cardiology). The existing curriculum involved 6 one-hour lectures given throughout the course of the year with topics that repeated yearly, every 2 years, and every 3 years.

Learners: Pediatric critical care fellows, years 1 through 3.
Teaching/Learning setting: The existing curriculum involved classroom lectures.

SELECTED TEACHING & LEARNING TOPIC:

I focused on assessing learner needs for the expansion of this curriculum. I then tailored education towards these needs.

I polled and interviewed the current 2nd and 3rd year PCCM fellows as to their perceived gaps in knowledge. I had them look back on their first few rotations in the CICU and identify what they wish they would have known before starting their rotations. I also had them look at the existing longitudinal curriculum and rate the topics with regards to their importance. They were also asked to provide a timeline for how often they wished to hear about each existing topic. In addition, they were asked to identify overall gaps in the existing curriculum. I also spoke with the PCCM fellowship program directors as to where they perceived gaps with regards to the CICU curriculum.

LESSONS LEARNED:

The fellows were very eager to help with providing their thoughts and opinions regarding the existing curriculum and their needs moving forward. They were also great advocates in asking for more education regarding CICU topics. The program directors were open to any increased offerings in education. We found that there were several holes in the existing curriculum and found that we didn't even know what some of the topics meant that were listed in the existing curriculum (i.e., "cardiac assessment"). We were able to create a list of topics to continue in the yearly lecture series as well as added a mini boot-camp for the first-year fellows prior to

their first CICU rotations. I also learned that there was an existing "experiential learning" curriculum that we had not tapped into. Personally, I learned that asking the people who have already been there had huge benefits. The input of the senior fellows was crucial. I also learned that the divisions in our hospital are fairly siloed, but when approached are very open to input and crosstalk.

Overall, I was just shocked at the lack of CICU teaching for the fellows and was surprised at how many holes there were in their education. Putting together and organizing all these new aspects of the curriculum took me more time than I thought. I also did not pay close attention to the timing of the boot camp and scheduled one during a holiday week, so I ended up doing most of those lectures myself. I was worried the bootcamp topics would be too basic (insulting to their intelligence), but they were very well received.

IMPLICATIONS FOR FUTURE PRACTICE

Using the "look back" technique of assessment is not one that I have used a lot, but one that I will definitely be employing more in the future. I was able to see the difference between asking someone who had never done CICU vs asking those who had already done it what they needed. I will be

using this assessment for my capstone as well, both to assess the entire course, but also each topic.

TEACHING TIPS:

I would encourage everyone to think about using this technique in cases where you aren't sure how much someone knows about a topic. It is easier for the learner to articulate what they did or did not know after they have heard or taken part in the education.

Written by Vijaya Kancherla, PhD
Research Assistant Professor
Department of Epidemiology
Rollins School of Public Health
Emory University

CONTEXT:

My learners are Master of Public Health (MPH) graduate students at the Rollins School of Public Health, Emory University.
The courses I teach are delivered using both synchronous/asynchronous format virtually (via Zoom).

SELECTED TEACHING & LEARNING TOPIC:

I applied 'peer-to-peer learning' method to teach courses in Epidemiology and Computer Programming for Data Management in Fall 2020. I plan to use it again in Spring 2021. Peer-to-peer learning is a method of pedagogy where a specific amount of time for every class is assigned for students to teach each other, unsupervised by the course instructor or the teaching assistants. In my class context, the peer-to-peer learning method was engaged in a class of students of the same academic year to teach each other concepts introduced to them during class each week. Students were also free to share on any issues, related to the course or personal during this peer-to-peer learning time. Circumstances that developed during COVID-19 isolation were also shared during this time. Overall, the peer-to-peer learning model highly relied on study groups sharing knowledge, ideas, and experiences at a similar level of understanding and mutually benefitting from it as a group.

Prior to 2018, the course I taught in Epidemiology/Data management with computer programming was offered in-person where students had an opportunity to discuss course content with each other during assigned class time, or outside class time. Students were also encouraged to work in groups, in-person, for their homework assignments. The class had approximately 150 students and was taught in a large auditorium once a week. From 2018, this course was changed to offer students a choice between taking it entirely online asynchronously or in-person. About 100 students took the class in-person, and 50 students took it online. My concern was that students who would take the course online would not benefit from engaging with their peers as the in-person class would allow them to. So, I introduced teaching techniques in the online class where: 1) in a synchronous setting, Zoom breakout room option was enabled for

students to engage in peer-to-peer learning. For each week when the class was offered synchronously, I set up strategically timed breakout sessions for 5 students per breakout group to discuss about the topic presented to them in the lecture; 2) in an asynchronous setting, a discussion board thread was enabled for students to post and engage in communication with their peers about the content taught each week.

Receipt of knowledge from the course was measured using weekly quizzes and midterm and final exams. Perceptions and acceptance of peer-to-peer learning opportunities were assessed via poll questions electronically.

Assessment of peer-to-peer learning effectiveness was made by comparing academic scores between the in-class group and the online group.

LESSONS LEARNED:

I learned that reciprocal peer-to-peer learning was accepted by students as they all engaged as equals and participated both during breakout room sessions on Zoom and the discussion board activities. Students not only learned together, but also got an opportunity to teach to their peers concepts that they could grasp well. During previous years when I had not implemented peer-to-peer learning method, students did not have an

opportunity to learn from each other, online or in-person. But, when I implemented peer-to-peer learning in 2020, soon after we had to shift to complete online classes, students indicated that they felt less isolated going through class sessions, and that they benefited from discussing class content, both for general understanding and for completing homework, with their classmates. Students also used peer-to-peer learning time to problem solve and prepare for the exams. The academic scores were same for both in-class and online groups at the end of the semester, and both groups performed equally. Compared to years when online section was not engaged in peer-to-peer learning methods (years 2018, 2019), the year when this method of teaching was used (Year 2020) had better student satisfaction, and academic scores.

IMPLICATIONS FOR FUTURE PRACTICE:

I will continue to fine tune both formal and informal ways in which peer-to-peer learning can be implemented, improved, and improvised as needed, for my future courses which will be taught online. Evaluation comments from students will be integrated into designing a better learning experience for students taking courses online asynchronously. The amount of time spent during peer-to-peer learning will be increased if students favor itafter the beginning few weeks of the course. I will research more on how peer-to-peer learning can be combined with other teaching models to maximize student learning potential. I will also include peer-to-peer evaluations on this teaching method so students can evaluate each other and provide constructive critique to their group

mates. Students will engage in respectfully receiving feedback from their peers.

TEACHING TIPS:

Peer-to-peer learning method is relatively new, and education research on its relevance to online classes is still in beginning stages. However, this method of teaching has shown to have promise in delivering knowledge and implemented in several graduate school settings. It is a method of not only delivering knowledge to students, but of empowering them to take personal responsibility to master a concept and deliver to their peers, while indirectly training to be teachers. The method is also linked to developing and improving critical thinking skills, and training in functioning through collaborations, and gaining team skills. The method is known to reflect unique strengths of students, developing with the resources they have. Guidance from instructors is focused on concepts that peer-to-peer learning limits.

Written by Joelle Karlik, MD
Assistant Professor
Emory University School of Medicine
Anesthesiology and Pediatrics

CONTEXT:

An OSCE portion was added to the Anesthesia Applied (Oral Boards) Exam in 2018. However, very few fellowship programs added OSCE-focused training along with the traditional oral boards practice sessions. As the only faculty member in the pediatric anesthesia department who has formally experienced the OSCE sessions, I started a OSCE curriculum to prepare fellows for the Applied Exam.

SELECTED TEACHING & LEARNING TOPIC:

Kern's Six Step Approach:

1. Identifying problem(s) and assessment of general needs: Assessment of American Board of Anesthesiology (ABA) OSCE topics and posted grading criteria
2. Needs Assessment for Targeted Learners: Informal questioning on preparation of current fellows
3. Goals and Objectives: A Linear Program Organization will be used
4. Educational Strategies:
    a. Introduction lecture outlining structure and topics of OSCE exam
    b. Hands-on workshop sessions involving 4 OSCE stations with faculty "standardized patients"
    c. Real-time feedback provided after each session
5. Implementation
6. Evaluation and Feedback: both real-time individual fellow feedback provided by faculty members and programmatic assessment by fellows

Hook 'em; Teach 'em; Assess 'em":
Hook 'em: Introduction lecture outlining structure and topics of OSCE exam, self-identification of pre-existing weaknesses in exam preparation
Teach 'em: Hands-on workshop sessions involving 4 OSCE stations with faculty "standardized patients
Assess 'em: Both real-time individual fellow feedback provided by faculty members and programmatic assessment by fellows

LESSONS LEARNED:
Using teaching theory can help guide and structure new curriculum development when it seems overwhelming. Learner self-evaluation of knowledge gaps can greatly motivate prior to formal teaching! When introducing new material, faculty instructors may require as much self-

evaluation and feedback as learners themselves. Ensuring that both fellows and faculty instructors were active participants in the education process promoted retention of information, optimized engagement, and resulted in excellent feedback for future sessions.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

I will continue to use structured learning theory approaches to introducing new topics to pre-existing curriculum. Learner self-identification of learning goals and gaps can ensure a targeted, efficient, and effective program. I plan to include both real-time evaluation of learners with post-session evaluations to maximize efficacy.

SELECTED TEACHING & LEARNING TOPIC:

I wanted to increase the interactive nature of each mentor group session. One of the ways to do this is to provide an opportunity to allow all students to answer questions simultaneously. I chose to use the polling feature that is built into Zoom which enables you to create multiple choice questions. Participants can answer these questions and then the anonymous results can be shown to the group. I created several multiple-choice questions for each mentor session and have already implemented these into our mentor group meetings.

LESSONS LEARNED:

Previously our mentor group sessions were in person. Now that we are using Zoom we can leverage its capabilities to provide a better educational experience for the students. I had not considered this until our WHEA session which covered the use of technology. Zoom also allows creation of templates so I can save the questions for subsequent mentor group meetings. I have received great feedback from the students about the polling.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

Technical features such as polling can be added to student meetings and lectures to provide an enhanced educational experience. Students will be more engaged and hopefully have more fun while learning. I intend to continue utilize polling and other interactive opportunities as much as possible.

Written by Eric Knauer, MD
Assistant Professor
Emory University School of Medicine
Surgery

CONTEXT:

I serve as a mentor for medical students during their third year surgical rotation. During each session we meet using Zoom and work thru a surgical case. These are interactive discussions which helps to keep the students actively engaged. For each case we cover history taking, how to do a physical examination, and the development of a differential diagnosis list and treatment plan. Most questions are directed at an individual student so not everyone in the group has an opportunity to answer. Also, students may go several minutes before they care called upon.

Written by Ashima Lal, MD
Assistant Professor
Emory University School of Medicine
Medicine

CONTEXT:

My learners were initially supposed to be third year medical students in their Palliative Medicine Clerkship however; I quickly realized in developing a feedback tool for them, that the intended learners were faculty members who were the student's preceptors during the weeklong clinical rotation.

SELECTED TEACHING & LEARNING TOPIC:

The teaching and learning topic applied in this context was two-fold. One was to develop a feedback tool, which could be actionable and provided in real-time.

The other was to receive faculty buy-in for its utilization. The process of developing the tool entailed adapting the previous RIME tool. The RIME tool has been studied, evaluated and reconstructed to fit the needs of the palliative medicine clerkship by our team. We adapted the RIME tool for palliative medicine to exclude the "educator" as we did not expect third-year medical students to achieve this level of knowledge in this particular field. Vocabulary used was specific for palliative medicine, with the goal to evaluate specific student performance activities. This tool was reviewed by experts in the field and further subjected to a focus group for further collaboration and refinement.

The second step included receiving faculty buy-in. To this end, I surveyed faculty members engaged in teaching medical students throughout the hospitals within the institution. This amounted to approximately 30 faculty members, both inpatient and outpatient providers, with 11 responses.

LESSONS LEARNED:

On analysis of survey results, I found that faculty were hesitant on utilizing a tool as they were concerned it would be too rigid and structured. In addition, I discovered that some found limited opportunities to provide actionable feedback as some of the Student Performance Activites (SPAs), such as communication with patient and families, was observed.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

I intend to continue to utilize this adapted tool in a focus group of faculty members to watch pre-recorded presentations that students have provided to assess the reliability of the feedback provided. I am also curious as to how the students will respond to the use of the tool, which I may rename as a "feedback guide".

This work leads me to consider adapting the SPAs offered in the clerkship in addition to consideration of further adapting the tool. What I would have done differently, or may suggest, would be to do a needs assessment prior to the development of a tool.

Written by Deborah Laubscher, RN
SP Educator/Program Coordinator
Human Simulation Education Center
(HSEC)
Emory University School of Medicine

CONTEXT:

I am a Human Simulation Educator in the Emory School of Medicine, Human Simulation Education Center. My Capstone Project is to prepare my first workshop, in a series of educational workshops, for our simulated patients (SP's). My first topic will address psychological safety issues that can arise with patient portrayal, especially in difficult and traumatic cases. Due to the COVID pandemic and subsequent budgetary constraints our SP continuing education is on a temporary hold. However, we continue to run our events remotely, so I'm still able to

interact with our SP's for online training sessions, using Zoom. Using online platforms can be isolating, and social isolation falls under the purview of psychological well-being, so I decided to use reflective practice to identify small changes I might make to improve connectivity.

SELECTED TEACHING & LEARNING TOPIC:

I was inspired by the James M Lang definition of 'Small Teaching' during our Reflective Practice module: "Small but powerful modifications to our course (i.e., session, module, or program) design and teaching practices".

Reflection Before Action

I have a set amount of time to provide all the needed content in the trainings. How could I make small, yet effective modifications to enhance connection while applying Kolb's Reflective Model featuring Experiential Learning Theory?

I decided to try the following modifications:
- Greet everyone individually to be sure I'd 'connected' with each SP. I generally have a maximum of 20 attendees at trainings, there were 12 at this one, so I had enough time.
- Use an 'ice-breaker' at the beginning of the session. Although we have all met before we can still listen and learn about each other.
- Unmute during entire training. I'd done this in prior trainings but wanted to place emphasis on the 'why'.
- Provide a break. Our SP's seem to prefer to skip breaks and push through with the hope of finishing early

- Addressing emotional components of the case and the importance of de-roleing
- Deliberate 'check-in' before dismissal and provide opportunities for connection post training.

Reflection During Action

Greet everyone individually

When multiple faces appear at the beginning of a Zoom meeting it is easy to greet the group as a whole. This time I addressed everyone by name and said how nice it was to see them. It's true, it was. A bonus- they said the same to me! I was also able to determine if each SP 'seemed themselves' so I could make note to reach out later if I had concerns.

Use an ice breaker at the beginning of the session

Concerned about the effects of social isolation I wanted my question to encourage positive thinking and looking towards the future: "If money and time were no object where in the world would you wish to travel?" We had a wonderful exchange, some choosing to return to special places, some wanting to connect with their roots, others wanting a new adventure. With such a positive response I thought it beneficial to add more time than initially anticipated. My goal was to improve connection, so I needed to adjust!

Unmute during the training

During events our SP's adhere to protocols and keep themselves muted. I made a specific point to invite them to unmute to mimic in-person trainings which were so enjoyable. You can't be in a roomful of actors and not enjoy their quips and or laughter!!

Provide a break

Breaks are always offered midway through trainings. This time I simply stated 'Using remote platforms like this can be mentally draining so let's take 5-10 minutes to step away from our screens'.

Addressing emotional/challenging portrayals.

In this particular case the 'patient' had recently lost a spouse. I allowed extra time for them to talk through how that might affect them emotionally and discussed the importance of stepping out of the character between encounters and being self- aware. This is standard practice but I this time I consciously took extra time to listen and allow time for discussion.

Check in before dismissal

I made sure to provide the SP's with an invitation to reach out to me with any concerns or questions. I thanked them for their participation and input to be sure they felt appreciated. I made sure the invitation to connect was deliberate and sincere to encourage and welcome contact.

LESSONS LEARNED:

Reflection On Action

I had utilized some of these action items

before. Using Reflective Practice kept my awareness on the goal of increased connection. Deliberate reflection provided valuable cues for extending or adjusting an activity in the moment.

Some specific moments of note:
-Making an initial connection with each SP seemed to galvanize them into a pro-active mindset.
-The ice breaker was a valuable use of time. We did not end early, neither did we run late. I noticed an increase in collaboration and mutual consideration among the SP's.
-Unmuting. I had to trust they would not take advantage of the situation and derail my agenda with anecdotes or lose focus - they didn't. An unexpected outcome was me feeling reassured of their respect for the training process which encouraged me as an educator.
-Breaks are necessary in this format. Finishing early may be one 'goal' but thoughtful use of the allocated time is a greater goal especially when using a remote platform.
-Challenges. Intentional use of this time allowed the SP's to share their expertise and become encouragers to one another,
-Final check -ins are usual practice but the art of applying reflective practice and making real time adjustments promoted a deeper sense of connection.

IMPLICATIONS FOR FUTURE PRACTICE:

Moving forward I intend to incorporate Reflective Practice in all of my educational endeavors. It encourages intentionality and ongoing re-evaluation and adjustment. It enhances the planning of educational goals and teaching methodology.

TEACHING TIPS:

Some 'tips' for improved connectivity during remote educational experiences:
-Be willing to make small adjustments 'in the moment'.
-Unmute group when able/ schedule a brief time for participates to greet each other and/or participate in discussions. Consider ice breakers.
-If feasible, connect individually with participants at the beginning or end of meetings and always provide a sincere invitation and opportunity for follow up.

Written by George Leach, MD
Assistant Professor
Emory University School of Medicine
Emergency Medicine

CONTEXT:

The learners were 2nd year medical students. The setting was the School of Medicine simulation center. In the Thrills and Spills elective, we have a 2.5-hour session dedicated to teaching Basic Life Support (BLS). In this we teach four core things: how to give chest compressions, how to breathe for the patient, how to recognize a heart rhythm that needs defibrillation, and how to be an overall leader of a cardiac arrest. The instruction had been delivered by a large group lecture followed by breakout small groups where a cardiac arrest scenario was simulated only one time.

SELECTED TEACHING & LEARNING TOPIC:

Using the ADDIE model of instructional design, we evaluated our BLS instruction session with verbal and written qualitative feedback from learners and verbal feedback from instructors. Up to this point in time, BLS small group instruction consisted of a minimum of 4 students. Each had a job. One was the team leader, also in charge of making decisions on heart rhythm interpretation and the need for defibrillation. One was in charge of breathing for the patient. Finally, two were in charge of performing chest compressions in an alternating manner. The cardiac arrest scenario was run once. Feedback we received from students indicated that they would have found it helpful to each have had a turn with each job in the scenario. Feedback from instructors also supported this.

LESSONS LEARNED:

After feedback analysis, we learned that there was an opportunity to change our instructional design to facilitate learning better, less by didactics, and more by active practice and repetition. Different skills and concepts do not all benefit equally from a rigidly uniform implementation structure.

IMPLICATIONS FOR FUTURE PRACTICE

This all occurred in 2018-19, so we developed and implemented changes in our instructional design. We shortened the large group lecture by 50% and expanded small groups so that each group only had 4 learners paired with an instructor. We set

up a cardiac arrest simulation room for every 2 groups. While one group ran a cardiac arrest with their instructor observing, the other would wait in a debriefing room, with their instructor, and discuss the effectiveness of their BLS delivery. The groups alternated in this fashion so that each group had 4 turns each, allowing each student to perform every simulation role. We again collected qualitative learner and instructor feedback and found that, in comparison to past years, the learners benefited from being able to perform each part of BLS delivery, benefited from the addition of multiple repetitions of the scenario, and felt more confident in their ability to respond to a cardiac arrest in the hospital.

TEACHING TIPS:

Regarding implications for others, we found that reducing large group didactic time was helpful when it was traded for more small group time and more repetition of the skills we were teaching. We benefited from having a very large volunteer instructor pool, which could be a limitation for some with less ideal instructor to student ratios. We could improve on our evaluation practices. While there was a shared sense amongst learners and instructors that these changes were very beneficial, there was not any rigorous, pre-analysis evaluation

system ready for use. Tracking quantitative feedback year to year between changes may help guard against instructor bias toward believing their curricula re-design is beneficial when that may not be true.

Written by Hee Won Lee, MD
Assistant Professor
Emory University School of Medicine
Anesthesiology

CONTEXT:

Learners—anesthesiology residents (PGY2 and PGY3), rotating on Labor and Delivery service at Grady Memorial Hospital

Teaching/Learning setting—clinical rotation on the Labor and Delivery unit, two months long for PGY2, one month long for PGY3

SELECTED TEACHING & LEARNING TOPIC:

I tried to apply the initial learning needs and outcomes. My goal was to try to figure out gaps of knowledge in maternal morbidity and mortality and inherent biases the residents had. Instead of using surveys or pre-tests, I interviewed the residents rotating on the service in thinking about each of the patient's pre-admission risks factors for outcomes.

LESSONS LEARNED:

I learned that several residents, whom I had mentally categorized as "not being woke" (if I may be colloquial), actually were more in tune with their inherent biases and were eager to learn about the disparities in healthcare outcomes for the patients. I realized that interviews are not necessarily standardized, and I'm not sure if they can be, but I found that these were more interesting to me and useful than surveys or pre-tests.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

I am aiming to standardize personal interviews and try to make a pre- and post-rotation interview for each resident and also for the rotating groups of residents. My "intervention" will be educational materials applicable to the residents in terms of learning about healthcare disparities and inherent biases.

Written by Vanessa Lee, DVM
Senior Veterinarian, Division of Animal Resources
Assistant Professor
Department of Pathology & Laboratory Medicine

CONTEXT:

I am a course coordinator and lecturer for a didactic course for veterinary residents in our and neighboring laboratory animal medicine veterinary residency programs. This course was historically taught in the classroom but was delivered via synchronous Zoom classes for 2020 to our eight students. Of the 34 lecture hours of this course, I recently assumed responsibility for a 4-hour husbandry section that up until now had been taught by another instructor.

SELECTED TEACHING & LEARNING TOPIC:

My goal was to apply multiple techniques for engagement in order to maintain the learners' attention for the husbandry classes. In addition to the standard PowerPoint lecture, I included problem-based discussions the Zoom annotate and poll features. Approximately 75% of my husbandry teaching consisted of lecture and 25% was dedicated to discussion. For the discussions, I detailed the problems at the beginning of the class and we would then discuss them individually after we had covered material related to that problem. The students could offer thoughts either anonymously with the annotate feature, in chat or verbally. I created one anonymous poll for approximately every 10 slides, and each poll was a question on material we had previously covered in that lecture.

LESSONS LEARNED:

The techniques were likely successful in increasing the students' attention because I had 100% participation in each of the activities and multiple students remarked in the end of year evaluation that these methods contributed significantly to their learning. These techniques also offered an opportunity to bring levity into the class as the students responses were sometimes intentionally humorous, and the students expressed that they had fun using the annotate feature. I was surprised at the high participation rate, as I had low participation (if any) when I verbally asked questions in previous classes.

I suspect that the anonymous aspect of both the polling and annotate, as well as the multiple-choice nature of the polls contributed to the increased participation. Possibly notifying the students of the problems at the beginning of class was also useful in increasing their engagement because they had time to think about it and identify relevant points as we went through the lecture.

The techniques were more effective than I expected, in that they served as an additional method for presentation and assessment in addition to my original primary intent of maintaining interest. Both the polling and problem-based discussions offered an alternate way to convey and allow the learners to apply the material. I could also easily identify knowledge gaps in material I thought they would have previously known, as I could determine in real time the students' ability to reproduce and apply material from the course.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

These techniques were generally successful and I will employ them in a very similar fashion in the future. The main change I would make is to practice more with each of these features before using them in class.

For example, I practiced with only one poll ahead of time and therefore did not realize until the class that using multiple polls is different and then had to fumble through the process while teaching. For the problem-based discussions, I suggest that instructors consider having specific learning objectives and outcomes to help with guiding the discussion productively. In regards to polling, multiple techniques could be beneficial but I will continue to ask questions on material we had covered, as that was a useful way to reiterate possibly tedious details. The discussions worked well because of the small class size, and might be less effective with a much larger class. Overall, the benefits of these multiple techniques were well worth the extra effort and time needed in advance.

SELECTED TEACHING & LEARNING TOPIC:

Since many of our clinics at Emory are run differently, I used the techniques from our introductory lecture to run a needs assessment in order to identify gaps in knowledge or concerns from learners before implementing our new workflow using Zoom for telemedicine appts. We used surveys as well as focus groups. We were then able to revise our workflow and educational outreach in order to get all providers up and running. By identifying stakeholders and getting their feedback we were also able to get buy in early from learners.

LESSONS LEARNED:

I learned that having different points of view at the table makes the implementation of a new workflow/concept more successful. I was humbled by how much was going on behind the scenes of me and other clinicians seeing patients. It was much easier to thwart potential failures before teaching a new concept/workflow. It also boosted morale and acceptance of the new workflow when a representative from every level was involved.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

I liked that I was open about being collaborative when it came to implementing/teaching of a new workflow. I wish we were able to record the information better in order for myself and the other facilitators to reflect on key concepts that participates brought up.

Written by Britt Marshall, MD
Assistant Professor
Emory University School of Medicine
Medicine

CONTEXT:

With many people in healthcare, March 2020 marked a drastic change in how we practice. With our clinics shut down to in person appts the division of medicine as well as other departments needed to create a way for our patients to access care. I volunteered to be a telemedicine facilitator for my division. Our learners were outpatient physicians, clinical staff, and administrators at Emory. Our learning setting was remote.

Written by Carrie McDermott, PhD, APRN, ACNS-BC
Corporate Director, Nursing Professional Practice
Emory Healthcare
Assistant Professor-Clinical Track,
Emory University, Nell Hogson Woodruff School of Nursing

CONTEXT:

The intended learners are experienced registered nurses (RNs) who are acting as preceptors for newly license RNs in the Nurse Residency Program (NRP) at Emory Healthcare.

A PowerPoint presentation was delivered in classroom settings during scheduled continuing education (CE) events. Due to the COVID-19 pandemic all CE events and meeting were cancelled. To support the summer cohort of resident nurses, there was a pressing need to disseminate information on competency-based orientation and a new clinical competency assessment tool.

SELECTED TEACHING & LEARNING TOPIC:

The topic I applied to my situation was enhanced teaching and learning through universal design. The small teaching topic was Competency-Based Orientation with instructions for how to complete the Clinical Competency Assessment Rubric (CCAR). The CCAR was developed at Emory Healthcare for use in the NRP. This new assessment tool was adapted from the Lasater Clinical Judgement Rubric (Lasater, 2007) to assess development of clinical competency among newly licensed RNs in the NRP.

A three-minute instructional video was created using an internet-based video-sharing platform, Vimeo. The link to access the video (URL and QR Code) was shared via email distribution to nursing leaders and nurse educators on clinical units at Emory Healthcare, with instructions to forward the information to unit-based preceptors. A printable flyer was included in the email with instructions to print and post the information on the unit.

Activity on the Vimeo site was monitored for usage. The video was watched 78 times by 55 unique viewers. The average length of time viewing the video was 137 seconds (65% of total video), 35 viewers completed the video.

There were no comments posted by the viewers who watched the instructional video.

LESSONS LEARNED:

Initial efforts to record the video were done without a script. I quickly learned that I needed to create a script and rehearse the script to make a useful instructional video.

I did not give careful thought to evaluating the effectiveness of the instructional video prior to distribution. Utilization data available through Vimeo suggests that the video was seen by 78 viewers. Some of those viewers may have watched the video more than once or more than one viewer may have used the same computer workstation to view the video. There is no data to confirm that the video was an effective teaching method.

IMPLICATIONS FOR FUTURE PRACTICE:

I anticipate using instructional videos again in the future. One thing that I will do differently is to attach a simple evaluation to the video.

TEACHING TIPS:

When converting traditional classroom teaching to an asynchronous platform, remember the basics of instructional design: Hook 'em, Teach 'em, Assess 'em.

References:

Lasater, K. (2007). Clinical judgment development: Using simulation to create an assessment rubric. Journal of nursing education, 46(11), 496-503.

Written by Jonathan Meisel, MD
Assistant Professor
Emory University School of Medicine
Pediatric Surgery

CONTEXT:

My learners were M3's rotating on their 6 week long Surgery Clerkship. The setting was the "virtual" classroom thanks to the pandemic. Zoom Fatigue is not only a delicious craft beverage from Wild Heaven Beer, but it is a real phenomenon that many colleagues and I have been feeling after 9 long months. Pre-COVID, my lectures were very interactive and had always received positive feedback. The Zoom classroom has taken a lot of fun out teaching, and I was looking for a way to better engage the students.

SELECTED TEACHING & LEARNING TOPIC:
I decided to try a new student engagement tactic called Poll-Everywhere. It allowed me to create Question and Answer slides to break up my lecture and feel like I was interacting with my students a bit more than I had been over the past few months. Responses could be collected in real time and I could see which topics were less understood and needed more clarification.

LESSONS LEARNED:

Poll Everywhere certainly met my need to interact more with my students, however I found there to be a steep learning curve when using the website and software. The interface with Zoom took a while to figure out, but I was eventually successful. Live Q&A just touches the surface of what the platform is capable of doing and I am excited to experiment more.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

Unfortunately, remote learning/teaching may be here to stay. Medical student and resident education may require new technology to be integrated into lectures in order to engage students. There are many platforms available to us as educators, but time must be invested in order to become familiar with them.

Written by Taniqua Miller, MD
Assistant Professor
Emory University School of Medicine
Gynecology/Obstetrics

CONTEXT:

Senior medical students applying to residency in gynecology and obstetrics. Teaching/Learning setting? Virtual classroom via Zoom.

Background: Traditional career advising has been abruptly disrupted during the COVID-19 pandemic. Our traditional model of in-person, one-on-one counseling and advising has been supplanted with the need for social distancing. Coupled with an entirely virtual landscape for the residency application process, students are increasingly feeling isolated. As students navigate this increasingly

virtual world and the uncertainties of 2020-2021 residency application cycle, the need for innovative and engaging advising strategies is paramount.

Goals of Capstone:
- To form a virtual "collective" to minimize the isolation felt by our students during the COVID-19 pandemic.
- To institute structured touchpoints for our students to come together with faculty and engage in meaningful discussions on topics relevant to the residency application process.
- To create a sense of camaraderie among students with career advisors. We want our students to know that we are all in this together and have their backs!

SELECTED TEACHING & LEARNING TOPIC:

Multiple Means of Representation - "Teach Em" Strategies:
Recognizing the novelty of this virtual advising series, I utilized the principles learned in multiple means of representation. I was challenged to create a curriculum that would provide innovatieve strategies to engage anxious applicants in a virtal setting.

As such, I recruited the input from resident physicians within my department who have recently graduated. GYN/OB physicians were involved in the creation of several advising sessions:

- Resident physicians were emailed questionnaire about strategies on choosing a residency program. Those responses were compiled by me, and overarching themes were developed from the responses. Three resident physicians from different post-graduate year levels were then selected to participate in the discussion.
- Resident physicians who have applied to fellowship and thus had experience firsthand with virtual interviewing were invited to provide "tips and tricks" for the senior medical students in preparation for virtual interviews.

LESSONS LEARNED:

When creating new content for a novel curriculum, employing the input and expertise from multiple stakeholders can be invaluable. I recognized early on that my perspective as a faculty member differs greatly from a senior medical student. Involving resident physicians who have recently completed the residency application process helped me to finetune the messaging of our curriculum with content that was timely and directly applicable.

IMPLICATIONS FOR FUTURE PRACTICE:

I may utilize Google forms and directly communicate with the students on topics that they wish to cover.

For our final virtual advising session, I will pilot this with sending the senior medical students pre-workshop feedback forms. This will help me to focus my teaching content on what the participants find most useful.

TEACHING TIPS:

Providing as much interaction and feedback for the teaching material is paramount. I am glad that I was able to utilize the input and feedback from the resident physicians who could inform my curriculum to current trends in the residency application process.

Utilizing Google forms and getting direct input from stakeholders increases buy in and interest in the content.

Written by Stewart Neill, MD
Assistant Professor
Emory University School of Medicine
Pathology & Laboratory Medicine

CONTEXT:

Our learners were medical students in the Foundations portion of the current Emory medical school curriculum. They were completing Prologue II, which is a particularly difficult module, now being expertly directed by Dr. Jennifer Spicer. Prologue II is a part of their transition from learning about "normal" human function to pathological and pathophysiological disorders of function. It involves a large number of concepts that are novel to the students and incorporates a variety of somewhat disparate topics and disciplines without the anchoring focus of a particular organ system.

The session covered here took place online over Zoom. Learners entered a central discussion room but were sent to breakout rooms (along with pre-established groups of fellow students) in order to complete the activity independent of faculty guidance and oversight.

SELECTED TEACHING & LEARNING TOPIC:

Gagne's model (Hook 'em, Teach 'em, Assess 'em) was applied over the course of build-up lectures (also delivered over Zoom) and then reinforced in this small group learning experience, with an eye toward cognitive load of a difficult aspect of the teaching – histologic images of typical inflammatory responses.

Hooks were first applied in a lecture regarding inflammation, in which I utilized a high degree of enthusiasm and drama to explicate the process of a typical localized inflammatory response. Initial presentation (Teach 'em) of the concept of a localized inflammatory response was made during the lecture. A portion of the lecture – including histologic images – is often a sticking point for the students. I lack time to go into substantial detail on it in the lecture and overall, it is not of critical importance for most students beyond the basic concepts presented. However, it is often a topic of confusion as students become concerned about their difficulty in completely understanding and interpreting the images based on the knowledge they possess. With this in mind, my teaching partner (Dr. Doug Parker) and I, along with

Dr. Spicer's guidance, produced a small-group session incorporating histologic images as a part of an ongoing team-based learning experience. We structured four sample cases, each with relevant clinicopathologic scenarios, provided specific histologic images to illustrate the scenarios, and then asked 3 multiple-choice questions per case to assist the students in evaluating their own knowledge base. I included 2 cases pertaining to localized inflammatory responses, building on the presentations made in lecture. Students were released into small groups to evaluate the cases on their own and log answers into a Qualtrics survey (Assess 'em). Points were generated based upon correct answers and were entered into a module-long competition between groups that did not factor (beyond participation) into the students' formal grade for the module. Following completion of the activity, students were brought back into the main discussion room, where Dr. Parker and I explained the cases and then stated and dissected the correct answers. Students were allowed to ask questions directly.

LESSONS LEARNED:

Teams overall did very well in the activity. My impression was that the team-based nature of the activity, along with the absence of direct faculty oversight, allowed for students to apply their knowledge and reach correct answers without fear of embarrassment in front of expert practitioners. Follow-up questions reflected a degree of engagement that was beyond what was usually demonstrated based on lecture material. In addition, we put extra effort into emphasizing how students should approach questions and clinical scenarios with a component of histopathology. Our message: use all of your context clues, take it back to basics in terms of interpretation, and avoid paralysis related to unfamiliarity. Informal feedback was positive; we will see what the formal learner feedback indicates (I have yet to receive it).

IMPLICATIONS FOR FUTURE PRACTICE:

Doug and I discussed the possibility of implementing something similar for future groups that would run across modules and serve as a way to reinforce pathology concepts within and between organ systems. For this module in particular, I will refine my presentation of the cases and questions slightly to aid the learners in focusing on the main points and not get distracted by information that is relatively extraneous for them.

TEACHING TIPS:

A challenging aspect of this for expert practitioners is actually to make it simple enough for the learners to effectively engage with the material independently. We went through several rounds of revision to case scenarios, images, and questions, with a general trend to make the information more direct and straightforward.

Histopathology carries a high cognitive load for medical students (as well as many non-pathologist practicing physicians), and our efforts to organize, focus, and order the material paid off in terms of substantial engagement and a high percentage of correct answers. We plan on doing this again.

Written by William Stephen Pittard
Senior Technical Project Manger
Instructor
Rollins School of Public Health

CONTEXT:

Medical screening tests and supporting diagnostics are standard tools in healthcare although understanding the associated performance measures (such as sensitivity, specificity, precision) remains a challenge for physicians and nurses. My Data Science teaching and research activities in Public Health involve frequent contact with healthcare providers who seek information on how better to interpret and explain such metrics. My goal is to develop an online bootcamp to help clinicians cultivate a deeper understanding of diagnostic performance measures and how to utilize them with a high degree of confidence and in a way that simplifies communications with patients undergoing medical testing.

SELECTED TEACHING & LEARNING TOPIC:

The application of learning assessment techniques is essential to the success of the project. Conducting a background knowledge probe via questionnaire will be used to establish an aggregate knowledge baseline from which to initiate the course. The goal will be for the clinician to understand what performance measures are associated with the test and what, if any, follow up testing should be done to rule in (or out) a disease in a way that the patient understands.

The ultimate learning activity will involve a case study presentation of a medical testing scenario that has ambiguous implications for a patient. Prior to this activity, formative assessments will be made to ensure a practical understanding of common medical performance measures and the interaction between them. The learning experience will involve several areas from Bloom's taxonomy, including Application, Analysis, Synthesis, and Evaluation.

LESSONS LEARNED:

As course participation is voluntary, maintaining engagement across sessions can be difficult with an already "too busy" cohort of medical professionals. Combining this with the wide variance in the statistical background of physicians and

nurses means that pre-course assessment is necessary to identify gaps which will require additional pre-work prior to the start of the course. The creation of asynchronous learning material to address these gaps will allow for a common starting point for the class. Keeping Gagne's Nine Levels of Learning in mind when developing courseware will result in more compelling material. As an example, stimulating the recall of prior quantitative learning and gaining attention via relevant case studies will provide a solid foundation for the course.

IMPLICATIONS FOR FUTURE PRACTICE:

A consequence of the COVID-19 pandemic has been the near exclusive move to online course delivery which has led to a greater facility with video creation technology as well as the refinement of written course material. This direction will benefit busy physicians and nurses who of necessity will need on-demand access to course material at their convenience particularly for the pre-work. As most clinicians have had some level of statistical education, this will be mostly a matter of review as opposed to ground up education.

SELECTED TEACHING & LEARNING TOPIC:

I followed the Biggs constructive alignment model to make a plan for teaching and assessment early in the rotation based on the fellow's desired topics of focus. I used Bloom's taxonomy to make the objectives specific and tangible to both me and the learner.

During the rotation I utilized the ADAPT model to provide feedback and gauge progress halfway through the two-week rotation and at the end of the two-week rotation.

Starting the two-week rotation with a dialogue with the fellow regarding topics they felt they needed more knowledge and experience with helped engage the fellow in the educational aspect of the rotation. Having the shared objective of gaining knowledge and experience in certain topics helped ensure time was made during busy rotations for reading and discussion regarding there topics. Knowing that an expectation of the rotation was focused learning on specific topics allowed the fellow to be more comfortable with me pitching in on some of the clinical work that had less educational merit.

The expectation of feedback being integrated into this process made it less stressful on the parts of both myself and the fellow and also gave us the opportunity to adjust our objectives during the rotation based on the cases we encountered and the

Written by Shreya Pujara, MD
Associate Professor
Emory University School of Medicine
Medicine

CONTEXT:

As part of my clinical duties, I work with first- and second-year Endocrinology fellows on the inpatient consult services and the fellow's outpatient clinics at EUH and EUHM. During those weeks I work directly with several fellows over extended periods of time and have many opportunities to directly observe their clinical skills and knowledge in varied scenarios. I wanted to focus on making these weeks productive by setting shared objectives for the rotation. I also committed to providing quality feedback that was honest, constructive, and timely.

opportunities for learning that present themselves naturally during clinical work. Mid rotation feedback also helped me assess the fellow's ability to integrate feedback and respond to it in real time. Using the ADAPT model to guide my feedback was a game changer because rather than me talking at the fellow which can feel awkward and leave me feeling unsure of whether my points came across in the way I intended, we had a conversation. Starting the conversation with a self-assessment from the fellow provided me insight into the fellow's level of self-awareness. Due to starting the assessment with shared understanding, we were able to move towards the planning phase more organically and in a way that felt collaborative. I found the feedback I was able to provide was more personalized and focused.

LESSONS LEARNED:

Shared and clear objectives are imperative when engaging learners, especially in clinical learning environments where the work can easily displace the overall goal of education. Having these objectives helps direct the workflow and place the educational aspect of a clinical rotation back at the forefront. Making sure that assessment is part of the initial objectives and setting the expectation of a collaborative mid

rotation and end of rotation discussion likewise helps engage the learner. It also leads to more thoughtful and useful feedback both from and to the learner.

IMPLICATIONS FOR FUTURE PRACTICE:

Learner engagement and prioritizing education has always been difficult in busy clinical rotations. I plan to continue to start rotations with a discussion of shared goals and set specific and direct objectives. I also plan to prepare the learner for feedback discussions by setting it as an objective of the rotation and letting them know they will be part of the feedback discussion with the goal of encouraging the learner to play an active role in the discussion. I plan to continue to use the ADAPT model to push myself to provide more specific and meaningful feedback.

Written by Ila Sethi, MD
Assistant Professor
Emory University School of Medicine
Radiology & Imaging Sciences

CONTEXT:

Radiology residents, 3rd and 4th year medical students rotating through Nuclear Medicine Division of Radiology.

Classically, the 'reading room' is the place where all the action happens. It is very different from bedside teaching, in the sense, it is one on one teaching using PACS and other imaging interfaces. In COVID era, things have moved to virtual platforms including Zoom and Teams. I have found assessing what the learner already knows and what the learner wants to know; and whether the teaching contributed to any increase in knowledge, to be the most challenging aspects.

SELECTED TEACHING & LEARNING TOPIC:

I applied the Hook 'em, Teach 'em and Assess 'em model based on Gagne's 9 events of instruction.

For the Hook 'em aspect, I started my teaching sessions with a series of questions to assess the existing knowledge. Digging deeper into the answers provided, I was able to understand learner's expectation from the teaching. For the Teach 'em aspect, I used multifaceted approach to deliver the content including use of videos, cartoons, and lucid charts. I strategically divided the content and took pauses at the end of every division to see if the learners were still with me. To assess the effectiveness of the teaching, I asked the same questions that I asked in the beginning.

LESSONS LEARNED:

I learnt that it was very helpful to prime the learners in the beginning. Once the learners were excited about how the promised content was relevant to their existing knowledge, they were hooked and more attentive to the teaching. I received unprompted, spontaneous feedback from a few learners which was unexpected and very encouraging.

IMPLICATIONS FOR FUTURE PRACTICE:

There is always a potential to improve and I will continue to practice applying these techniques in my future teaching endeavors.

TEACHING TIPS:

Invest in assessing the existing
knowledge and expectations of the
learners and be nimble to modify your
approach based on that.

Written by Kathryn Sutton, MD
Assistant Professor
Emory University School of Medicine
Pediatrics

CONTEXT:

I am the Program Director for the Pediatric Hematology/Oncology Fellowship. My learners (the fellows), like most adult learners, crave feedback. Unfortunately, the fellows were complaining that the feedback they were getting was too little too late and not actionable.

SELECTED TEACHING & LEARNING TOPIC:

Quality feedback is goal-oriented, actionable, timely, limited, and addresses specific behaviors.

Goal: Improve the frequency and quality of verbal, timely, actionable feedback during clinical rotations that addresses specific behaviors.

Concrete Experience: My program coordinator and I have worked together to set up the attending and fellow dyads for successful feedback during rotations. At the start of the rotation, I send out an introductory email that includes a reminder about the importance of feedback and 5 prompts to jump start the discussion. The prompts provide specific behaviors to address. Then I identify an attending working with the fellow each week and a day toward the end of the week (typically Friday, but not always) when they will both be available for a feedback session. My program coordinator then sends Outlook calendar invites to both the attending and fellow for that day to prompt them to set aside time for verbal feedback.

LESSONS LEARNED:

I have surveyed the current clinical fellows who report they are receiving verbal feedback that is actionable nearly every week. In previous years this answer was "a few times a year!" Their satisfaction with feedback overall is much improved.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

Providing a strategy and creating space and time for effective feedback sets both educators and learners up for success!

Written by Silke von Esenwein, PhD
Assistant Research Professor
Rollins School of Public Health
Emory University

CONTEXT:

I am the Instructor for the Research Seminars for the Masters of Science of Public Health students in the Health Policy and Management Department at the Rollins School of Public Health. The classes' goal is to give students the skills to conduct independent health services research, culminating in a Master's thesis.

My learners are Master's students who underwent a highly selective process to enter the MPSH program. As such, they are a group of exceptionally bright and ambitious students with a high level of critical thinking skills.

The Covid-19 epidemic forced us to conduct the seminars online. I was concerned with recreating the intimate, very interactive environment when this class is being taught in person. In the usual format, readings are assigned ahead of time. They are analyzed and discussed in depth during class time, fostering knowledge consolidation, peer-to-peer learning, and science-related communication skills.

SELECTED TEACHING & LEARNING TOPIC:

Learners' current level of development interacts with the social, emotional, and intellectual climate of the context to impact learning.

Goal: To accommodate the shorter attention span and work "windows" in the online format, I wanted to recreate this level of peer-to-peer discussion and learning by providing specific, weekly Canvas Discussion board requirements and a rotating schedule for students to" host" the discussion board. A secondary goal was to foster a feeling of connectivity and community among the students.

Concrete Experience: The students acted as hosts and engaged in online discussions from the start of the semester, but they never reached the level of excitement and interaction that I had envisioned. While the students met all of the standards I had given them, it seemed like they were doing the minimum without much enthusiasm.

Assessment and Re-shaping of Teaching Approach: I conducted an anonymous

mid-term evaluation to receive feedback about the class and its components. The students in both of my seminars reported that they considered the Discussion board requirements busywork with little return. The students also stated that they were continuously swamped with interactive exercises because all of their instructors were worried about their social isolation. They were tired of being forced to interact together. For the remainder of the semester, students had to read/watch/listen to the assigned materials but decided ahead of class which materials they wanted to discuss in class. This approach ensured that they were still exposed to knowledge that I considered necessary for their course work but allowed them to individualize their class time learning experience.

LESSONS LEARNED:

There are two things that I learned from this experience. 1. Student feedback about your teaching throughout the semester (e.g., mid-term evaluations) are a valuable tool to assess your teaching tools and re-shaping them. The students appreciated that they had a safe space to voice their concerns and then hear from me what steps I was taking in response to their feedback. 2. I was eager to employ every tool I knew to make sure that my students had interactive and socially connected experiences in my class. (After all, we were encouraged from all sides to do this!).

IMPLICATIONS FOR FUTURE PRACTICE:

While I do believe that online Discussion groups can be a valuable tool for asynchronous teaching, it became clear that, in the current context and for these particular learners, it was an ineffective and burdensome exercise.

TEACHING TIPS:

In short, instead of "throwing the kitchen sink" of teaching tools at them, pick a few and elicit feedback from the students on an ongoing basis to evaluate their use.

Written by Dawn Warner Bolden, MSN, MHSc, RN
Education Coordinator
Instructor
Emory Healthcare

CONTEXT:

COVID-19 was a novel disease and there was a lot of uncertainty around this virus and Personal Protective Equipment (PPE). I decided to do 30-minute module on PPE. Leadership was notified of the addition to the program and they were excited. When entering a healthcare system, the biggest fear or concern is: will I have the appropriate PPE and will this healthcare have enough to keep me safe? The presentation included modules that consisted of videos and a lecture on how to keep the employee protected during their shift. The employees received handouts on how to don and doff PPE. After every video there was a question-and-answer segment. This helped to alleviate a lot of fears and misconceptions they may have had prior to starting their employment at Emory Healthcare.

SELECTED TEACHING & LEARNING TOPIC:

Gagne's Nine Events of Instruction were used to make this learning activity meaningful.

LESSONS LEARNED:

In the beginning I learned that keeping up with all of the Covid-19 changes were going to be challenging because they were constantly changing. No matter how prepared I was to teach this lesson, there were going to be questions that I may not be able to answer. As long as I knew where to find the answers, I was going to be successful.

IMPLICATIONS FOR FUTURE PRACTICE / TEACHING TIPS:

It has been nine months since the beginning of COVID-19 and I am continually learning this disease. Policies and procedures will continue to change and be updated. To be successful i must continuously educate myself on the topic being taught. Adequate preparation will make your teaching experience very rewarding.

Written by Charlotte Whitehead
Assistant Director, Medical Education Programs
Office of Medical Education and Student Affairs
Emory University School of Medicine

CONTEXT:

New Medical Student Orientation –
"Introduction to O.A.S.I.S."

Due to global pandemic, this session
was conducted via ZOOM instead of an
in-person lecture.

**SELECTED TEACHING & LEARNING
TOPIC:**

Gagne's 9 Events of Instruction. Using
the "Hook 'em; Teach 'em; Assess 'em"
model, the training session was
converted into a virtual learning
opportunity. The presentation was
revamped applying these principles.

"Hook 'em" (1. Gain attention of the
students; 2. Inform students of the
objectives; 3. Stimulate recall of prior
learning)

- A pretest was added to gauge the
  learner's awareness of the topic – using
  emoji icons, I asked the students to
  annotate the slide on the image that
  indicates their level of exposure to the
  O.A.S.I.S. system.

"Teach 'em" (4. Present the content; 5.
Provide learning guidance; 6. Elicit
performance)

- This session was an introduction to
  various functions available in O.A.S.I.S.
  for their role as students.
- During the presentation, I asked the
  student to reserve the use of the "?"
  stamp in Annotation to indicate when
  they have a question on the content.
  When the "?" appeared, the students
  were asked to unmute and ask their
  question instead of typing in the chat.

"Assess 'em" (7. Provide feedback; 8. Assess
performance; 9. Enhance retention and
transfer the job)

- A post-test was used to gauge the
  learner's new awareness of the topic –
  using fewer emoji icons, the students
  were asked again to annotate the slide
  on the image that indicates their level of
  the OASIS system. This provided an
  instant assessment of how the learners
  grasped the content shared.

LESSONS LEARNED:

The use of the annotation tool in ZOOM
kept the learners engaged and allowed

opportunities to address questions spontaneously during the session making the session more conversational.

The learners feedback revealed this approach was a refreshingly welcomed change to teaching on a virtual platform.

IMPLICATIONS FOR FUTURE PRACTICE:

This experience has influenced how I deliver content to my learners. Going forward, I will continue using ZOOM features for every virtual teaching opportunity.

TEACHING TIPS:

Depending on your teaching platform, I recommend using features that break away from the "norm" to engage the learner. Most learners will welcome the change and retain the content if it's delivered in a unique interactive fashion.

Written by Zanthia Wiley, MD
Assistant Professor
Emory University School of Medicine
Medicine

CONTEXT:

Medical Students, Internal Medicine Residents, Infectious Disease Fellows, and Pharmacy students/residents

I am an infectious diseases attending and teaching occurs while rotating on the inpatient consult service. The teaching/learning settings take place (currently socially distanced) in the ID consult team room, outside of the patient's room, or at the bedside.

SELECTED TEACHING & LEARNING TOPIC:

I applied the Hook 'Em, Teach 'Em, and Assess 'Em approach.

Hook 'Em – I always start with a case presentation, either a current patient or an example case presentation that includes the patient age, history, pertinent exam/lab/medications. I have learners at different levels (including pharmacy students), so I pose questions that each of them may consider. What bacteria should we consider in this setting (i.e., for medical students)? What is on our differential diagnoses for this case (i.e., for internal medicine residents)? Is there anything on his/her exam that concerns you (i.e., ID fellow)? What exam findings my help you elicit this diagnosis (i.e., student, resident, or ID fellow)? What diagnostic tests should we consider (i.e., ID fellow)? What categories of antibiotics should we consider in this infection (i.e., pharmacy student/resident).

Teach 'Em – Depending on the case being presented, I may do a very brief (no more than 8 minutes) didactic on a focused area. For example: Physical Exam Findings in Endocarditis, or Categories of Antibiotics to target MRSA Infections, or Echocardiogram in MRSA bacteremia.

Assess 'Em – after the Teach 'Em portion, we have a brief, 1-2 minute "Recap". For example, "So what are the eye exam findings that we should look for in patients with endocarditis?", "In this case, why did we decide to pursue a transesophageal echocardiogram rather than a transthoracic echocardiogram?" And beyond the brief "Recap", I will weave in these same concepts into future cases so that we can build on the learning topics.

LESSONS LEARNED:

I learned that in each teaching session that I have to consider each learner (given their different levels and career plans) and ensure that the cases have at least one element targeting each learner. Do bite-site teaching. No one wants to listen to you wax poetically for 30 minutes. Our learners have short attention spans and, as a teacher, many times I do as well.

IMPLICATIONS FOR FUTURE PRACTICE

I will use this same method as I think about my PowerPoint didactic sessions.

TEACHING TIPS:

Bite-Size Teaching. Short and impactful. Hook 'Em, Teach 'Em, Assess 'Em!

Written by Keneeshia Williams, MD
Assistant Professor
Emory University School of Medicine
Surgery

CONTEXT:

The Learners are third year medical students that are at the beginning of their surgery rotation. The TEAM (Trauma Evaluation and Management) Course that I teach has historically been taught in a classroom setting. The class is 4 hours in length, with 3 hours of didactics and 1 hour of case discussion and a tour of Grady's Trauma Center. Since the beginning of Covid-19, I have taught the class online for 3 hours.

SELECTED TEACHING & LEARNING TOPIC:

Hook 'Em, Teach 'Em, Assess 'Em

Hook 'em
The TEAM course provides students with a lot of information in a short period of time. It is important to maintain the student's engagement throughout the course. I use specific trauma case examples to Hook students. I present various cases throughout the lecture, that pertains to the topic being discussed. After learning about Hook 'em in class, I added video throughout the lecture as well. The lecture now starts with a video that shows trauma at Grady on a busy trauma night.

Teach 'em
After I added video to the lecture, I reduced the number of slides. I made sure to ask the students questions throughout the lecture. I added annotation to the lecture. My plan is to add more annotation and interactive learning to the lecture.

Assess 'em
The students have a pre and post exam that they complete. During the lecture, the students have breakout sessions where each group manages a trauma patient and then reports back to the larger group on their case. This is an opportunity to teach and assess students; the students are taking what they have learned during the lecture and applying that knowledge to the case discussion.

LESSONS LEARNED:

It is difficult to engage students online. Having students turn on their video really helped to increase engagement. Additionally, students really benefit from the breakout sessions. I did not have

breakout sessions during the first few months that we transitioned to online learning. As I visited breakout session rooms once they were added, I noted that students were very engaged and enthusiastic during their discussion of the cases.

IMPLICATIONS FOR FUTURE PRACTICE:

In the future, I will continue to work on hooking students and keeping them engaged. I will focus more on Applying Gagne's principles as I create course curriculums. Although online teaching was initially challenging, it has its benefits; especially when teaching students that are physically rotating on various campuses. I will continue to implement online teaching, and likely use a hybrid model in the future. I will also likely include an asynchronous component to the course as well.

TEACHING TIPS:

It is important to consider what you are trying to teach and who your learners are when applying learning topics. Engage co-faculty to help teach when possible. Assess learners, provide feedback, and seek feedback throughout the course, to provide the best teaching and learning opportunity for everyone.