The Case of the Absentee Audience

Case Written by Teresa Chan

Case
Dr. Teresa Chan

Objectives:
Dr. Teresa Chan

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Dr. Stella Yiu

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The view from the lectern was less than inspiring. Dr. Nelly Xiu, newly appointed Associate Professor, stood in front of a half filled lecture hall. Of the nearly forty residents and medical students that were supposed to be at the Emergency Medicine conference day*, only about half were physically at the talk. Nelly viewed the learners, watching them pull out their computers, smart phones, and the occasional journal, and wondered if any of them were mentally present.

At the end of her lecture, the tepid applause from the audience further reinforced her impression. Nelly was surprised when the chief resident, Andrew Smith, came up to chat with her after her lecture.

"Hey Dr. Xiu, good talk. Therapeutic Hypothermia is a really important topic," he started. "I was wondering if you've ever thought about doing this topic as a workshop instead?"

Nelly looked at him, perplexed by his question. Clearly the students and residents had been wholly disengaged with her lecture, couldn't he see that?

"Andrew, this was a mandatory class, and only 20 of the 40 learners on our teaching unit came. And then the half that did come were too busy texting and emailing to listen."

"Well, I don't think that's fair. A bunch of them are post-call, some of them were still rounding with their attendings, and some of them were sick. You're right - this is mandatory - but sometimes that isn't enough to get people in seats anymore. And it's definitely not enough to make sure they're paying attention."

Nelly pondered this thought for a moment. If the word mandatory wasn't enough to ensure learner attendance and attention, then what would she need to do to reach her audience?

Questions for Discussion

1. In this case Andrew says: "…sometimes that isn't enough to get people in seats anymore. And it's definitely not enough to make sure they're paying attention." Is he correct in his statement? Why or why not?

2. What are some issues that occur when you make a session 'mandatory'?

3. As a teacher, are there any preventative measures that you can use as prophylaxis against an absentee audience?

4. What are some strategies that you might advise Dr. Xiu to use in her future sessions?wrong?

Usage

Competencies

ACGME	CanMEDS
Professional Values (PROF1) Accountability (PROF2)	Scholar Communicator

Intended Objectives of Case

1. Discuss and describe various teaching strategies that might help enhance your lecturing skills

2. List various techniques that may allow you to overcome the psychological or physical absenteeism of an audience.

3. Describe the role of lectures and when they are most useful.

4. Assemble a list of at least 3 other instructional methods that might work in lieu of a lecture.

5. Analyze the teaching dynamic within a given lecture to diagnose the issues.

Expert Response

Web 2.0: How I Learned to Love the Millennial Learner
by James Ahn MD

Dr. Xiu's audience response is not uncommon when lectures are used as the primary instructional strategy. Unless faculty members are gifted storytellers, lecturing as an instructional strategy for core content will be met with the same palpable disinterest expressed in this case.

The Problem(s)

Time Constraints
Although this didactic session was mandatory, audience attendance was not reflective of that. The target audience had multiple competing time demands that detracted from their attendance. Also, conference attendance may be influenced by cultural issues in the residency program. We must consider that learners may be "voting with their feet" if they are not interesting in attending lectures.

Learner Interest
Not only did a half-full auditorium demonstrate a lack of interest, the behavior demonstrated by the present learners showed a dearth of enthusiasm. Akin to a visual analog pain scale, learners interest can be judged from texting or napping (sad face) to eager nods and questions (happy face).

Unfortunately, based on audience response, Dr. Xiu's didactic session fails to capture the interest of her target audience.

The Solutions

Relieving Time Constraints
Unless Dr. Xiu is part of the residency program leadership she may have a difficult time advocating for increasing protected time for residents or changing the culture to create a sacrosanct time for conference. However, Dr. Xiu can appeal to the program leadership that if conference attendance is a persistent problem, then the residents will be in danger of failing to meet ACGME requirement that residents must participate in 70% of all planned didactic experiences(1). The program leadership may be to motivated to change the culture of the residency or even implement different staffing

models to allow residents the time to attend didactics(2,3).

Increasing Learner Interest
The millennials, or Generation Y, are a generational group defined by Howe and Strauss as people who have turned 18 in the year 2000 and entered college or entered the adult workforce(4). As the median age of medical school matriculants in 2011 is 23-24, the current generation of medical trainees are primarily millennials(5). This generation has been exposed to technology from a very young age and considers it an essential enabling device for their education(6). Teaching suggestions for the millennial generation often center around appropriate usage of technology to engage this group of learners(7). Further, learning activities that involve interactivity, group learning, and multiple media modalities have a higher chance of successfully engaging them(6,7). In fact, millennials have "little desire to read long texts" and delivery of instruction is preferable in short media segments(8,9). Dr. Xiu's lecture is a case study in alienating the millennial learner.

Strategies for Engaging the Millennial
The "flipped classroom" design as described Salman Khan, espouses an educational philosophy that speaks to the Millennial generation(10). This teaching ideology requires student to access online videos to learn concepts prior to the classroom. The classroom can then serve as a vessel for robust discussion between the expert and learners. "Flipping the classroom" encourages interactivity in the classroom while replacing long texts with short media segments for the Millennial learner. This design has been shown to be effective with our current crop of learners and has increasingly been a focal rallying point for educational change(11-14). Dr. Xiu may choose to "flip the classroom" in any number of ways. For example, she may choose to split the classroom in to multiple groups and assign video vignettes to each group for discussion during conference time. Also, Dr. Xiu can consider offering the same video to all the learners with embedded discussion points for the classroom.

Expert Response

The social web, or Web 2.0, also offers an educational tool that can serve the millennials preferred style of learning. It is the newest manifestation of the web that supports and encourages social interactivity and collaboration. Types of web 2.0 applications frequently used in education include blogs, wikis, podcasts, social media(15). Over 70% of millennials use social networking sites and approximately one-fifth read blogs and wikis(16). Because web 2.0 holds a natural application as an educational tool for the millennials, there is no reason that this should not be mined by educators. The explosion of Free Open Access Meducation (FOAM) suggests that our learners have already cast their vote(17). Web 2.0 can be used in a number of creative ways.

In this case, Dr. Xiu could use social media resources as her vehicle for "flipping the classroom" and delivering educational content beforehand. The challenge comes, then, to fill the interactive time with learners – a skill that Dr. Xiu will need to develop since it is not well taught presently. For instance, she might encourage the use of Web 2.0 to search for evidence-based medicine to support or debunk therapeutic hypothermia during her classroom discussion in a modified problem-based learning or "Big Questions" session – acting more as a guide or one of Sugata Mitra's "Grannies" who encourage students to find the answers themselves. Finally, she may consider using Twitter as a multiplier and engage the entire FOAM community by encouraging her learners to live-Tweet during conference(18).

Conclusion

Albert Einstein said: "Insanity is doing the same thing over and over again and expecting different results." Lecturing to this current crop of learners will prove to be unsuccessful. Faculty members must be agile in their educational strategies to meet and engage learners along their interests and expectations. Currently, these interests lie in technology available in short media segments, group work and interactivity. The challenge moving forward for faculty is to incorporate these elements in each teaching session.
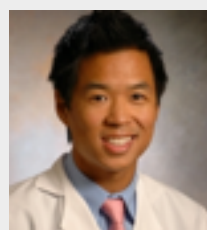
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About the Expert

Dr. James Ahn (@ahnjam) is an emergency medicine physician in Chicago, IL. He is the associate program director and medical education fellowship director at the University of Chicago. His areas of interest include curriculum development and competency testing.

Expert Response

Listening and Engaging: Trade secrets for combating the absentee audience
by Stella Yiu MD CCFP(EM)

For Dr. Xiu to engage the audience, I would suggest that she tailor concrete objectives for the audience and build in active elements to increase learning.

1. Tailor content to the audience
As a first step, Dr. Xiu should find out what the audience needs from her, the content expert. She could do a needs assessment about what the learners know about the topic using a free online survey tool like Survey Monkey http://www.surveymonkey.com to discover any beliefs and controversies.

Once she has decided on her content, she should break them down into clear themes. In a study by Kessler et al (1), best presentation design include 'manageable scope of content' and 'clear objectives'. Most audience will not remember more than 3-5 themes (2) so she needs to emphasize the specifically selected aspects of her presentation.

2. Build in active elements to increase learning
Students actively involved in the learning activity will learn more than passive recipients. (3) Interaction also improves problem-solving, decision-making and communication. (4)

Attention decays every 15-18 minutes (probably shorter even for Emergency practitioners!). For a 60-minute talk, Dr. Xiu should try to insert one interactive activity every 20 minutes.

Interactive exercises can be used with groups or individuals. Dr. Xiu needs to tie these activities to the objectives and themes. For her session, examples could include:

1) Brainstorming: Start with a cardiac arrest case. She could bring a few learners up to the blackboard or flip chart to write down their management at the start of lecture.

2) Audience Response System: She could build in multiple-choice questions in the lecture using free softwares such as Poll Everywhere http://www.polleverywhere.com or Socrative (http://www.socrative.com)

3) Role play: Dr. Xiu can have learners role play (paramedic/ER resident/nurse/family member/ICU resident) clinical scenarios to highlight learning points and develop decision making in various contexts.

4) Flipped Classroom with active learning activity in class: She could also use the flipped or reverse classroom model by assigning the reading materials beforehand and using class time for interactive activities. (5) It is critical that she prime her students. Her students need to understand that there will

Figure 1:
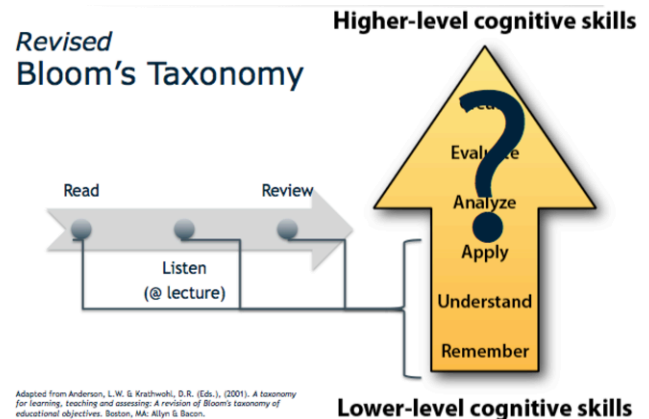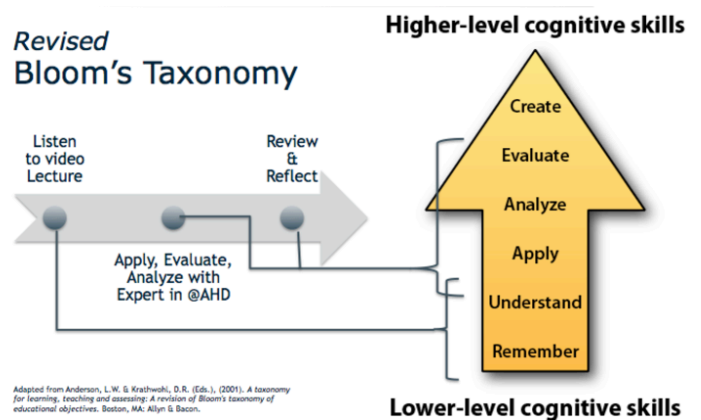**Bloom's Taxonomy for the Traditional Classroom (6)**

Figure 2:
Bloom's Taxonomy for the Flipped/Reverse Classroom (6)

not be a didactic lecture in class, and they must do their pre-reading of core materials to be ready for class. They are responsible for teaching one other. If the students do not do their pre-reading, they will be behind everyone else.(See Figure 1 & 2 for helpful schematics for how the flipped classroom works along Bloom's taxonomy.)

For example, she could assign each learner to read one of 5-6 studies or papers about therapeutic hypothermia.   During class they could form teams to debate on controversies about cooling or work in teams to create an algorithm for cooling patients. They could then compare their results with existing hospital algorithms afterwards to see which is the closest. (A little competition always encourages engagement.)   Table 1 (on the next page) contains other suggestions for activities.

Expert Response

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Table 1:
Suggestions for activities designed around a flipped classroom

Examples of Pre-Learning	Examples of Classroom Learning	Examples of "Follow-up" Material
- Video lectures - Podcast episode - Important papers - Web pages - Reflection activity with clinical cases or controversies - A Set of Practice Problem	- Discussion groups - Think-pair-share - Team-based learning - Review practice Problems (address common misconceptions) - Game or competition - Debate - Role play - Simulation	- Quizzes - Follow-up digest of day's proceedings - Release of group Products for 'peer review' - More problem sets - Create a blog post as a group

Other useful sites for activities for the flipped classroom:
- http://blog.peerinstruction.net/2013/01/15/quick-start-guide-to-flipping-your-classroom-with-peer-instruction/

- http://www.mghihp.edu/faculty/faculty-compass/teaching/Teach-Your-Course/Activities/activities-flipped-classroom-model.aspx

Conclusion

To summarize the take-home points, Dr. Xiu could increase active engagement and attendance at her teaching sessions by using interactive strategies such as refining their management of a case that they committed to at the beginning of class, producing evidence-based algorithms, or holding debates and voting on the winning teams. Candy prizes don't hurt either!

About the Expert

Dr. Yiu graduated from the CCFP (EM) program in Ottawa. She is the Assistant Clerkship Director for Emergency Medicine at the Department of Emergency Medicine at the Ottawa Hospital. She is a Distinguished Teacher and an Assistant Professor at the University of Ottawa. Her academic interests include resuscitation and curriculum delivery in medical education. She is particularly interested in using social media and technology for teaching. She is the co-creator of the Flipped EM Classroom blog (http://flippedemclassroom.wordpress.com/) and teaches workshops in education technology and flipping the classroom.

Curated Community Commentary

By Eve Purdy   MD (candidate)

A qualitative methodology was used to curate the community discussion. Tweets and blog comments were analyzed, and four overarching themes were extracted from the online discussions. Prior to publication, we sent this analysis to several of our community members to perform a "member check" (and editing) to ensure credibility (TC, SLG)

During the extensive conversation, there were many pearls of wisdom that were traded amongst teachers and learners of various backgrounds. Of note, the follow are some of the common themes that seemed to emerge from the comments.

Both parties must take responsibility for learning

The ALiEM community identified that teachers and learners must share responsibility for ensuring the success of any lecture. When both parties respect this responsibility, great learning opportunities arise. The community identified the following qualities of the responsible teacher and learner.

- **Teacher:** The responsible teacher knows the level of the learner, identifies goals, and facilitates progression. She understands where her own content fits into the overall curriculum. She is invested in learners and identifies relevant stressors in personal and professional spheres that may compromise the learning environment. Her in-depth knowledge of her content facilitates flexibility and adaptation to learner needs and interests. The responsible teacher has an enthusiasm for the material and passion for teaching.
- **Learner:** The responsible learner engages, regardless of the format or style of material delivery. He is invested in the content and comes prepared to learn and contribute. He is intrinsically driven but he also responds to extrinsic motivators when created by a teacher he trusts. The responsible learner understands that the classroom has limitations and extends his learning to contextualized (e.g., clinical) learning environments. He is forgiving and is enthusiastic both about the material and about learning. The responsible learner engages in a partnership with his teacher that allows him to be flexible and adapt to new teaching styles. He is forgiving when these teaching styles are not as productive as planned.

Training and practice are important for success

The ALiEM community highlighted the need to seek out opportunities for professional development. Medical professionals are given formal training in most other aspects of their careers; the consensus was that teaching should be no different. Formal training for both faculty and residents is ongoing at some, but not all, centers. A number of resources for improving presentations were suggested (see resources).

Other tips included:
- Identify lecturers that you like, appreciate their style, but develop your own. Seek out mentors in those who you admire (Chan, Swaminathan, Choo)
- Get formal coaching (Chan, Choo)
- Practice your talks beforehand, preferably with a brutally honest critic (Luckett, Hensley)
- Have a colleague watch you (Swami, Siedsma)
- Practice, reflect, adapt and keep at it (Swaminathan, Gibson)

Draw from a diverse toolkit

Community members highlighted that there are ways to make classroom sessions more engaging:
- Invite people down to the front (Hicks);
- Flip the classroom if you are limber enough and confident enough to do it well (Chin, Kobner, Macias, Brazil, Gibson, Hicks, Hensley);
- Interact with, and respond to, the audience, which may require diversions from your planned lecture (Brazil, Swaminathan, Hicks, Hensley, Mukherji);
- Break the room into teams and make it a competition (Mukherji, Luckett);

Three pro tips for handling a low turnout at your lecture

by Christopher Hicks (@Humanfact0rz)

Step 1: "Invite everyone down to the front of the class." Don't let learners linger in the back rows.

Step 2: "Interact—confess that the lecture was planned for a larger group, but suggest you change it up. Seek input [from the learners in attendance]."

Step 3: "Up the interaction—more discussion, less lecture."

- inject fun breaks or, if appropriate for the material, think about running a workshop or simulation instead of using a lecture format (Chin, Hensley, Benitez).

Also see the 'call out box' on the previous page for tips from Dr. Hicks about handling a smaller-than-expected-audience.

Technology can engage and disengage learners

There were differences of opinions and experiences with incorporating versus "banning" technology to encourage student engagement (Murray, Brazil, Swami, Gibson, Luckett, Rogers). Some suggested that live tweets/audience polls might provide the presenter with real time feedback (Keefe). Javier Benitez summarized: "Technology can be a great aid to learning, if used appropriately, but pedagogy should come first."

Teaching metacognition might help

Reasons for absenteeism by learners include "I already know this material," and "I don't think that I'm going to learn anything" [1]. Discussion from the ALiEM community suggested that metacognition in learners is quite poor, which means self-evaluation of what one knows and what one does not know is often inaccurate. Explicit teaching around, and assessment of, metacognition are important next steps in medical education (Purdy, Luckett, Gibson, Siedsma) A focus on metacognition by both parties may improve learner engagement and teacher performance.

The jury is still out on non-traditional methods

A number of non-traditional methods were discussed, including using television episodes and interpretive dance*. Teachers are finding ways to be creative; sometimes it works and sometimes it's a flop. But as Michelle Gibson pointed out we "have to be prepared to fail".

* Please note the consensus on interpretive dance was, that while entertaining, it might not actually be a great way to relay medical concepts. At this time, it cannot be endorsed as a valid evidence-based education intervention. Since we hope someone can prove us wrong we will continue to re-evaluate this lecture option moving forward. Please pass along any evidence you may have, preferably in video form.

[1] Clay T, & Breslow L. (2006). Why students don't attend class. MIT Faculty Newsletter; XVIII(4). Accessed online at http://web.mit.edu/fnl/volume/184/breslow.html on July 29, 2014.

Resources

There were a lot of very great resources that were suggested by our community this month. Here is collection of the resources mentioned by the ALiEM Community at some point during this week's discussion.

Presentation resources
1) iTeachEM's Good Educator post http://iteachem.net/2014/06/good-educator/
2) Nancy Duarte's Resonate book (free e-book) http://resonate.duarte.com/#!page0
3) Nancy Duarte's TED talk "The secret structure of great talks": http://www.ted.com/talks/nancy_duarte_the_secret_structure_of_great_talks
4) Presentation Zen, a book by Garr Reynolds
5) Rhona Sharpe (Oxford Centre for Staff & Learning Development) on lecturing: https://www.youtube.com/watch?v=JnMfo4iUgks
6) Ramsey Musallam's TED talk: "3 rules to spark learning" http://on.ted.com/j0MZv

Medical Education Blog Posts (from FOAM and beyond)
- Javier Benitez's post from ALiEM: "Why lecture" http://www.aliem.com/why-do-we-lecture/
- Ineffective uses of lecture: http://isites.harvard.edu/fs/docs/icb.topic38998.files/Bligh_Ch1_and_Ch3.pdf
- Pedagogy in flipped classrooms: http://www.aliem.com/where-pedagogy-in-flipped-classrooms/
- Taxonomy of PBL: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2923.1986.tb01386.x/abstract
- http://link.springer.com/article/10.1007%2Fs10648-007-9054-3.
- Dr. Fox Effect: http://iteachem.net/2013/06/the-dr-fox-effect/
- Fluent vs Effective learning: http://www.timeshighereducation.co.uk/news/great-lecture-what-was-it-about-again/2004222.article
- Surface learning: http://exchange.ac.uk/learning-and-teaching-theory-guide/deep-and-surface-approaches-learning.html

Lingo for Learners

This month we found that there was a very sophisticated and high level debate, but as a learner, there seemed to be a lot of education lingo (e.g. edu-speak) that may not have been familiar with everyone.

The following are some key links to define the terms that may help others to get to know some of the key terminology mentioned in this discussion.

Key Concepts from the Discussion
- 6 Steps for Curriculum Development (Kern) - a primer from UCSF: http://bit.ly/1oNR3Hq
- Active learning strategies: http://en.wikipedia.org/wiki/Active_learning
- Banking Education: http://en.wikipedia.org/wiki/Banking_education
- Community of practice: http://en.wikipedia.org/wiki/Community_of_practice
- Expertise reversal: http://en.wikipedia.org/wiki/Expertise_reversal_effect
- Problem-based learning: http://en.wikipedia.org/wiki/Problem-based_learning
- Social constructivism: http://en.wikipedia.org/wiki/Social_constructivism
- Situated learning environments: http://en.wikipedia.org/wiki/Situated_learning

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About

The Medical Education In Cases (MEdIC) series puts difficult medical education cases under a microscope. We pose a challenging hypothetical dilemma, moderate a discussion on potential approaches, and recruit medical education experts to provide their insights. The community comments are also similarly curated into a document for reference.

Did you use this MEdIC resource?

We would love to hear how you did. Please email MEdIC@aliem.com or tweet us @Brent_Thoma and @TChanMD to let us know.

Purpose

The purpose of the MEdIC series is to create resources that allow you to engage in "guerrilla" faculty development – enticing and engaging individuals who might not have time to attend faculty development workshops to think about challenging cases in medical education.

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