Flipping the Classroom: Making the Educational Experience More Active and Effective for Emergency Medicine Residents

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Adult Learners

Medical Education Reimagined: A Call to Action
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Flipped Classroom

Change in the Conceptual Framework

* sage on the stage *  " guide on the side "

TIME
OUR MOST PRECIOUS RESOURCE
Implications

- Need quality educational materials
- Buy in from learners
- Faculty development
- Adjusting education based on learner’s progression
Application Exercises

Forming Teams

Pre-Class Preparation

Readiness Assurance Process

Facilitation

Application Exercises
Application Exercises

Forming Teams

- Pre-Class Preparation
- Readiness Assurance Process
- Facilitation
- Application Exercise

• www.epsteineducation.com
• Formats
  • 10, 25, 50 questions
  • 4 or 5 answer choices
Application Exercises

- Tenet of the "4S's" of Application Exercises
  - Significant Problem
  - Same Problem
  - Specific Choice
  - Simultaneous Report

Example #1 iBook EKG Interpretation
Application Exercises

Example #1 iBook EKG Interpretation

A

B

C

D

Application Exercises

Example #2 iBook Peds Critical Care

A

B

C

D
Example #2 "Traditional" Presentation

Tox

CC/Abdominal Pain

Physical Examination

- Vital Signs: HR 120, BP 90/60, R 30, O2 92% on 4L N/C
- Abdominal examination: tender in epigastrium

You also note the following finding...

Now What?

- Make your top 5 differential diagnoses
- List your top 2 diagnoses
- What are your priorities?

Some Results

- CXR: Right lower lobe consolidation
- CBC: WBC 12,000, Hgb 14, Platelets 250
- LFTs: Normal
- BUN/Creatinine: Normal
- Chest CT: Consistent with your diagnosis

Discuss with your team...

- What is the likely cause of your patient's symptoms?
- How does this diagnosis impact treatment?
- What other investigations should you perform?
- Is there any immediate interventions that need to be done?
Application Exercises

Example #2 "Traditional" Presentation

Tox

Example #3 Use of Video - NIHSS

Sight Seen at Traditional Lectures...
How do Residents Like TBL?

- Pre-Class Preparation
- Forming Teams
- Readiness Assurance Process
- Application Exercises
- Facilitation

Try to Avoid Just “Giving the Answer” or Saying “You are Right or Wrong”
Summarize Information

WPW Aflib vs V Tach
- WPW Aflib: 
  - More severe
  - Fast conduction of atrial activity to the ventricle
  - Immediate ventricular response

V Tach: 
- Less severe
- Slower conduction of atrial activity to the ventricle
- Delayed ventricular response

Black Widow Envenomation
- Toxidrome:
  - Headache
  - Nausea
  - Vomiting
  - Numbness

- Treatment:
  - Early recognition
  - Supportive care
  - Pain management
  - Antivenom administration

- Most cases are handled without antivenom

- Must know the differences between different hypereosinophilic reactions
Lessons Learned

- Tech is good and bad
- Beware of length and time management issues
- Make sure the material is suited to TBL
- Construction of materials
- Be prepared to facilitate the discussion

References

1. Team Based Learning Handout, TBL 101 -

2. Team Based Learning Facilitation Guide -
   http://www.teambasedlearning.org/Resources/Documents/Poster_TBL%20Application-proof.pdf

3. General Information on the Team Based Learning Collaborative -
   http://www.teambasedlearning.org