5E Model for organizing active learning in lecture courses

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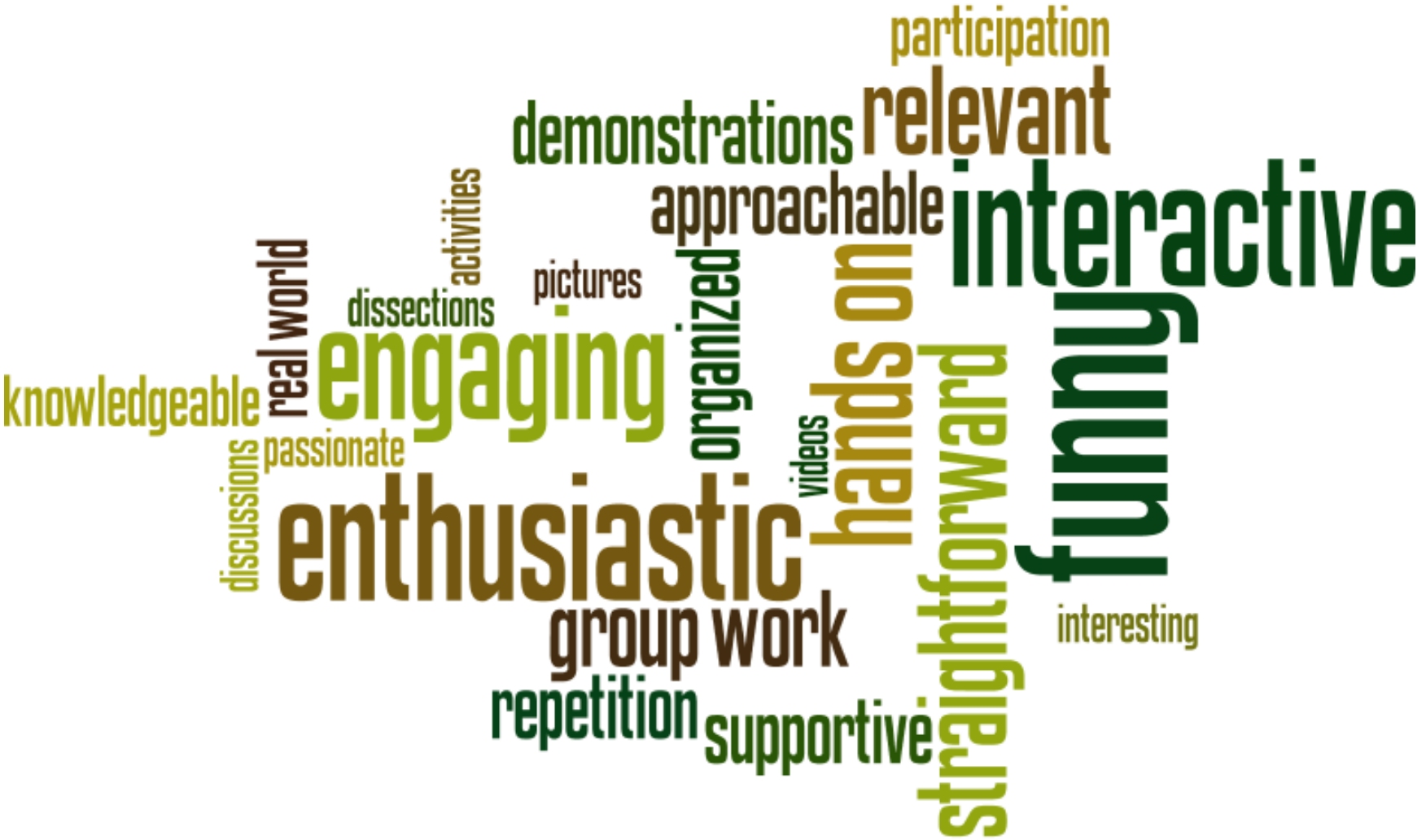
How do we teach large science classes?

How MCB 32 students described their favorite classes and teachers



How can I create these interactive learning experiences in a large lecture?

The 5E Instructional Model

Example: introduction to homeostasis

1. Engage

Discuss with other students: What is a fever? How you feel during and after a fever?

2. Explore

Introduce the concept of homeostasis.
Challenge statement: Fever is a failure of the body to maintain homeostasis.

1. Explain

Go through an example of homeostasis and negative feedback using a thermostat and heater. Define stimulus, sensor, set point, integrating center.

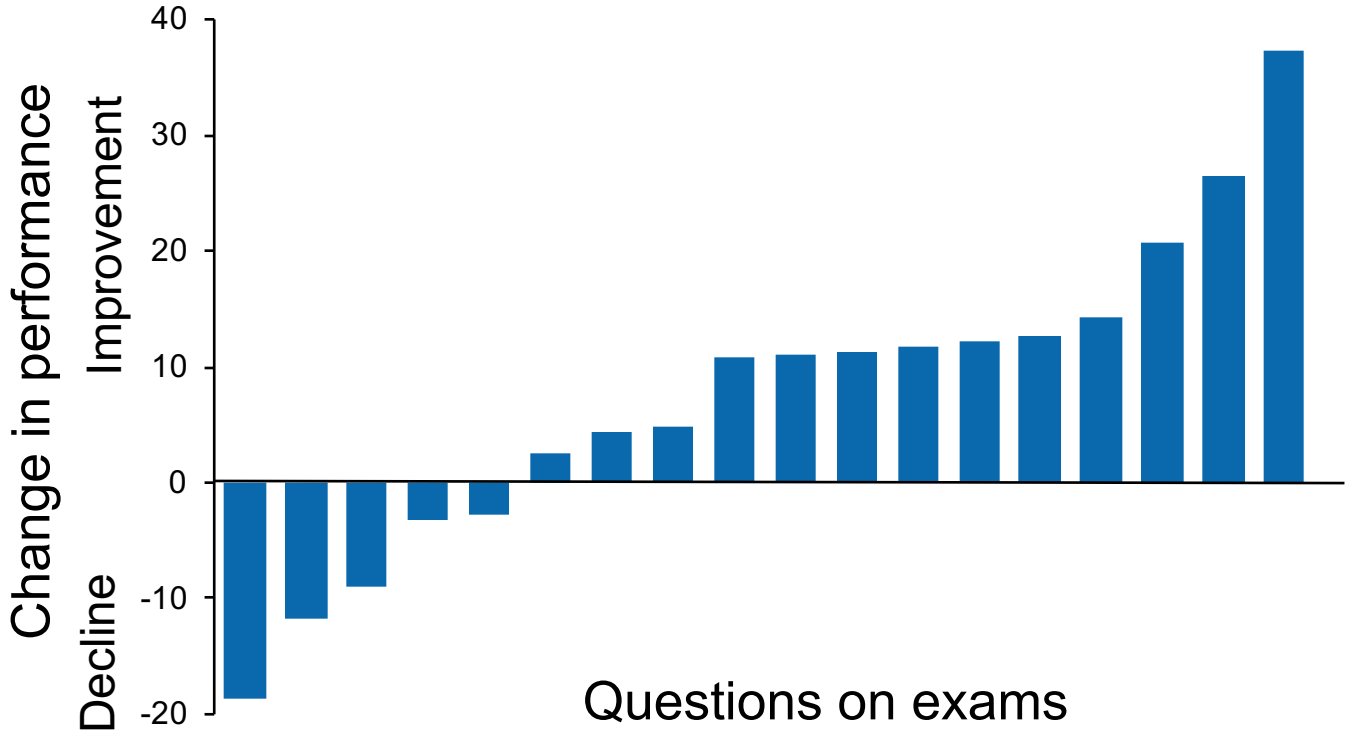
2. Elaborate

Students draw a diagram of homeostasis/negative feedback for how the body reacts when it is too cold.

3. Evaluate

iClicker: return to challenge statement. Discuss with other students, then class discussion.

Active learning improved performance on exam questions



Regardless of the test results, following the 5E model challenged me to make every topic engaging and relevant

Change in performance = % correct [2015] - % correct [2014]
n = 42-44 students in 2014, n = 52 students in 2015