Reviewing PPE Readings in Class
Identifying and Discussing the Main Points and "Golden Nuggets"

(Context: Online Virtual Synchronous Classroom)

If a teacher wants the students to learn and retain something, one must tell them what it is that they need to learn and retain, especially if the something might appear in an exam (or quiz), or be an important consideration in, or input to, a subsequent concept or a written assignment.

Part I - The Options

Option A: Ask the Students to Identify a Main Point of a Reading (Oral Responses)*

> Write the results on the Zoom White Board until no more candidates are offer by students; then discuss them (include students in the discussion). The teacher ends by contributing his/her choice and explains why it his/her choice. (The latter can be done orally with or without a projected slide or two.)

Option B: Conduct a Zoom Poll with a Number of Alternative Main Points.

> Conduct a Zoom Poll with number of alternative main points (or "Golden Nuggets") from which students can select. Share the results and discuss as a group. The teacher ends by contributing his/her choice and explains why it his/her choice. (The latter can be done orally with or without a projected slide or two.)

Option C: Slide Presentation Summarizing the Reading(s).

> The teacher prepares a slide presentation (e.g., MS PowerPoint). The presentation points out the quotes and concepts in the reading which the teacher believes are most important, and explains why. Each quote is footnoted as to location at the bottom of the slide in which the quote appears. Students are invited to discuss, or at least invited to ask questions.

Option D: Open PPE Reader and Point Out Important Quotes.

> The teacher opens the *PPE Reader*, and directs** the students to one or more quotes in a reading that the teacher believes are important and explains why the quote(s) is (or are) important. Students are invited to discuss, or at least invited to ask questions. If teaching multiple sections of the same course, the teacher must execute this task consistently among the sections.

Notes:

* To broaden active participation especially in large enrollment sections, students can also respond via the Zoom Chat.

** Page number and approximate location on the page in the *PPE Reader*. Similarly, the page number and location on the "Course Reserves" version of the reading. The Course Reserve version is the original source material — non-edited and unabridged.

Part II - Considerations in Selecting an Option.

Options A and B require the student to read the assigned reading before class and represent active learning approaches, while Options C and D represent passive learning approaches, and do not require advance reading, but do require that the student have either the *PPE Reader* or the source reading handy. GenEd and Higher Education moving toward active learning approaches and away from passive learning approaches. Education research has shown for sometime that active learning is more effective than passive learning. Active learning does require the teacher to do more planning and work. Taking notes is essential to student success in all four options.

Part III - Two Important Concepts to Consider: Active Learning and Prior Knowledge.

The following information is offered if you want to take an evidence-based approach to teaching in higher education and inform your instructional decisions with research evidence and research-based theory.

Active versus Passive Learning.

The lecture dominated classroom is a classic example of passive learning. Passive learning is a method of learning or instruction where students receive information from the instructor or reading materials and internalize it, often through some form of memorization or rote learning, and where the learner receives little to no feedback from the instructor, but primarily watches, listens, and takes notes.

Active learning is "anything that involves students in doing things and thinking about the things they are doing" (Bonwell & Eison, 1991, p. 2). Active learning Activities can be as short as a few minutes long, and can be integrated into a lecture or any other classroom setting relatively easily. Even large classrooms can involve learning activities beyond the traditional lecture format.

The following is a example from physics and math that vividly contrasts the two learning/teaching approaches for a relatively simple concept.

Two Ways to Learn About Physics and Math

Method A - Discovery of a Rule: Here is a pile of 11 blocks, sort them into separate stacks of 2 blocks each, such that you don't have any leftover blocks.

(Then into separate stacks of 3 blocks each, such that you don't have any leftover blocks. Then into separate stacks of 4 blocks each, such that you don't have any leftover blocks. So on and so forth.)

Method B - Presentation of a Rule: A prime number is whole number greater than 1 that can not be made by multiplying two other whole numbers together; or in other words, is only divisible by 1 and itself.

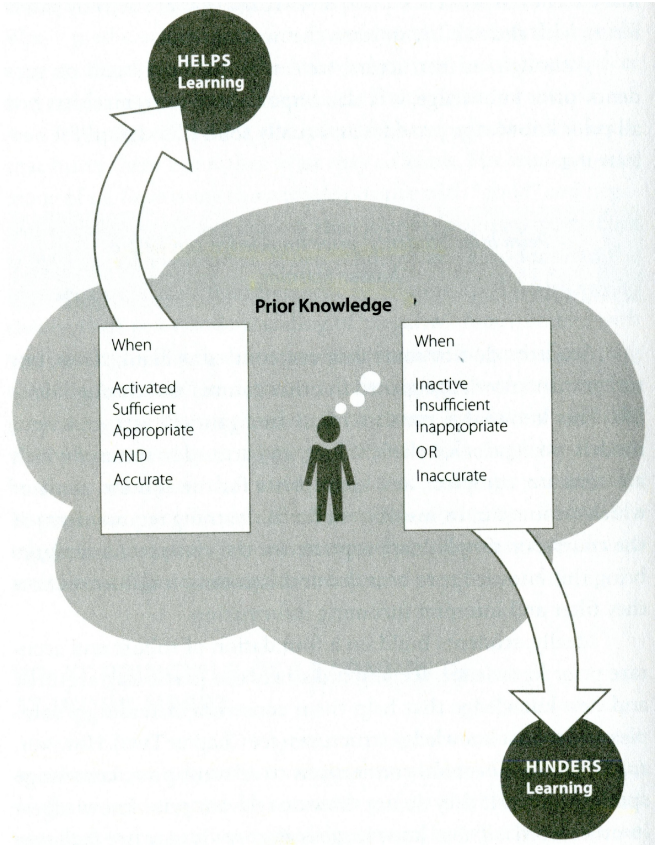
Which method do you think is more personal and engages more senses and parts of the body? Which method takes longer? Which will likely result in greater retention?

Prior Knowledge

Prior knowledge refers to the knowledge, beliefs, skills, behaviors, and attitudes, no matter how limited, a person has at the start of learning a new topic, skill, or behavior.

> Students do not come into our courses as blank slates, but rather with knowledge gained in other courses and through daily life. This knowledge consists of an amalgam of facts, concepts, models, perceptions, beliefs, values, and attitudes, some of which are accurate, complete, and appropriate for the context, some of which are inaccurate, insufficient for the learning requirements of the course, or simply inappropriate for the context. As students bring this knowledge to bear in our classrooms, it influences how they filter and interpret incoming information.[1]

> Students connect what they learn to what they already know, interpreting incoming information, and even sensory perception, through the lens of their existing knowledge, beliefs, and assumptions (Vygotsky, 1978; National Research Council, 2000). In fact, there is widespread agreement among researchers that students *must* connect new knowledge to previous knowledge in order to learn (Bransford & Johnson, 1972; Resnick, 1983). However, the extent to which students are able to draw on prior knowledge to *effectively* construct new knowledge depends on the nature of their prior knowledge, as well as the instructor's ability to harness it.[2]



Qualities of Prior Knowledge That Help or Hinder Learning. (Page 14 from How Learning Works, 2010.

Older students and instructors are going to have their own prior knowledge also. A teacher will likely have past experience with a topic or skill. One should reasonably expect that first and second year students might have difficulty finding the same main points or "Golden Nuggets" as a teacher would find. And, there likely will be differences among students. So with all four options, it is essential for the teacher to reveal what the teacher believes the important main points or "Golden Nuggets" are.

Most students will not be familiar with much of material in the People, Places and Environment course. In fact, for many students, PPE will be the first and only time in their life and academic career that they will be exposed to the ideas, problems, and issues contained in the course. Yet the forces, trends, and ideas which we introduce will affect their future private and public decisions and actions. We are preparing them for life in the vast array of environments and human settlements as responsible adults who will contribute to the productivity, sustainability, beauty, and enjoyability of those environments and settlements.

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[1] *How Learning Works: 7 Researched-Based Principles for Smart Teaching.* Susan A. Ambrose et al; San Francisco, CA (Jossey-Bass), 2010; p. 13.

[2] Ibid, p.15.