Teaching and Learning: Context Matters (Part II)

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“You have the right to remain silent. Anything you say can be taken out of context and put on Twitter and then it’ll be a whole thing.”

How does learning occur?

Who is responsible for learning?

What is teaching?

Why should people go to school?
All Learning is Contextual

New knowledge is created via extending & revising prior knowledge

New ideas acquire meaning when presented in a coherent relationship to one another

Knowledge becomes usable when acquired in situations that entail applications to concrete problem solving

Christensen et al. 1991, p xiv
Learning

“People learn to the degree to which they can actively manipulate facts within some general framework and can relate general ideas to specific events in their experience.”

Learners are responsible for learning.
Students and instructors are learners.
Teaching is a process to enable learning.
Content vs. Context

Context is the network of relationships which lives between the content.

It is good practice to tell learners about the context.
It is GREAT practice to ask learners to determine context themselves.
How learning happens...

“We have knowledge... only as we actively participate in its construction.”

How can we support active learning?
A Wearable Sensor for Unobtrusive, Long-Term Assessment of Electrodermal Activity
Ming-Zher Poh, Nicholas C. Swenson, and Rosalind W. Picard*, IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, VOL. 57, NO. 5, MAY 2010

Fig. 9. Long-term in situ EDA recordings. Continuous skin conductance measurements were recorded for seven days in a natural home environment. Daily EDA waveforms displayed are normalized.
First Concept Review

Circle the variable in each pair that you would expect to have the largest standard deviation:

1.1 peoples’ heights  peoples’ weights
1.2 domestic dogs’ weights  domestic cats’ weights
1.3 language skills of 12-year-olds  math skills of 12-year-olds
1.4 hours students spend in this classroom  hours students spend studying for this class
Figure 1.2 Gowin’s Vee heuristic invented to illustrate the conceptual and methodological elements that interact in the process of knowledge construction or in the analysis of lectures or documents presenting knowledge.
Active Learning

• Practical ways:
  • Combine with formative assessment
    • [https://cloudfront.ualberta.ca/-/media/gradstudies/professional-development/ctl-program/teaching-resources/planning-formative-assessment-workshop.pdf](https://cloudfront.ualberta.ca/-/media/gradstudies/professional-development/ctl-program/teaching-resources/planning-formative-assessment-workshop.pdf)
  • Do it soon (first class, first 5 minutes)
  • Repeat it
  • Share the results
References
