
I. What is Technology?

A. There are many fun, interesting and exciting devices but innovative/exciting does not necessarily make a tool educational.

B. Technology is nearly everything that is artificial: clothes, books, pencils, computers, etc.

C. Each technology has benefits and restrictions which must be understood before the technology can be applied for educational purposes.

II. What about Pedagogy and Content?

A. Content is what we teach and pedagogy is how we teach it. Lee Shulman suggested that at the intersection of content and pedagogy is specialized knowledge, which he called pedagogical content knowledge (PCK).

B. Example: a great mathematician may not be a great teacher.

C. Good teaching develops with reflective and purposeful thinking about content and strategies for learning that content. PCK is the unique blend of these constructs.

D. Emerging technologies and their applications to education call for an additional blend of knowledge, called technology knowledge (TK). Thus, the knowledge of technology, content and pedagogy create the TPACK framework.

III. How Can You Repurpose Technology?

A. Teachers have had to repurpose technologies designed for other uses and apply them to teaching. Successful repurposing requires an understanding of how the elements of the TPACK framework work together.
B. Three examples of technology that can be successfully repurposed for education are: microblogging, specialized search engines, and music DJ software.

1. Microblogging: Sharing short messages within specific pedagogical guidelines; enhances classroom experiences. Must be incorporated into the classroom, not a separate activity.

2. Specialized search engines help students visually appreciate how texts work together and how the same words can have different meanings. Students select a target phrase, title, name, or keyword and the results demonstrate how words are recombined and reused in new contexts.

3. DJ software allows users to download music and paste it into a mixer. Users can cut and paste the samples in order to relate them to mathematical concepts such as ratios and percentages.

IV. Conclusion- There are cool tools that teachers can learn and adapt for instruction. However, we need to take care not to mistake innovative technology for educational technology. The effective use of any new technology requires that we first understand its purposes, advantages and constraints, then make apply it toward meeting specific goals. At the same time, excellent technology will not take the place of excellent teachers.

Reflections: I’m wondering about Shulman’s conceptualization of PCK— is it too nebulous to be broken into identifiable pieces? Or is it like trying to separate the ingredients of a cake batter after they have been combined—the eggs and flour can’t be returned to their original form? The relevance of this question becomes clear when we try to teach people how to be teachers. Students know the difference between teachers who know and can teach their subject and those that mostly just know the subject.
Conversely, there are teachers who implement effective strategies (e.g. differentiated instruction, facilitation) even in the absence of solid content knowledge and have excellent “results”, as perceived by the learners. In order to create “good educators”, we must understand how that intersection of content and pedagogy is created. Otherwise, we would simply hire subject matter experts and toss them a few teaching tips and call it good. On second thought, that is even more training than I received.

I could have used an example of how teachers may repurpose technology without “knowing the rules of the game”. This would increase my understanding of the metaphor. Similarly, I am interested in the concept of intertextuality and want to better understand this example. It reminds of teaching elementary students the use of idioms, but in a more interesting, active fashion.