**STUDENT ENGAGEMENT**

# Deeper Learning: Why Cross-Curricular Teaching is Essential

By **Ben Johnson**

January 15, 2013    Updated August 14, 2014

It is time that teachers and administrators realize that public education has reached a dam in the river. We have gone about as far as we can go with isolated instruction and learning. While it may have served the purpose for the older generations, it does not meet the deeper learning needs of students today and tomorrow. Fortunately, deeper learning can be accelerated by consolidating teacher efforts and combining relevant contents, in effect, opening new spillways of knowledge.

Deep learning is like taking a long drought from a well of knowledge as opposed to only sipping from many different wells. Deep learning implies that students will follow a particular stream of inquiry to the headwaters, rather than simply sampling all the possible streams. Teachers know all too well the outside forces that pressure them to limit how deeply their students can drink from any single well.

## Requirements

Undaunted, educators are committed to providing students full access to the well of deep-learning knowledge that will unlock their potential. But in order to get beyond the current eye-dropper doses of knowledge sampling in school curriculum, it requires that teachers and administrators understand and accept a few things:

**1. Deep learning engages the whole student (and teacher)** -- heart, mind, body, and soul.

**2. It requires enthusiastic partners** -- students, parents, and community.

**3. It requires intensive preparation.** Heather Wolpert-Gawron **[shared her experience of incorporating TED Talks](#)** into her curriculum and in doing so demonstrated what teachers need to do to prepare successful learning experiences that promote deep learning.

**4. Assessment must mirror learning**. Shawn Cornally **[provided wonderful suggestions on how teachers should change their gradebooks](#)** (and their instructional perspective) to logbooks, reflecting mastery of learning objectives rather than mere assignment completion.

**5. Collaboration is necessary.** Rebecca Alber **[explained that students must be taught how to collaboratively gain knowledge and skills](#)** in order to be expert learners and demonstrate their learning by applying and creating.

In order for all this to happen in a sustainable way in our schools, deeper learning requires that groups of teachers pool their talents, resources, time, and efforts to maximize coherence, relevance, and connections among the content areas.

## Cross-Curricular Teams

Without belaboring the point that teacher isolation has to end, unless teachers stop departmentalizing their teaching and start teaching knowledge in context of other knowledge, student learning will continue to be stuck at the dam. It is time for teachers to collaborate.

Teachers must take the first stroke and swim across the hall and start a collaboration with another teacher from a different department. For elementary teachers, work with other grade level teachers and dive into the math and science books, for example, and find common topics to prepare to teach math and science jointly rather than separately.

There are three general phases of teacher collaboration and interdisciplinary teaching:

- Aligned

- Cooperative

- Conceptual

## Aligned Collaboration

To start collaboration, begin with alignment. The first thing to do is jump in and start wading in the same direction as your fellow teachers. Aligned collaboration is when a social studies department and the English department get together and agree that DBQ's (Document Based Questions) can count for English credit as well as social studies credit and then plan the year so that topics of study in history are taught concurrently with literary eras. In this way, students can construct a foundation, and are able to better generalize what is learned in history because they see the effect on literature.

## Cooperative Collaboration

You and your fellow teachers need to synchronize your strokes to match your pace. For example, a math and science teacher get together and decide on the best way and the best time to teach motion and cooperatively agree to help each other teach it, either separately or jointly. When the math teacher needs models to show students what the math is good for, he obtains them from the science teacher, and when the science teacher needs the students to perform mathematical calculations, she utilizes the same process the math teacher used just a week before. In this way, students understand math and science with their heads above water, rather than drowning in confusion.

## Conceptual Collaboration

Finally for conceptual collaboration, a teacher must dive into the deep water of conceptual understanding in the other content area. In other words, the teacher must know both subjects at high levels and be able to teach both conceptually. This is difficult for a single teacher to be expert in two subjects, so the solution is to combine forces and team teach.

Conceptual collaboration happens when an art teacher works closely with the science teacher and they both help students understand the effect of pigments and light by teaching together the science of wavelengths, the electromagnetic spectrum, and the dual nature of light. Or when a social studies and science teacher do a triple gainer into the deep end by team teaching a project-based learning activity of the renaissance period illustrating how history affects science and how science affects history.

As demonstrated above, we can promote deep learning by encouraging multiple teachers working together in helping students to understand math in the context of science,

coordinating timelines of scientific discovery and literature, and demonstrating how a painter uses light to express meaning. This is just like what happens to a river that is too fragmented into little streams. When the streams are channeled together it then can develop a deep flow. So it is with learning. When professional educators combine their energies and reinforce the same deep learning, the stream of information is clearer for the student, the learning activities are more fluid, and the student's reservoir of knowledge and skills fills faster.

## What About Students?

One problem remains. After years of sipping knowledge, getting students to deeply learn is a daunting challenge. It is hard to get students to drink knowledge deeply or drink at all if they are rarely thirsty. Parched minds become satisfied with minimum learning expectations and some, especially as they approach middle and high school, begin to believe that school cannot quench their thirst as well as other societal options.

Working together, teachers can help students re-acquire the thirst for knowledge they were born with. The task of all educator teams is therefore two-fold: provide a rich, rigorous, and relevant flow of knowledge and skills, and then find a way to lead the students to this water and then make them thirsty enough to drink deeply.

Students and teacher teams focusing on learning deeply have the force to achieve learning beyond the traditional education dam and shoot out over the spillway to not only understand the torrent of available knowledge, but to also add to it in phenomenal ways.

The tremendous power of a river is diminished when it is fragmented into little streams. However, when the streams are channeled together, it then can develop a deep flow. So it is with learning. As demonstrated above, we can promote deep learning by encouraging multiple teachers working together in helping students to understand math in the context of science, coordinating timelines of scientific discovery and literature, and demonstrating how a painter uses light to express meaning. When professional educators combine their energies and reinforce the same deep learning, the stream of information is clearer for the student, the learning activities are more fluid, and the student's reservoir of knowledge and skill fills faster.

**SHARE THIS STORY**

https://www.edutopia.org/blog/cross-curricular-teaching-deeper-learning-ben-johnson