

# Learning 2.0—Part I

## Time to Move Education Politics from Regulation to Capacity Building

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[As the current controversy over parent takeovers of schools illustrates](#) almost all the politics of education concerns rearranging adult power and privilege. Relatively little political energy is spent consciously designing a contemporary system of public education. That should change.

By focusing political energy on how students learn rather than the long list of hot button issues—tenure, teacher evaluation, charter schools, Parent Triggers—it is possible to design a truly modern education system that is a worthy successor to the industrial-era public education structure that served the state well for a century. With minor variations, we teach as we have for a century.

### LEARNING 1.0

In software nomenclature, we work with the first full version of mass public education designed to move most students from toddler through teenager. Designed in the early part of the 20th Century, Learning 1.0 involves all the parts of schooling that we consider normal and proper: students divided by grades, lessons by subjects, tests at the end of the year, and high school units collected until graduation. Underneath it all is a common pedagogy and an outdated assumption that it is aptitude rather than effort that should determine a child's course in school.

Why, one might ask, should California, [the headwaters of the digital revolution](#), be stuck in the eddies of an early 20th Century school design? The answer lies partly in culture and partly in politics. In Learning 1.0, schooling and most other forms of formal learning are built on the design principle of acquisition and storage of information, acquiring the ability to analyze it, and, eventually, to use it.

When [Stanford University dean Ellwood Patterson Cubberley](#) wrote the first widely used textbook on school administration in 1916, the acquisition and use of knowledge were proximate. Students left school early; most all by the end of high school, some by the end of third grade. The world of work and adulthood greeted them, however harshly. Indeed, in 1939, over 95 percent of the jobs in the automotive industry could be accomplished by someone with a primary school education. But now, the lag between acquisition and use can be long. High school graduation is no longer the gateway to economic self-sufficiency. The pathway to being a medical doctor, a lawyer, or a professor can take a student well into their third decade before they practice what they prepared for. Deferred gratification, or at least incomplete selfhood, is one of formal education's fundamental lessons. (And we wonder why neurosis is rampant among the professional class.)

### THE LEARNING 1.0 ACQUISITION AND STORAGE MODEL

The acquisition and storage model of learning forms the bones of schooling. Students march through eight years of basic literacy and numeracy without a hint that any of what they are learning might become part of their lives or livelihood. Through high school,

college, and, for the most persistent students, through graduate or professional school, knowledge becomes increasingly specialized. The academic disciplines, some with medieval roots, are mirrored in high school subject matter, departments, licenses, approved courses of study and textbooks. Spatial and personal relationships mirror these divisions. High schools have “math wings,” and teachers cluster by professional associations. These structures are cemented into an institution of education: school districts, state departments of education, the federal government, schools of education, and universities.

In this view, knowledge acquisition itself has value. As [John Seely Brown](#) notes, [it's a Cartesian premise of “I think, therefore, I am.”](#) Pedagogy becomes the means to transfer knowledge through known and authoritative channels. Teachers teach. Students learn. Academic disciplines and courses of study organize knowledge into neat divisions. These become curriculum requirements that are counted and tested. Every strand of the public policy muscle surrounding these bones wants to strengthen these structures. The current system of tests and standards are the institution’s biceps.

However, even as the existing institution bulks up, its basic logic is becoming antique. “Just in time” learning Cognitive science tells us, for the most part, people do not learn through the acquisition and storage model; knowledge acquisition and practice are integrated. The information processing capabilities of the Internet along with personal computers and other smart app electronics, have enhanced the capacity for “just in time learning:” students are highly motivated to get the information they need to do the task that needs to be done.

This was the case in traditional societies, through formal and informal apprenticeships, “working” the farm, or “learning the ropes” in a business. In these settings, young men and women acquired knowledge as they needed it, not for storage and recitation on tests followed by rapid forgetting. Urbanization and industrialization obsolesced the traditional learning-by-doing form of education. Children were withdrawn from the workplace. Learning 1.0 gained efficiency through the graded schooling, subject matter disciplines, and a batch-processing model borrowed from industrial manufacturing.

Now, we have the opportunity to redesign education creating Learning 2.0, a more flexible, personalized, and experiential form of learning. The capacity to do this comes partly from the Internet’s network technology but mainly from changing how people think about learning. More than their schools, it is people’s heads that will need rewiring.

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