

Everything you know about curriculum may be wrong. Really.

13 Tuesday Mar 2012



What if the earth moves and the sun is at rest? What if gravity is just a special case of space-time? Following both counter-intuitive premises revolutionized science and ushered in the modern world. Could a similar counter-intuitive thought experiment advance education from where I believe we are currently stuck? I believe so.

The educational thought experiment I wish to undertake concerns curriculum. Not the specific content of curriculum, but the *idea* of curriculum, what any curriculum is, regardless of subject. Like Copernicus, I propose that for the sake of better results we need to turn conventional wisdom on its head: let's see what results if we think of action, not knowledge, as the essence of an education; let's see what results from thinking of future ability, not knowledge of the past, as the core; let's see what follows, therefore, from thinking of content knowledge as neither the aim of curriculum nor the key building blocks of it but as the *offshoot* of learning to do things now and for the future.

In our own era, this may seem to some as nutty as Copernicus' idea must have seemed. For over a thousand years a formal curriculum has been conceived of as an organized and logically-sequenced march from the basics to advanced knowledge. Well, *of course*: whether we are Professors of Physics or third-grade teachers, when we develop a syllabus and lessons we consider the most important topics, and we then devise a sequence by which they are ordered and addressed via instruction. By this means we parcel out learning in clear and logically-sequenced elements. We design backward from human knowledge, in other words, and we

sequence knowledge in ways that suit the learner's prior and current knowledge. What else could a curriculum be?

Well, this works fine if the present is just like the past; if ideas turn into competent action automatically; and if theory, not effects, matters most. Alas, each notion stopped being thought of as true *in the time of Copernicus*. That's why folks like Comenius, Rousseau, Spencer, Dewey, Bruner, and Toffler have been arguing for *fundamental* change over the last 300 years – not in the 'content' but in the very meaning of education and thus curriculum.

So, suppose knowledge is not the goal of education. Rather, suppose today's content knowledge is an *offshoot* of successful *ongoing* learning in a changing world – in which 'learning' means 'learning to perform in the world.'

As odd as that might sound for academics, it makes perfect sense in our everyday lives. The point of child-rearing, cooking, teaching, soccer, music, business, or architecture is not 'knowledge'; rather, knowledge is the growing (and ever-changing) residue of the main activity of trying to perform well for real.

In athletics this is very clear: the *game* is the curriculum; the *game* is the teacher. And each game is different (even as helpful patterns emerge). Knowledge about the game is secondary, an offshoot of learning to play the game well. As I learn to play, knowledge – about rules, strategy, and technique – accrues, but it is not the point.

So, it would be very foolish to learn soccer (or child-rearing or music or how to cook) in lectures. This *reverses* cause and effect, and loses sight of purpose. Could it be the same for history, math, and science learning? Only blind habit keeps us from exploring this obvious logic. The point is to do new things with content, not simply know what others know – in any field.

The Copernican hypothesis eventually made sense because it did two things: made better sense of the data, and dealt with increasingly embarrassing anomalies in the Ptolemaic view. Similarly for my theory: thinking of knowledge as an offshoot and performance as primary helps us make sense of current oddities and failures in schooling. For example, boredom is rampant in schools; perhaps it is the *inevitable* result of focusing on knowledge instead of performance (which is inherently more engaging). Forgetfulness is constant: students rarely recall what was taught a few weeks ago. How can content move from short-term to long-term memory if there is always more content to memorize tomorrow? And test results reveal over and over that few students can transfer learning to new challenges and overcome basic misconceptions. What do these unending "discrepant phenomena" tell us—if we would only attend to them?

Video games are especially startling from the perspective of conventional views of curriculum and instruction. According to the standard view, I should *never* be able to learn and greatly improve at the games since there is no formal and explicit curriculum framed by knowledge, and – even more puzzling – no one teaches me anything! I shouldn't learn but I do. In games (and in life), I begin with performance challenges, not technical knowledge. I receive no upfront teaching (or even manuals any more in games and other software!) but I learn based on the attempts to perform and feedback from trying – just as I did when learning to walk or hold a spoon. How is that possible? Conventional views of curriculum and instruction have no good explanation for it.

So, perhaps our 'crazy' thought experiment has promise.

What else might follow from thinking of performance, not knowledge, as the aim of education? We might finally realize the absurdity of marching through textbooks. You want to learn English or be a historian? You would think it very foolish if I said: OK, sit down and let's march for years through a dictionary or an encyclopedia, A to Z. Yet, that is basically what textbooks do: march through content, logically organized. Want to learn to cook? Read the *Joy of Cooking* all the way through its 700+ pages – before ever setting foot in a kitchen??? Yet, this is what we do and have always done in conventional textbook and lecture-driven schooling. It is also absurd to teach novices lots of technical jargon upfront, as if that will somehow have meaning and stick for later use. Yet, from Friday vocab. quizzes to almost all tests terminology is an absurdly major focus. We must only still do it, like medieval monks, if at some level we still think that giving things names and possessing plus appreciating (eternal?) knowledge is the point of education.

Beyond these examples of transformed curriculum, there are other reasons for declaring that all conventional curriculum-writing is badly misguided and is doomed to fail the moment we frame it backward from topics and content instead of performance. The following questions are suggestive:

- If curriculum is a tour through what is known, how is knowledge ever advanced?
- If learning requires a didactic march through content, why are movies and stories so memorable – often, more memorable than classes we once took?
- If a primary goal of education is high-level performance in the world going forward, how can marching through old knowledge out of context optimally prepare us to perform?

- If education is about having core knowledge, and we are more and more teaching and testing all this knowledge, why are results on tests like NAEP so universally poor, showing that over *decades* American students have not progressed much beyond basic “plug and chug”?

A revealing shift in the winds has in fact occurred in our era in professional education. In medicine, engineering, business, and law courses are no longer built backward from content. They are built backward from key performances and problems in the fields. Problem-based learning and the case method not only challenge the conventional paradigm but suggest that K-12 education is increasingly out of touch with genuine trends for the better in education.

The thought experiment I propose is not new, as suggested by the reference to Dewey and to the case method in law – both over 100 years old. As in the history of science, this idea of designing backward from the ability to use content well for worthy present and future purposes has lurked under the surface or in pockets of the medieval paradigm that still dominates curriculum for centuries. All one has to do is read Plato’s “Allegory of the Cave” and the *Dialogues* more generally, Kant’s criticism of conventional education, Rousseau’s *Emile*, Hegel’s *Phenomenology*, dozens of books from the Progressive era in the 1920s – 30s, Piaget on what mental growth demands educationally, Bruner’s *Process of Education*, the recent book *Shop Class As Soulcraft*, as well as current research on student misconceptions and their persistence to see perpetual papered-over weaknesses in the standard view and the promise in alternate conceptions.

Back to Tyler, everyone. A key person in the Progressive era was Ralph Tyler, the Director of Research for what came to be called the 8-Year Study – a major investigation, funded by the Carnegie Foundation, into the effects of progressive education. Tyler went on a few years later to write the modern classic text on curriculum-framing (based on his work as Director of Evaluation for the 8-Year Study) entitled *The Basic Principles of Curriculum and Instruction*. Yet, in spite of the book’s success – it is still widely read in graduate courses – Tyler’s rejection of the standard view of curriculum continues to be ignored.

He was quite blunt about the error of conventional curriculum: “it is clear that a statement of objectives in terms of content headings...is not a satisfactory basis for guiding the further development of the curriculum.” The critique resulted from a premise about the aim of education (since curriculum is the formal path by which we achieve our educational aims). What is the aim of *any* curriculum? According to Tyler, the general aim is “to bring about significant changes in students’ patterns of behavior.” In other words, though we often lose sight of this basic fact, the point of learning is not just to know things but to be a different person – more mature, more wise, more self-disciplined, more effective, and more productive in

the broadest sense. Knowledge is an *indicator* of educational success, not the aim. Thus, the conventional view of curriculum and the process of conventional curriculum writing *must* be wrong:

“The purpose of a statement of objectives is to indicate the kinds of changes in the student to be brought about so that the instructional activities can be planned and developed in a way likely to attain these objectives; that is **to bring about these changes in students. Hence it is clear that a statement of objectives in terms of content headings...is not a satisfactory basis for guiding the further development of the curriculum.** The most useful form for stating objectives is to express them in terms which identify both the kind of behavior to be developed in the student and the ... area of life which this behavior is to operate.” pp. 45-7.

So, let's re-consider Tyler's claim. Let's follow the logic, since it holds out some promise of solving vexing and persistent problems of boredom and ineffectiveness that we see daily.