

# The curriculum car

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Educational Pedagogy today expects teachers to design curriculum in which students can apply effective strategies and pre-knowledge to course content matter. (Bransford, 2001). Teachers are also expected to design their curriculum in such a way as to encourage the diverse learning styles of their students (CAST, 2002) and to dive deeply into subject matter, through the provision of multiple entry points and student agency (Gardner, 2005). Putting these principles into systematic practice at the graduate school level (never the mind the elementary) is both difficult and rare, because of academic expectations for rigor and because of pedagogical diversity. No two teachers teach the same way, this is a given, but the somewhat troubling result is that graduate students studying cognitive development are not necessarily experiencing the pedagogical approaches that are espoused by the field. (Bransford, 2001). In summary, Graduate students may read about the cognitive strategies for learning, but there is no guarantee they experience them.

This is of concern for two reasons. First, graduate students are just as diverse in learning style as children. Therefore, simply reading about an effective strategy is not necessarily enough for them to put it to practice. (Bransford, Gardner, Willingham). Second, it has been proven that the most effective way for teachers-in-training to improve their pedagogical practice is to study the “concrete tasks of teaching, assessment, observation, and reflection” (d-h 1995, p598). Abstract theory does not help the soon to be teacher. Teachers in training, aka graduate students, need context-specific practice (Marashel, Karmiloff-Smith) in the improvement of classroom and course design. How could you model this practice in a graduate school? Some teachers require students go out into the field, others have students teach. Another option could be to engage

would-be-teachers in reflecting and strategizing about the curriculum design of the courses they are enrolled in. This last option, while seemingly bizarre, is of great interest to me.

## CURRICULUM DESIGN & REVISION

Of the 16 courses I have taken at the Harvard Graduate School of Education (HGSE), four have been about curriculum design. I have a double concentration in Technology & Mind, Brain & Education. None of my courses in education at HGSE, nor any I have taken in my whole academic history, have ever asked me to reflect upon the curriculum I was expected to engage with while I was taking it. Yes, at the end of the year I sometimes had to fill out an evaluation sheet, and these evaluations were taken seriously. But we all know that multiple choice questions cannot capture the creativity of the student body, many of whom want to learn and many of whom have ideas about what could be done to improve their learning experience. In summary, classroom student bodies, are not encouraged to analyze and/or make suggestions to a teacher's syllabus. It just isn't done. But what if we could justify it biologically?

## 2. FRAMING THE CHALLENGE

### B. THE ANALOGY: THE CURRICULUM CAR

Let's imagine that every year, a teacher drives a 'curriculum car' that is filled with students. Ultimately, if the bus breaks down (or gets a bad comment in the end of year review), the teacher is responsible. The teacher has to look under the hood of their curriculum at the end of the trip to try to make a fix. Then, they test it the following year. What would happen if the teacher looked under the hood in the middle of the year, before anything was broken? What if they encouraged students to look too? Would the students break the car? Or Would they all run away screaming?

Most of the time, especially at the graduate school level, the curriculum car doesn't break down. However even if their course gets mostly high marks at the end of the year, professors remembers their worst comments. (JPalfrey, Gardner, personalcommunication, 2009). The negative comments nag at them. How could they have helped that student? What were they missing?

Let's return to the curriculum car analogy. The year (or semester) long road trip was good for most of the people in the car, but a few were just miserable. Maybe they wanted to take more pit-stops. Maybe the car passed too quickly by some exciting landmarks. Maybe the car just generally moved too slow. If you ask your passengers at the end of the trip what could have been done to make the ride better, you've lost the opportunity to make it better for them while they were still in the car with you.

You've also lost the opportunity to harness the creative solutions that come from student brainstorm. Your other passengers might have some very cool ideas for modifications of the curriculum car experience. Overtime, a curriculum car might go bio-diesel; take regular pit-stops for national parks; and even add on a solar-power converter to the roof.

But a classroom? A classroom stays the same because students are not invited to contribute to the intellectual road trip. The traditional view of the classroom is that the curriculum belongs to the teacher and the knowledge is passed down to the students. This outdated, unidirectional attitude about learning that prevails in graduate level classrooms is in direct contrast to what we know currently know about learning, development, the brain and biology. (maraschel, etc). (Erlich,

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### THE CURRICULUM CAR AND THE INTELLECTUAL ROADTRIP

Traditional interpretation Let's imagine that every year, a teacher drives a 'curriculum car' that is filled with students. Ultimately, if the bus breaks down (or gets a bad comment in the end of year review), the teacher is responsible. The teacher has to look under the hood of their curriculum at the end of the trip to try to make a fix. Then, they test it the following year. What would happen if the teacher looked under the hood in the middle of the year, before anything was broken? What if they encouraged students to look too? Would the students break the car? Or would they all run away screaming?

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