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Editorial

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The Distinctiveness of Higher Education

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ABSTRACT: Higher education is under huge financial and political pressures to change. Another critical driver is not always as present in the conversation: just what is being learned and how well. A recently proposed model for *transformational teaching* provides three empirically determined principles for what might constitute criteria for the distinctiveness of higher education. The third of these principles, which is to promote positive, learning-related attitudes, values, and beliefs, creates a compelling challenge for educators to demonstrate the enduring values from an education.

KEYWORDS: *General Public, Curriculum, Chemical Education Research, Distance Learning/Self Instruction, Learning Theories*

The skyrocketing interest in online instructional methods, particularly the rise of MOOCs, is re-igniting the most fundamental questions about the goals, needs, and objectives of an education. In his splendid essay, Patrick J. Deneen convincingly describes how the decades-long embrace of standardization and a consumerist mentality has created an academic monoculture where, by keen analogy, we end up with MOOCs as "the Wal-Mart of higher education".[1] While acknowledging the inevitability of an upcoming era of cost-driven changes to higher education, Deneen also predicts distinctive, artisanal education will be preserved at some institutions. He suggests these institutions will define clear missions that understand the inherent strengths of promoting interaction between students with one another and with a diverse collection of individualistic faculty members.

I am reminded of the preface from a UNESCO report[2] on the technology revolution:

> *The speed with which [the new technology] is spreading through the world is one of the technological phenomena of our time... At the same time, educators everywhere are faced with the challenge of a rapidly growing school and college population and the need for a new approach to the content and methods of teaching. [This technology] may provide one of the answers to their problems.*

This UNESCO report was written in 1960, and the technology in question was television—clearly, in retrospect, a two-edged sword. One can only imagine that such essays were written 30 years earlier, when radio became widespread, in the 1920s when the postal service became reliable,[3] and it seems to me that Martin Luther made the same point about books.

Books, radio, television, and the Internet are all wondrous vehicles for providing access to information, particularly into parts of the world where access is limited. This is Friedman's "flat world" ideal.[4] But Richard Clark's 1983 aphorism[5] is worth remembering, too:

> *Media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition.*

Talking about trucks (educational modes), and how to build them and race them, is simply easier to do than talking about the groceries (educational outcomes), and how to nurture, grow, and preserve them. The University of Virginia's David Feldon provides a courageous perspective on academia's most maligned truck: the classroom lecture.[6] Paraphrasing Feldon's important bottom line: do not confuse the bad use of a method with the use of a bad method. Can it be that so many people have had such a horrible experience with education as an incoherent bundle of recited facts... from Bill Gates[7] to Salman Khan...[8] that they can only see the truck? Is this why they are so intent on revolutionizing the mode of delivery with no regard to whether the goods are rotten? Sadly, this would explain much.

Deneen, Clark, and Feldon are all pointing to one question: what is the distinctiveness of a higher education? Slavich and Zimbardo[9] provide an intriguing answer to this question. Upon the basis of a meta-study of 40 years' worth of higher education reforms, they propose a model of *transformational teaching*. I think that the middle tier of their model, which is called "basic principles", is an interesting way to think about the features of a distinctive higher education. The three basic principles of their transformational teaching model are:

1. To facilitate the acquisition and mastery of key course concepts
2. To enhance strategies and skills for learning and discovery
3. To promote positive learning-related attitudes, values, and beliefs

The first two principles are self-explanatory. The authors are educational psychologists, and so their description of this intriguing third principle includes students':[9]

> *[C]apability to acquire, synthesize, analyze, and use knowledge in a way that is meaningful for their lives... [and to demonstrate] greater motivation, more enjoyment out of class, greater satisfaction with the class and teacher, and greater self-determined motivation, as well as with significant improvements in self-efficacy and intrinsic motivation.*

I would like to elaborate on this third principle, because I think the distinctiveness of a higher education is tied in to our deep disciplinary understanding and our ability to connect it with broad, learning-related attitudes, values, and beliefs.[10]

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Deep disciplinary understanding is coupled with disciplinary socialization, as we learn about disciplinary dispositions, that is, "the prevailing ways of thinking, feeling, and behaving".[11] Camins[12] urges three scientific dispositions that should accompany science education: comfort with ambiguity, the search for uncertainty, and learning from failure. It is easy to think of others, such as skepticism and creativity, as are the outcomes associated with a liberal arts education.[13] Certainly, none of these things ever appear on the syllabus (Day 12, Skepticism; Day 16, Comfort with Ambiguity; Day 30, Building a Defensible Argument). While I hope that these lessons are imbedded in the way we design all of our learning environments, I am sure they are often neither explicit, nor are they obvious, in the tasks we ask students to perform. Yet I am convinced that these are the lessons that I want to persist in the minds of my students long after the details of, say, the regioselectivity of the Diels–Alder reaction have faded. Even the course content, to some great degree, becomes a part of the truck that is used to deliver these enduring lessons I care about the most.

The strength of the *transformational teaching* model, then, is to draw a line in the sand. It challenges us to articulate and demonstrate the development of students' abilities in all three areas—acquiring concepts; improving learning skills; and integrating learning-related attitudes, values, and beliefs—regardless of whether we are using chalk-on-slate or a 200,000-person online network. Achieving demonstrable improvement in all three areas is necessary for claiming a distinctive education.

Two important consequences emerge from this proposal. First, contemporary education has embraced the rhetoric of competency-based outcomes, particularly for online methods.[14] One concern with the concept of competence, which has been long associated with technical and vocational training, is that it might be a poor surrogate for a distinctive education.[15] Competence is historically benchmarked against known standards of practice, policy, and factual information. To the degree that learning-related attitudes, values, and beliefs (comfort with ambiguity, learning from failure, etc.) are associated with the ways in which we extend—and sometimes obliterate—practices, policies, and facts, I doubt that the concept of competence can encompass a distinctive education. And frankly, before I admit that not every student in every circumstance needs this level of education, I would like to see overwhelming evidence that the benefits from an outstanding and effective liberal education does not serve our students. Second, keeping in mind that Gates and Khan might well have a point that some teaching and learning reduces to passing information around, then some fraction of what passes for an education today will not clear the bar of those three principles in the *transformational teaching* model. We need to face this, to improve, and to learn how to find and demonstrate the value of a distinctive education that includes the enduring lessons. If we do not, we will be forced to like what we get when others end up defining for us what it means to be an educator.

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Notes

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