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By Kenneth C. Green

# The Productivity Conundrum

WHAT ARE THE REAL AND TRUE ATTRIBUTES OF  
QUALITY IN HIGHER EDUCATION?

Two words continue to cast a long shadow over both public and private conversations about the role of information technology at all levels of education: quality and productivity. This is not surprising, given the great aspirations among many -- teachers and college professors, principals and college administrators, parents and public officials -- for what technology might/could/should do to enhance teaching and learning.

Quality, of course, has long been an ambiguous and difficult term in our conversations about education. More than 30 years ago, Robert Persig's *Zen and the Art of Motorcycle Maintenance* echoed the concern (and the complaint) of many. Searching for an absolute measure of quality, painfully conscious of his own experiences as both graduate student and as young faculty member, portions of Persig's journal and travelogue actually scream at us, asking "What the hell is quality?" What are the real and true attributes of quality in higher education, Persig asks? Is it only found among the elite institutions? If so, what does that suggest about learning experience at "other" colleges and universities?

And what does quality mean for students? Do the



ever-increasing number of college guides and annual program rankings ("best" colleges, "wired" colleges, "best buy" colleges, "party" colleges) really help tens of thousands of prospective college students and their parents understand the going-to-college experience? How should prospective college students - some who are high-school seniors, some who are the parents of high-school students - make their personal journey through the ambiguity of quality as they sort through college catalogs, (and now) college Web sites, attempting to decipher the language and infer the attributes of "quality" programs and quality colleges. After all, what college would claim to not offer top quality courses and academic programs? What is quality?

How fortunate that we can turn to economists to help us resolve any potential ambiguity regarding the definition of productivity. Alas, productivity may be a new concept to many of us in academe, at least in the context of institutional values and priorities. But productivity is certainly a core concept for our colleagues in economics.

Perhaps it has been a few years (few decades?) since you sat in an Econ 101 class. If so, then let's begin with a quick review of some core concepts.

Economists seem to agree that there are three components to productivity - cost, quality and quantity. They also agree (if they agree on anything) that there are three circumstances under which productivity occurs: 1) The cost of production declines while quality remains constant (i.e., it costs less to produce each widget); 2) the cost of production is stable while quality improves (i.e., each widget costs the same to produce but we are producing much better widgets) and; 3) the cost of production declines and the quality improves (i.e., we are producing better widgets and it costs less to do so).

Admittedly, most school teachers and college professors don't think of themselves as "widget" producers. Most don't think of their schools or colleges as "widget" factories. We teach. We are committed to teaching and learning. Production or manufacturing models of education are somewhat offensive to most school teachers and college professors.

But in the emerging new world order of higher education, it is increasingly clear that costs - college costs, operating costs, production costs - do matter. In the emerging new world order of higher education, the conversation about the benefits of technology often migrates into some discussion about the link between technology and productivity. Under traditional economic models, investments in technology increase productivity, which means that quality improves and costs decline.

So here's the problem. Who chooses which definition of productivity is to apply in institutional and public discussions about productivity? Cost-conscious administrators and public officials might support technology because of the potential to reduce costs. In contrast, faculty might argue that the appropriate perspective is one that leaves funding constant but focuses on quality - technology as a catalyst to enhance how and what students learn.

Today, we see elements of both these issues in play on college campuses and in public policy discussions. State initiatives such as Western Governors' University reflect, in part, an assumption that technology can be used to expand educational access and reduce educational costs. State officials hope to offer more opportunities for more potential learners by investing in bits and bytes (content and technology), rather than mortar and bricks, as a new form of infrastructure for higher education. Concurrently, faculty across all types of colleges argue that technology is part of the new infrastructure that enhances the quality of content available to their students - wander the stacks and surf the Web. Investments in technology are essential to support student and faculty access to online resources - to enhance the quality of teaching, learning and scholarship.

Must we choose between one or the other - between definitions of productivity that focus exclusively on costs vs. quality? Unfortunately, this is where the conversation about productivity begins to get personal and begins to look and feel like our public and private conversations about quality. Our colleagues in economics may be able to define productivity, but they cannot tell us which definition is most appropriate under what circumstances.

And that is the conundrum we confront. Like the old Miller Lite commercials (tastes great; less filling) we are, perhaps, destined to argue about productivity in terms of more quantity (reduced costs) vs. more quality. Concurrently, we

will continue to search for evidence that supports the perspective we endorse: Some will focus on the potential of technology to reduce the costs of education, while others will emphasize the potential of technology to enhance the quality of teaching and learning.

These debates promise to make for engaging faculty meetings and to offer some interesting theater. But if these debates really contribute to good institutional or public policy is another set of questions. Be assured, however, that these issues, joined at the hip, will cast a significant and continuing shadow over our public and private conversations about the appropriate role of technology across all levels of education in the coming years.



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