

Applied Research and the Transformation of College Education

By Howard A. Doughty

Like everything else today, education is changing—perhaps more so than most contemporary domains of human activity. The dimensions of change are varied and, although we are not always sure of precisely how they are connected, it is clear to most of us that a pattern of transformation is emerging. Some obvious elements are education's social function, demographics and technology.

Function

Education was once the preserve of the aristocracy and, at best, a few bright youngsters from the lower orders who could be saved from lives of penury by catching the attention of an upper-class patron or scholar and gaining entry—most likely through religious orders—to literacy and learning. At the time, education was protected turf. Especially after the intervention of Gutenberg and the arrival of cheap books, more and more people learned to read and it was a constant worry to the rulers that the ruled might get ideas that would radicalize them and threaten social order.

With the emergence of mercantile and then of industrial capitalism, however, such arguments were withdrawn. Modernity required workers who could read a work order and do the arithmetic needed to set the dials properly on industrial machinery. So, the nineteenth century witnessed the growth of elementary public and eventually secondary schooling. It worked: the economy grew and (at least in North America) thanks both to some material gains among the middle and working classes and to the spread of mass culture that encouraged indulgence in consumer goods and hopes for upward mobility, political life was mainly undisturbed.

Demographics

By the middle of the twentieth century, it had become clear that global competition, sophisticated communications equipment and the developing information society required even more learning than was normally acquired in high schools. Brains not only equaled, but largely replaced, brawn as a necessity in the labour force. Existing universities expanded and colleges added new and growing opportunities for a wider range of citizens than ever before.

Martin Trow (2010) has presented a coherent view of the past century when he related the story of higher education's shift from elite (when no more than 15% of the population was privileged to attend institutions of higher learning), through mass (when roughly 50% were recruited to meet the needs of an increasingly high technology economy) and on to the current situation when we encourage close to 100% of the people to experience higher learning on one or another of its diverse platforms.

Technology

A chief enabler of this trend toward universal access, of course, is technological innovation, often in the form of computerization and distance education. Sceptics worry that academic standards are being irredeemably compromised, that the curriculum is being famously "dumbed down," and that education is more and more becoming a matter of mere employment preparation; however, despite such concerns, the trend away from liberal education and toward vocational training seems dominant and, perhaps, inexorable.

In the process, some university professors are being weaned away from research and compelled to teach more, though the majority of the added teaching chores required by increased access (increased tuition fees notwithstanding) are being redirected to a reserve army of precarious faculty living contract-to-contract with little reasonable expectation of ever finding themselves a tenure-track position.

A Revolution in Research

Now, a fourth dimension is being added to function, audience and technique. Research itself is being reorganized. The restructuring of research is just as controversial as the other dimensions of change and now it is becoming an issue in the colleges as well. When, for example, the United States Congress banned the use of federal funds for research in political science unless the project

could be shown to enhance “homeland security” or to protect American economic interests abroad, it was deemed a short-lived but nonetheless frightening aberration. Now, however, it is commonplace to find that a condition for research funding is that a project must prove itself in terms of commercialization. Because it is largely funded by private sector companies, research is expected to provide a material pay-off such as a new product or process that will find its value in the economic marketplace. In the alternative, academic research intended mainly to satisfy intellectual curiosity or to advance purely theoretical knowledge without thought to profit finds it difficult to locate a sponsor.

Since most colleges were never interested in either scholarly or practical research, the issue of corporate-sponsored versus independent academic inquiry rarely surfaced. Now, however, some colleges are understandably tempted by the prospect of financial investment from private firms, non-governmental agencies and the increasingly fashionable public-private-partnerships. So, targeted “applied” research has produced a flurry of activity. Particularly since government funds have shriveled and student fees are reaching a breaking point, the advantages of industry funding are too attractive to ignore.

At *The College Quarterly*, we are at once sensitive to the legitimate educational concerns that have arisen in response to the new ethical and academic ambiguities inherent in the current enthusiasm for applied research projects and also to the socially useful consequences that such projects may bring. Although the funding possibilities are important, a strong case can also be made for the educational value to students and the end-product economic value of a student-centred research experience. Accordingly, we are interested in the promotion of successful research projects (and unsuccessful ones with practical lessons to teach us as well). We hope that engaged educators will be willing to share their experiences, submit examples of applied projects either as research papers in themselves or as commentary on the ways that applied research relates to the pattern of transformation reflected in the social function, demographics and technology of college education.

Reference

Trow, M. (2010). *Twentieth-Century Higher Education*. Baltimore, MD: Johns Hopkins University Press.

CICan showcase on Applied Research in the Colleges

<http://www.collegesinstitutes.ca/the-issues/applied-research/vignettes/>

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