

The Impact of Distance Education on the Future Demand for College Faculty

Carol Frances

John Collins

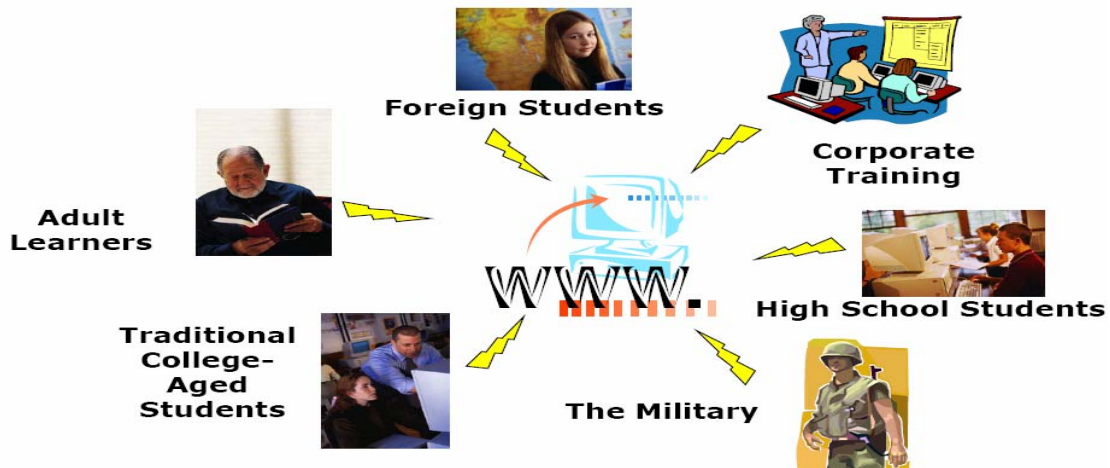
Seton Hall University
South Orange, New Jersey, USA

Abstract

The purpose of this paper is to build a conceptual framework to help scholars think systematically about the impact of technology-based distance education on the future demand for faculty. The proposition which we consider is the impact of technology-based distance education on the future demand for faculty will depend on whether increasing markets will increase the numbers of faculty needed to teach faster than increases in productivity will decrease the numbers of faculty needed, without negatively affecting educational quality.

To begin addressing this proposition, let us examine trends in six segments of the distance education market:

Distance Education Consumers



1. Adult learners seeking further education and professional certification

The U.S. Bureau of the Census projects an increase from 2000 to 2010 of slightly more than 10 percent in the adult working-age group from 25 to 64. While the

numbers of potential workers is increasing, their job prospects are less certain. Pressures of the global knowledge-based economy on this group and consequent job insecurities are likely to increase the number of adults seeking to further their education as a way to change careers.

While many manufacturing jobs have already been shipped out to countries with lower wages, more and more service jobs are also becoming vulnerable to outsourcing overseas, intensifying the needs of workers for training to develop new skills. Though the adults need further training, they are place-bound and therefore prime candidates for distance education.

2. Traditional college-age students

The Census Bureau also projects an increase of about 13 percent from 2000 to 2010 in the numbers of 18 to 24 year-olds, the traditional college age. If students continue their willingness to borrow to overcome shortfalls in student aid, we can expect increases in the college-going rates and consequently increases in potential enrollment.

The state of California is expecting a Tidal Wave II of additional students. But California, along with many other states, is facing state budget crunches and is reluctant to construct sufficient buildings to provide traditional classrooms to meet the additional demand. Distance education is being proposed as an alternative to investment in bricks and mortar. Thus, the increase in demand for college from the traditional college-age group may be met, at least in part, by distance education.

3. High school students

An entirely new but growing segment of the distance education market is high school students. In fact, the National Center for Education Statistics recent survey of school districts across the county reports that close to one-third of the districts have students taking one or more distance education classes. Presumably, most of this distance education is being provided by colleges and universities to the students taking advanced placement and other college-level classes.

4. Military

The U.S. military made a major commitment to the use of distance education with the establishment in 2002 of eARMYU. This new virtual university currently works in partnership with 29 two- and four-year primarily traditional colleges and universities. eARMYU enables enlisted men and women to earn college credit, and even degrees, on-line. Close to a million active military men and women are taking advantage of these distance education benefits.

5. Corporate training

Corporate training was once considered a threat to colleges because they had the ambition and the potential to expand their operations and take over some of the college courses. The reverse seems to have happened, however. As profits sank, in-house training was often among the first of the corporate cuts made to save money. Thus, some corporate training seems to have migrated back to the traditional colleges and universities, if the classes meet the needs of the corporate world. Many of the corporate training programs are delivered via distance education channels to save employee time and corporate money.

6. Foreign students

The new General Agreement on Trade in Services (GATS), which is currently being negotiated under the auspices of the World Trade Organization, covers the delivery of educational services. GATS, for the first time ever, could effectively globalize higher education markets. This has a tremendous potential to affect the international flows of foreign students. The United States is still the destination of choice for the majority of students traveling abroad to study. GATS could increase the number of foreign students studying in the United State, and consequently increase the demand for faculty. This potential may not be realized, though, because of the difficulties foreigners experience getting student visas since 9/11.

American colleges and universities are actively engaged in delivering educational programs overseas, particularly MBAs, but they also face newly aggressive marketing competition on the part of other nations, including Australia and Great Britain, in particular. (Video conference with Australian university March 18, 2005).

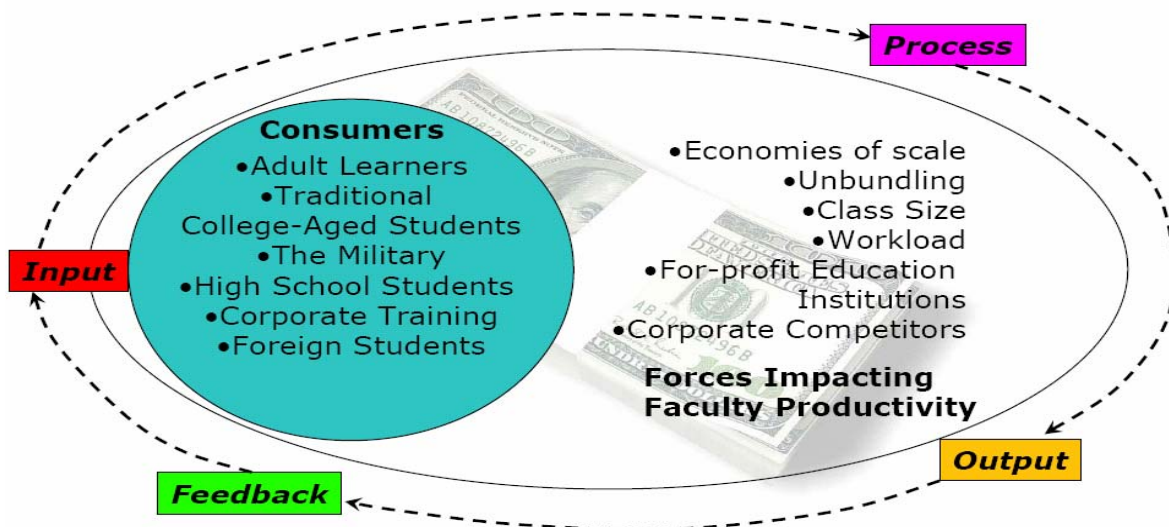
Considering all six of these components of the market for distance education, on balance, it looks to us as if the United States is on the threshold of a major expansion over the next decade of education markets potentially served by technology-based distance education. This implies that the numbers of faculty who will be needed in the future will increase.

On the other hand, some forces will operate to reduce the number of faculty needed. Factors potentially decreasing the numbers of college faculty needed to teach include increasing productivity and competition from other education providers

Forces which could affect faculty productivity include:

Conceptual Framework

A Partial Systems View



Economies of Scale

Increasing faculty productivity, all other things being equal, will decrease the demand for faculty, if more students could be served by fewer faculty.. Increasing productivity could

be achieved by economies of scale in the delivery of education. The possibilities differ, of course, depending on the discipline. There are two different ways to achieve economies of scale in higher education. One way is to serve more students at one point in time. Few people argue that the numbers of students served can be continually increased, however, without at some point affecting educational quality. There is debate over what the quality tipping point is, though it may be moved much further out by redesign of the classes.

The other way to achieve economies of scale is to serve more students over time, using the same educational materials. The problem with this approach is that it runs head on into the inherent Paradox of Information Technology. The very technology which creates the potential to achieve economies of scale over time is also likely to render education materials obsolete. In many fields, probably most, the students' ready access to new information requires faculty to continuously update, or even make major revisions, of their educational materials. This Paradox of Information Technology is likely to prevent economies of scale from being achieved over time in most quality higher education programs.

Class Size

The amount of interaction with faculty which students seek and expect may limit the size of distance education classes. In some distance programs using a cohort model, for instance, the amount of interaction with the students limits the class size. The class size for a distance education program may be even lower than for an on-campus program

Faculty who report potential class sizes for the distance classes up to 100 students also report actual class sizes of 10 to 20. Some enthusiasts of distance education argue that large freshmen classes are ideal candidates for asynchronous distance education. Others, equally enthusiastic about the great potential of distance education for adult learners, argue that freshman classes are not at all suited for replacement by distance education. The freshmen students are in transition from high school and the teaching mode where they are told what to do, to college where the learning mode requires that the students

must take more responsibility for their own education. Quality is once again defined in a way which increases the demand for faculty rather than decreases it.

Workload

Universally, faculty report that it is more work to prepare an on-line course than a traditional classroom course. Some faculty have been compensated for additional work with overload pay or fewer courses. This is becoming less frequent, however, particularly as the on-line distance courses move from the periphery of the institutions to the central core. Transformations are taking place in higher education affecting the faculty, as more part-time faculty are hired, and more full-time faculty are kept off a tenure track. This transformation is driven primarily by financial strains and the desire to increase institutional flexibility, not by information technology as such. IT installation and accompanying cost-overruns, may contribute to the financial strains, however. Some faculty report that faculty time per student with technology-based distance education may decrease slightly with larger enrollments, but without documenting student performance or student satisfaction. What does this all mean for faculty? More teaching requirements for faculty already typically expected to research and serve their communities, places a burden on administrators to solve a new equation for division of labor. Failure to do so can result in faculty burnout or worse.

Unbundling

Some education institutions, particularly those which are profit-oriented, are achieving economies by unbundling the separate functions involved in delivering education, contracting separately for curriculum development, course design, class preparation, instructional delivery, communication with students, and assessment and grading. Costs are reduced by hiring faculty only for the high value-added components and hiring people who earn less than faculty for all the other components. The burden of proof is on the unbundlers, however, to show that students learn as well from “messengers” as they do with faculty, and that they are equally well satisfied with their experience.

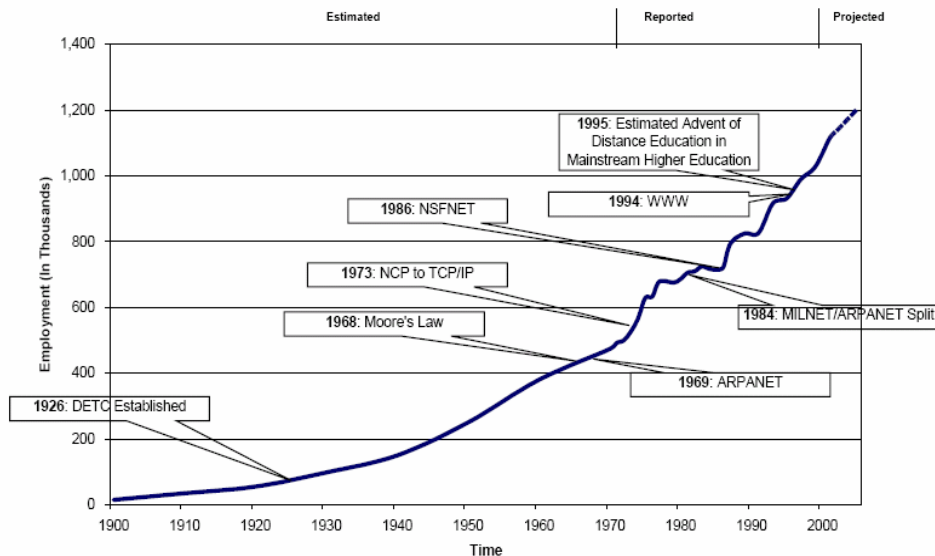
Profit–Oriented Education Institutions

Profit-oriented educational providers are the fastest growing segments of higher education. They may operate as free-standing entities, or in partnership with traditional colleges and universities. They may skim off the high enrollment programs which are least costly to deliver. This leaves traditional institutions with the more specialized, and higher cost, programs. These profit-oriented firms may in the future pose a greater competitive threat to traditional institutions than they do now. As of 2001, however, profit-oriented private institutions employed, mostly part-time, about 30,000 faculty, or about three percent of a total number of faculty of over 1,100,000,. An additional consideration is that, in many cases, the private profit-oriented educational institutions draw their faculty from traditional institutions.

Corporate Competitors

Corporate training is a huge business. Critiques of high education lamenting what they perceive as an industry slow to change, have projected that traditional institutions will become obsolete and that their role will be taken over by corporate providers more cost effectively. Cold showers of reality have softened this rhetoric more recently as corporate providers confront the complexities of providing quality education and re-examined their bottom lines.

MAJOR DEVELOPMENTS IN THE HISTORY OF DISTANCE EDUCATION IN RELATION TO TRENDS IN FACULTY EMPLOYMENT 1900-2010



Conclusion:

The most fundamental lesson to take away from this initial examination of the influence of technology-based distance education on the numbers of faculty needed to teach is the already accepted maxim: "It's not about technology, it's about learning." The assessment movement and the national survey of student engagement are likely to provide the best ideas to guide the way forward to quality education, whether in traditional classrooms or online..

Expanding education markets are likely to increase the numbers of faculty needed, faster than increases in productivity decrease the numbers. As long as the quality of the learning experience is defined by students to include substantial interaction with faculty--either face-to-face or mediated by technology--the numbers of faculty needed to teach college students will increase, not decrease.

About the Authors:

Carol Frances is a Professor of Education at Seton Hall University. She teaches classes on the economics and finance of higher education and policy analysis. She has a special interest in the impact of information technology on higher education and is co-editor of the book “Dollars, Distance, and On-Line Education: The New Economics of Teaching and Learning.”

John Collins is an Assistant Professor of Education and Acting Chair of the Education Leadership, Management and Policy Department at Seton Hall University. Professor Collins has over 30 years experience and numerous publications in the field of information technology and distance education. He recently earned a Certificate on Distance Education from Indiana University.

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