

# Economic Models for Distance Learning

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An understanding of the economic models for the use of computer-based learning is important for educators worldwide. Particularly in America, there seems to be a great deal of confusion regarding the potential profitability of distance learning in higher education today (Berg, 2002). This entry looks at distance learning economic models as primarily seen in America and Great Britain.

While it is surely true from anecdotal evidence that many institutions beginning to develop distance learning programs have trouble making a profit, according to the Primary Research Group (1999) 86.96% of the distance learning programs surveyed in America make a profit. However, it is important to note that different forms of computer-based and distance learning have very different costs associated with them. Bates (1995) argues that broadcast and computer-based learning are more expensive per student study hour, while print-based and online forms are less expensive up front. This clearly makes sense, particularly given the large up-front expenses involved in video production and software development. Nevertheless, Bates points out that after 1,000 students, the expense variance among the types of distance learning formats narrows considerably.

Although there are differences in the economics among the types of technologies used in distance learning, the main expense in higher education is generally faculty labor. Consequently, the two major approaches to the economics of distance learning involve a reduction in labor costs: the substitution of labor with capital, or the replacement of faculty with cheaper labor. John Daniel (1998), vice-chancellor of the British Open University, claims that the basic economic approach of distance learning is to replace labor with capital, or to replace variable costs with fixed costs. He proposes that the per-unit cost of teaching can be cut either by adding more students to existing courses, or by making instruction more efficient. Daniel shows the point at which volume is large enough for distance learning courses to be

more productive than traditional courses by replacing labor with fixed-cost capital. The British Open University claims that it has used this model to reduce faculty labor costs from 66% to 20% of the total budget (Bates, 1995).

As is typical of higher education in the United States, the development of economic models for distance learning has been more decentralized, chaotic, and in the case of online delivery, in the early stages of development. Some (Massy & Zemsky, 1995; Twigg, 1996) follow Daniel in arguing that distance learning offers economies of scale after an up-front capital investment. They claim that savings can only be realized by reducing personnel costs (estimated at 70% to 80% of total expenses). They, too, see the solution in finding ways to substitute capital for labor. There is some evidence that this may be occurring. The Primary Research Group (1999) found that instructor and tutor salaries account for only 31.72% of the distance learning program expenses in their survey, far less than in a traditional program.

Nevertheless, many question whether or not distance learning programs are in fact reducing the amount of faculty labor in America. Some (Massy & Zemsky, 1995; Daniel, 1998) point out that in practice, technology is often added to a fixed-faculty cost, thereby only adding expense to the total budget. Again, anecdotally this often seems to be the case. Many institutions implementing distance learning through traditional faculty-controlled administrative structures are unlikely to focus on cutting costs, and in fact, add expense through the augmentation of traditional courses with technology. There is also indication that when implementing distance learning, faculty workload is at least initially increased rather than decreased (Metlitzky, 1999). Consequently, it is unclear as to whether or not the model of replacing labor with capital is leading to a reduction in faculty workload in American higher education.

The second basic approach, a labor-for-labor model, is to divide the faculty role into segments and

reduce the total labor cost by replacing higher priced faculty with less expensive labor. Jewett (1999) identifies three basic functions of faculty in a cost analysis: preparation, presentation, and interaction and assessment. To the degree that these functions can be performed individually by less expensive labor, the overall cost will be reduced. The British Open University divides these functions with course design teams and 7,000 part-time tutors (associate lecturers) whose tasks are to provide academic support to local groups of students (Daniel, 1998). Faculty expenses are spread amongst development, maintenance, and delivery costs.

These distance learning economic models show that probably the largest change in the administrative practices in higher education as a result of the use of distance learning will come in altered compensation and duties for faculty. Faculty rates of compensation and duties may be affected by either substituting labor with capital, or by substituting faculty with less expensive labor performing current faculty tasks. The current data indicates that in America thus far, the two basic strategies for achieving increased productivity (capital for labor, and labor for labor) are in early stages of implementation. In terms of direct compensation, one source (Primary Research Group, 1999) has found a decrease in the percentage of faculty pay in the overall distance learning budget, at 31.72% for 1998, down from 37.21% in 1997.

In terms of indirect compensation, a systematic restructuring of the work of faculty into discrete tasks such as is done at the British Open University is thus far only occurring at nontraditional institutions such as the University of Phoenix and other for-profit institutions in America. While it is unlikely that this kind of division of faculty labor will occur in the immediate future at traditional institutions, replacement of expensive faculty may instead occur through the general increased use of part-time or adjunct faculty in distance learning courses, as documented in Finkelstein, Seal, and Schuster (1998).

Finally, various forms of distance education have been, and are likely to continue to be, a source of revenue in higher education. Undoubtedly, for some the expectations of revenue from these new distance learning ventures are as exaggerated as those for the Internet companies whose fortunes fell at the beginning of the 21<sup>st</sup> century. A complete understanding of the current picture of distance learning in

America must include an appreciation for the variations among the various specific forms of delivery. However, regardless of the delivery platform, the economics of distance learning are likely to lead to changes in faculty roles and compensation practices in America. On the international scene, the economics of the large mega-universities such as the British Open University tend to focus more on scalability questions.

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