
APPENDIX B -- COURSE PRICING MODEL

User's Guide to Course Pricing Model (See Sheet 2)

Overview

The purpose of this model is to allow the user to see under what conditions a distance education offering will be cost effective. It does not compare a course broadcast or received over the network to the same course taught in a traditional manner.

The model utilizes the concept of "net present value" to assess the costs and revenues associated with a particular course. "Net present value" represents the costs and revenues of the course in today's dollars. Therefore, a revenue received or cost borne tomorrow will be worth less than a revenue received or cost borne today. This model will be very sensitive to the lifespan of the course and the discount rate employed.

In the model, some costs, like course development costs, equipment costs and room development costs, are not discounted. This is because it is assumed that these costs are one time expenditures in year 0. Therefore, a student utilizing this equipment would incur the cost paid at year 0.

The costs in this model apply only to the equipment and network use of one distance education class. Multiple classrooms should be evaluated separately.

Furthermore, this model does not include the additional cost of student support services, such as library services or counseling.

Finally, the model assumes that enrollment at each node and network usage will remain constant over the lifespan of the course.

Parameters

This section allows the user to input the characteristics of his or her institution's use of the network, the characteristics of the course that is intended to be broadcast or received over the network, and the characteristics of the network itself.

Network Component

The Network Component is the amount that each institution must pay to the Consortium to pay for line charges and administration. Because capacity is unlimited, a flat usage fee is the best method of allocating this cost to institutions.

Instructional Component

The Instructional Component is the amount that receiving institutions pay to the broadcasting institution to share the instructional costs. The broadcasting institutions pays their share as well.

Institutional Component

The Institutional Component is the part of the cost that is not shared with the other members of the Consortium, or with other members of a particular course. It is borne by the individual institution.

Allocating Costs

Institutional and Network Costs are converted into an hourly rate under the assumption that the network is at full capacity. If the network is not at full capacity, the operating parameters can be changed to reflect the network's use.

For instance, if the network is available to be used for 12 hours a day, but it is only being used 8 hours a day, then the hours per day parameter should be changed to 8 to reflect the actual use of the classroom.

Because institutions should share instructional costs according to the number of students taught, Instructional Costs are converted to a per student rate.

Instructional Costs are divided by all students to get the per student rate, and then multiplied by the number of students per node to find the instructional cost per node.

The hourly rates of network and institutional cost are multiplied by the number of hours the course utilizes in the distance education classroom to find the price per course.

Total Costs

The Instructional, Network and Institutional costs are added together. Indirect costs are added at the indirect cost rate established in the parameters.

Revenues

Number of students per node multiplied by the number of credits for the course multiplied by the cost per credit. The state subsidy is multiplied by the student revenues and added to them.

Net Present Costs, Revenue and Value

This is the total cost, revenue or revenue minus costs in today's dollars of the course over its lifespan.

Peak Load Pricing

If an institution chooses to adopt peak load pricing to manage increased demand for its distance education facilities, it would need to be sure that its differential rates recovered its costs.

Peak load pricing could be accomplished by charging rates different than the institutional hourly fee over certain high, medium or low demand periods. However, care must be taken that the sum of the new rates multiplied by the length of the individual demand periods equals the institutional hourly fee multiplied by the total number of hours in use in a day.

For instance, the institutional hourly fee is \$5 per hour for 8 hours. The institution wants to set three demand periods that reflect high, medium and low demand. High demand lasts 2 hours, medium demand last 3 hours and low demand lasts 3 hours.

To recover costs without peakload pricing, the institution must receive \$40 ($\5×8 hours). With differential pricing the institution still must receive \$40. One possible differential pricing scheme would be high demand = \$10 per hour, medium demand = \$5 per hour and low demand = \$1.67 per hour. ($\10×2 hours) + ($\$5 \times 3$ hours) + ($\$1.67 \times 3$ hours) = \$40