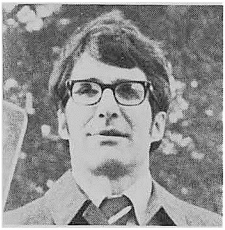


Management Practices Applied to Cost Accounting of CE Courses in Nursing

by EDUARDO MARENCO



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The purpose of this article is to indicate some of the management needs of continuing education and inservice nursing units. The effect of the mandatory law in California (*i.e.*, legislation requiring nurses to embark on a program of continuing education in order to maintain their licenses) will be to increase demand for continuing education. Management practices of continuing education centers will have to be re-examined to insure that they are adequate. Reassessment of management practices is also necessary because federal administrators are currently emphasizing the need to more accurately measure the benefits of social programs and educational innovation in terms of the cost investment in all areas of human development. Finally, a new awareness and interest in nursing management practices as applied to continuing education operations is vitally linked to the issue of the changing professional role of nurses. An effort to test the adequacy of management practices in continuing education in nursing is wedded to a complex structure of relevant current legislation, federal funding priorities, and issues concerning the professional image of nurses.

If the operation of continuing education in nursing units needs to be examined because of the forces mentioned earlier, we must first develop an orderly process for investigation. First, we will look at the *approach* used to develop and implement management assistance to continuing education in nursing units. Then the *management tools* developed through this particular process of management assistance will be viewed within the context of a continuing education in nursing (CEN) unit. Finally, we need to see the relevance of management tools to the problem of *costing out* a specific CEN course.

THE APPROACH

Management assistance and management tools (*e.g.*, cost accounting principles) are not a "black box." Raw data, information, and management techniques by themselves are not really very meaningful. CEN units have an ongoing ambient of their own: established ways of doing things and goals that are thought to be important.

Management innovation to take hold must be integrated to this policy of established procedures and priorities. The management change agent (*e.g.*, policy advisor, policy analyst, consultant) must become thoroughly familiar with what *is*. In particular, if an effort is to be made to improve the management of CEN operations, then the nuances of current operation have to be thoroughly understood and assessed by the change agent and the regular staff before any change can take place.

The change agent is a management professional who works for a specific clientele. The clientele is the audience of continuing education in nursing. The change agent must learn what the management needs are of CENs and must provide guidelines for change that clients can adapt to their own operation.

The change agent and client work to establish a *two-way* relation that will be continuously developing. In this relationship, it is the *client's* view of established procedures, goals, and values which will be most determinative of the process of management innovation.

MANAGEMENT TOOLS

Let us consider the total operation of a "typical" unit in terms of the total revenue (TR) received by that unit minus the total costs of operation (TC). Other specific periods of time a surplus (S) or a deficit (D) may be generated.

Revenue may be derived from several alternate sources: course tuitions, governmental funds for special projects, foundation grants, private donations, etc. Costs on the other hand may be classified between those that are integral to the primary mission of the organization (e.g., in the case of CENs, course preparation may be primary objective) — *direct* costs — and those which are necessary but not an indispensable part of the organization's primary task — *indirect* costs.

In order to assess costs, we must be able to satisfactorily answer three questions:

1. Have we included them all? Have *all* the direct and indirect costs been counted? Direct costs are usually easy to identify. Great care must be taken to insure that the indirect costs have all been counted — both those that originate within a specific department as well as those that have their source in a related department outside of a specific organizational unit.
2. If we believe all the different costs of running an organization have been counted and classified appropriately (direct vs. indirect) then we must take steps to insure that costs are properly computed. In other words, we must feel confident that we have computed costs

in an accurate fashion. Is each item of cost as low as it can be?

3. How are we controlling our costs? How do we know over a week, a month, or a year that our costs are minimal and in line with the revenues we are generating? Costs have to be estimated in advance using a set of standards, so that over time management may be able to discern variances and take appropriate corrective action.

There are a variety of procedures which can be used to address these questions. The basic question, however, for a CEN unit or for any revenue producing organization is what is our goal with respect to total revenue minus total costs? Do we wish to maximize our surplus? Do we wish to make a set percentage of surplus, e.g., 10 percent on a yearly basis? Or do we wish to equalize total revenue with total costs at the end of the year? Or is there some other goal? In any case, the answers to the basic question will influence greatly the management procedures that are used to view total revenue and total cost streams of funds within a specific organizational unit, e.g., CEN operations.

Cost Analysis:

CEN As An Example

Three terms are particularly important in the present discussion: direct cost, indirect cost, and full cost. A direct cost of a certain department is a cost incurred because of some definite action by or for the department (or program or project). Thus, in a CEN unit the salary of a teacher is a direct cost of the CEN department. Clerical costs and program coordination expenses are indirect costs because they are necessary but not integral to the presentation of a CEN course. Similarly, accounting services performed for a CEN unit by the accounting department of a hospital are indirect costs because they are not directly related to the provision of continuing education courses in nursing.

In order to determine the total cost, or full cost, of serving students of continuing education in nursing, it is necessary to add the indirect costs to the direct costs. Although the process of cost allocation is

illustrated here in relation to a CEN unit within a hospital, it underlies all cost accounting and cost determination systems.

COSTING OUT A CEN COURSE

I am currently developing procedures for dealing with specific questions: (1) How do we cost out CEN courses? (2) What tuition do we charge? (3) How can we predict whether a sufficient number of students will attend a course to pay for its costs? The steps that can be taken to accomplish the stated purpose are as follows:

1. Introduce direct-indirect cost terminology to individual course sheets.
2. Adapt job order cost accounting concepts to CEN course costing process.
3. Develop a set of standard costs to be used to define performance standards which will in turn be used for control and evaluation.
4. Develop a set of alternative costing procedures for courses — four variables are being manipulated, tuition rate, minimum number of students to break even, total costs, and surplus margin.

A Job Order Cost Accounting View of CEN Costing

In order to record the costs of a particular course in a systematic manner, job order cost accounting may be used. In brief, the essential characteristic of a job order cost accounting system is the routine identification of each element of the direct cost of a given course. All costs are viewed as direct on the theory CEN courses involve cash drains, primarily through salaries and material expenses which can be traced to individual courses. If the system is operated manually or with a bookkeeping machine, a cost sheet is kept for each course (workshop, seminar, etc.). Figure 1 shows that the costs of requisitioning materials for a course and the cost of labor performed are itemized on the cost sheet. The cost of any supplies purchased specifically for this project, or any other "overhead" item incurred for the course, would also be entered on the cost

sheet; general overhead would be allocated to the course on the basis of predetermined rate.

Cost Standards. Standard cost accounting systems are rarely found in nonprofit entities such as CEN centers, but the use of standards apart from the books of account is rather common. Cost standards can be predetermined scientifically, as described in cost accounting texts, for operations which are performed repetitively. Cost estimates may be prepared for operations which are performed less frequently. Standards are useful for planning purposes as they provide a basis for control. Job order cost accounting systems yield historical costs for comparison with standards or estimates; investigation of the variances between predetermined and historical costs enables management to take corrective actions.

CEN Cost Accounting Procedures

1. Total direct and indirect costs to derive total costs for a particular CEN course. Divide the total costs by a predetermined rate of tuition, e.g., \$20.00 per unit of credit. The result will be the minimum number of students to balance total costs with revenues for a particular course. This equation focuses on the possible manipulation of total costs and the minimum number of students, but not the predetermined tuition rate:

$$\text{minimum number of students} = \frac{\text{total costs}}{\text{tuition rate}}$$

2. The same equation as above is used except that tuition is not arbitrarily set. Costs of courses falling within a specific specialized area of continuing education (e.g., emergency care) are linked to the tuition rate to be charged on a per unit basis. Obviously, some CEN courses cost more than others. If cost standards can be set up to reflect the direct costs of CEN course presentation, then, all three variables in the above equation, total costs, tuition, and the minimum number of students to balance costs, can be manipulated:

$$\text{minimum number of students} = \frac{\text{total costs}}{\text{tuition rate}}$$

3. A variation of the above two equations

**Set by standards for each family of courses.*

Figure 1

CEN UNIT
COURSE COST SHEET

Course No. _____

Description of Course _____

Area of Specialization _____ Account No. _____

Requisition No. _____ To Be Completed (date) _____

Completed (date) _____ Reference _____

Date	Explanation	Materials	*Labor	Date	Explanation	Overhead	Other
Totals				Totals			

SUMMARY

Item	Estimated	Actual
*Direct Labor	_____	_____
Materials	_____	_____
Overhead	_____	_____
Contingency	_____	_____
Profit Margin	_____	_____
Other (specify)	_____	_____
Total	_____	_____

*e.g., instructor and resource input.

is to add to the total costs or to the tuition rate, set by standards or arbitrarily, a set rate of profit x . The idea here is that a "hidden" but real cost of continuing education is the professional development afforded the health professional. The CEN unit sets a rate of profit x for the professional development provided by a particular family of courses.

4. The following approach focuses on relating the costing out process we related earlier to the tuition to be charged per student. Total costs are computed from the course job order cost sheet. A variety of marketing strategies are then used to determine the minimum number of students expected to enroll. A percentage x of the total costs taken from the course cost sheet is added on to the total direct costs to yield actual total costs. The equation looks like the following:

$$\begin{aligned} \text{tuition per student} &= \\ & \text{total actual costs/min. no. of students expected} \\ & \text{to enroll} \\ \text{total costs} &= \text{total cost course costs} + x\% \\ & \text{(total course costs)}^\dagger \end{aligned}$$

$^\dagger x$ percent (total course costs) = profit margin for that family of courses.

CONCLUSION

If an effort is to be made to improve the management of CEN operations, the nuances of current operations have to be thoroughly understood and assessed by the change agent and the regular staff before any change can take place. By meeting together, various specific management practices within a context of relevant political issues can be implemented.

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