COMPENSATION MODELS FOR FACULTY TEACHING ONLINE COURSES

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ABSTRACT

This paper will investigate several models of compensation and reward systems that have been utilized to foster increased productivity in online activity. The following issues will be discussed in the paper:

Compensation based on a per student basis vs on a course basis
The course as part of a faculty member's full-time load or as part of an overload
Use of course remissions as an incentive to develop online courses
Use of professional instructional course technologists vs lone ranger models
Issues of tenure track implications vs time devoted to research activity
Use of graduate assistants for ongoing support for online courses
The rise of the exclusive online faculty person.

The aforementioned factors must be addressed on an institution-by-institution basis. Discussions at recent IACIS meetings have highlighted the vast differences among various institutions in how they deal with each of these issues. This paper probes each factor and discusses the implications of each one for both the short-term as well as for the long-term for both the individual faculty person and the university.

Keywords: compensation, distance learning, tenure, rewards

INTRODUCTION

There has been an explosion in the number of universities actively engaged in on-line learning (Spayde, 2001). This phenomenon has resulted in a concomitant increase in the level of the debate over how to compensate and reward faculty for their participation in the design, development and implementation of on-line courses. For purposes of this paper, the term "on-line learning" will be limited to college-level courses that are taught exclusively on the Internet. It will not include web-enhanced courses that have an on-line component as part of the course (Boettcher, 2001).

THE NEED FOR A GENERAL MODEL

Each time a professor, college unit or university performs an analysis of moving toward an online course essentially the identical thought process is followed. This reality leads to the obvious conclusion that it should be possible to formulate a generalized model of the process. The value of the existence of such a model is that it allows decision makers to focus on the key factors that must be understood regarding the economics of the decision.

Most of the existing research on the economics of online learning focuses on the required infrastructure in terms of what hardware, software and personnel are necessary. Boettcher (1998) wrote "Every medium requires an infrastructure: content expert, instructional designer, web master, content researcher, graphic designer and a development and production producer." Unfortunately, some instructors quickly discover that they are expected to fulfill all of these roles. What is missing is a framework or model from the faculty perspective as it relates to compensation for online courses.

THE ROLE OF ASSUMPTIONS

In developing a model for faculty compensation for online courses a few initial assumptions must be postulated. The first assumption is that we will define three phases for the process. They are as follows: course design, course development and course implementation. Each phase has its own characteristics of cost behavior. We will assume that each phase has both fixed and variable costs associated with it. We also assume that the faculty member and the university view the concept of cost differently. This notion is developed later in the paper.

IDENTIFYING THE COST COMPONENTS

For each phase of an online course we can identify its unique fixed and variable costs.

DESIGN PHASE

For the instructor, the fixed costs of the design phase are high. These costs must be incurred regardless of the number of students in the course. Some key operational questions are as follows: Has the course been taught before in the traditional mode? Is there an existing course syllabus available? The answer to each question will affect the magnitude of the fixed costs incurred by the instructor. The variable costs for this phase are minimal.

DEVELOPMENT PHASE

For the instructor, the fixed costs of the development phase are high. Some cost drivers are as follows: Who will collect the course content? Order the content in modules? Who will load the content into the course container? Who will validate the content and test out all of the hyperlinks? A great deal of these costs can be shifted to the university if it chooses to invest in the personnel infrastructure that was discussed earlier in the paper. Nevertheless, the instructor acting as the subject matter expert, must still interact with this cadre of support people. There is still a definite cost to the faculty member especially if his/her technical skill level is at a basic level at the start of development. The variable costs in this phase are insignificant.

IMPLEMENTATION (DELIVERY) PHASE

In this phase, the fixed costs for the instructor are low but the variable costs become increasingly important as the size of the course increases. This realization can have a profound impact on the compensation model under which the instructor operates. Some of the costs of this phase are as follows: monitoring student progress, online chat (synchronous) sessions or online office hours, reading e-mails, keeping up with the asynchronous discussion boards, troubleshooting technical problems, initial "hand holding" for rookie online students. The more students in the course, then the more effort required in grading, communicating, etc. These factors influence the variable costs. However, under some compensation models, there is no concomitant increase in revenue for the instructor!

COMPENSATION MODEL ON A PER STUDENT BASIS

Assume that the cost of the course for each student is $500. Assume that the compensation for the course is $200 per student. Let "V" = Fixed cost to the university to offer the course (recall the discussion earlier on the infrastructure). Let "x" = the number of students in the course.

Model For the University:

$$\$500*x = V + \$200*x \ .$$

Solving for x, we have

$$X^* = V/\$300 \ ,$$

where x^* is the breakeven point in terms of the number of students. Any profit that the university wants to make can be added to the numerator. The simple effect of this is to require more students in the course in order to reach the targeted level of profitability. Also, the higher the cost to the student and/or the lower the faculty compensation level per student, then the fewer students that will be needed to achieve the targeted levels by the university.

If we assume that the instructor is compensated on an overload basis that is a fixed amount rather than on a per student basis, the model becomes the following:

Assume $4000 compensation per online course on an overload basis.
Assume the student's cost is the same as before, $500, as is the fixed costs "V".
Let m be the variable cost for the faculty. Therefore,

$$\$500\,x = \$4000 + V + m*x$$

or
Revenue = cost of faculty + fixed and variable cost to offer the course.

Note: If we take the university's perspective, there is no variable cost to the faculty.
From the faculty member's viewpoint:

Let "q" = fixed cost incurred by the instructor

"g" = variable cost incurred by the instructor
Then, for the overload fixed rate compensation, the model is as follows:

$4000 = q + g*x.

Solving for x^*, we have **($4000 – q) / g**.

X^* is the breakeven number of students taught. A number higher than x^* means that the cost to the faculty member exceeds the revenue earned. For a value less than x^*, the reverse is true. For example, if "q" is $5000 and "g" is $25 , the x* is actually negative! Since the fixed cost alone is larger than the course compensation, it follows that from a financial point of view, the faculty member should not teach the class. However, if the fixed costs were lowered sufficiently and/or the compensation was increased it might become worthwhile to teach the course.

For an overload, variable rate compensation scheme, the model becomes as follows:

$200*X = Q + G*X..

Solving for X* we have **q / ($200 – g)**.

x* is the breakeven number of students taught. For the faculty member to benefit, the fixed costs to teach the course, "q", would have to be small relative to the variable cost "g." For example, if "q" is $5000 and "g" is $25 per student, then x* is 28.57 0r 29 students. But if "q" is doubled to $10000, the x* would become 57.14 or 58 students. This assumes that "g" stays the same, which it would not; because we know the variable cost must increase as "x"(the number of students in the course) rises. So if "g" also doubles to $50 per student, the x* rises to 66 students to breakeven.

COMPENSATION MODELS AS PART OF FULL-TIME TEACHING LOAD

Assume that the instructor must teach six courses per year (3 and 3). The single DL course will be one sixth of the base salary (excluding fringe benefits).
Assume a base salary of $60000 per year or $10000 for each course taught. This assumes also that there is zero dollar value for non-class activities.) The new model is as follows:

$500 * x = $10,000 + w or

Revenue = faculty cost + other costs.

Solving for x* = **($10000 + w) / $500**.

If w = $1000, then x* will be 22 students. However, if the course is on an overload basis, then we have

$500 * x = $4000 + w or

$$x^* = (\$4000 + w) / \$500,$$

then x* will be only 10 students. These results demonstrate that, for the university, the breakeven level is lower if the faculty member is on an overload. Note that if "w" doubles, then the breakeven levels are 12 students and 24 students respectively. This results in a change of 20% versus only 11% for the case of the full-time load. However, from the faculty member's perspective, the opposite is true because the fixed costs of the development and the design phases are so high that traditional compensation levels might not be set high enough. It should be noted that if the instructor will be teaching future sections of the same course, the fixed costs should be significantly lower. This will change the economics for the faculty member.

USE OF COURSE REMISSIONS TO DEVELOP ONLINE COURSES

There are two schools of thought on this topic. Some say that new course development should be a normal expectation for every instructor. Others argue that online course development is unduly labor intensive and should be treated using a different approach.

If course remission is used as an incentive, then the cost to the university increases. The effect of this policy is to cause the breakeven level of students to rise accordingly. However, if it is part of the faculty member's load, then the fixed costs to the faculty member rise but there should be no effect on the variable costs to the instructor. If the fixed costs rise, then the breakeven level must also be higher. The change of costs will force the instructor to require more students which forces a change in the variable costs to the faculty member in the form of grading, etc.

USE OF PROFESSIONAL COURSE TECHNOLOGISTS

Employing professional online support personnel should result in a shift of fixed costs from the faculty member's development time to the more efficient instructional technologists. This shift should be in both magnitude and location. The impact on variable costs should not be material to either the university or to the faculty member.

There may be a noticeable issue of quality of the final product. One could assume that using a team of professional instructional technologists would lead to a higher demand for the course (assuming all other factors stay the same.) If the use of an instructional technologist does not add to quality, then it is possible that the only impact will be to add to the overall fixed cost structure of delivering distance learning courses. However, the professor's role becomes one of a SME (subject matter expert) who drives the development process. The overall fixed costs to the faculty member might not change but the nature of the cost drivers might shift from clerical activity to creative activity. This change might yield an improvement to the "quality of life" issues of teaching in a distance-learning environment.

USE OF GRADUATE ASSISTANTS TO SUPPORT FACULTY

Areas of impact of graduate assistants will be in the design and, more importantly, in the development phase. Utilization of these assistants will lower the fixed costs to both the faculty and the university. The obvious assumption that is being made is that there will not be an issue

of deterioration of quality as a result of this substitution of activity. Whether or not graduate assistants are used in the first two phases is one thing but they should not be used as freely during the implementation phase. Activities in this phase are best left to the faculty member.

THE RISE OF THE EXCLUSIVE ONLINE FACULTY MEMBER

At the present time most universities are in a situation where the full-time faculty teaching online courses are also teaching traditional courses on campus or on campus-affiliated sites. It is not entirely implausible that some time in the future some instructor's teaching loads will consist on online courses exclusively. There are several issues that should be raised in this discussion. Will this situation result in a lack of institutional bonding? Does this matter at all? Will an "out of sight, out of mind" mentality ensue? Will there be an equity balance out of sync with traditional faculty? Will this situation create a "rent –a-faculty" paradigm? (Consider global faculty availability.) This situation could conceivably result in a savings of office space as seen in the telecommuting impact on corporations. Will the temptation of this mode be so compatible with issues of child-care, elder care and medical recuperation that it encourages its acceptance by selected faculty?

There are obviously many unanswered questions that in time might get resolved. Many of the issues surround faculty compensation for teaching online courses.

LONG-TERM COMPENSATION AND REWARD ISSUES FOR TEACHING ONLINE COURSES

In this section of the paper, we list the issues according to the perspectives of the instructor and the university.

For Faculty Member: Is it worth the effort especially for tenured, senior faculty approaching retirement?
Will the effort be recognized in the tenure decision?
What will be the impact on collegiality? Mentoring? Politics?
How will textbook publishers' support materials lessen the fixed cost to faculty member to create online courses?

For the University: Is it more cost effective for the university, more efficient use of resources?
Is it more appropriate for graduate or undergraduate level?
Will the intellectual capital issues be resolved?
Will it create the rise of an "excluded" faculty class?
Are commercial course containers preferable to those developed by individual universities?

CONCLUSION

The rapid growth in the number of faculty and universities engaged in online education is testimony to its importance in higher education. The major question that must still be answered is whether or not traditional compensation models for faculty teaching online courses are still appropriate. Do these compensation schemes reflect the amount of talent and effort required to develop online courses. Will there be a revisiting of this question by unions and faculty senates. This paper developed a framework for the modeling of faculty compensation. Hopefully, this paper has contributed to this important dialogue.

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