INSTITUTIONAL RESEARCH AT THE CORE OF STRATEGIC PLANNING

Proceedings from the 11th Annual Conference

FOREWORD

The Eleventh Annual Conference was perhaps one of the most exciting ever presented by the Association. The theme was clearly addressed by many of the panels, papers, and workshops. The breadth and depth of the Association's members was evident as DSS and Strategic Planning, as well as other critical planning tools were presented and explored.

Our continuing movement into the high-tech area was aided by our ability to facilitate an on-line presentation by NCHEMS as well as demonstrations on micro-generated graphics, and institutional data-sharing. Participants were afforded the opportunity to take a closer look at micro applications for DSS, LOTUS 1-2-3, dBaseII, SCSS and SPSS-PC, and graphics. Response was positive, with encouragement for more of the same next year.

The tracks around which the program is arranged allowed the members to focus on faculty issues, outcomes, alumni studies, marketing, finance, and community college issues, to name just a few. Clearly, there was something of interest in every time slot.

Special Kudos must go to Jack Dunn (Program Chair) and Wendell Lorang (Local Arrangements Chair) for the excellence of the program and the facilities. The assistance of both of their institutions is greatfully appreciated. Many, many hours go into planning this annual event, and it only due to the spirits of volunteerism and excellence of people such as Jack, Wendell and their associates, that the Association is able to present an annual meeting of this calibre. Each conference seems to be "Untoppable!: and yet each is better than the last. Our eleventh continued this tradition.

Special thanks to Mike Middaugh and Kathy Kopf, whose efforts over the past 7 months have made these PROCEEDINGS possible. The quality of the publication is testimony to their innovative and dedicated attitudes (and their perseverance!).

Finally, thanks to all who contributed to and participated in the Conference, and most especially to those who submitted papers for publication. The quality improves each year, and is a clear indication of the professionalism, talents, and just plain helpfulness which characterize the NEAIR membership. Thanks.

Nancy Neville, NEAIR President

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*1983	Institutional Research and Planning in the Next Decade	ED246-744

*1983 and 1984 proceedings were produced at the State University of New York, Central Administration.

THE NEAIR LOGO

The NEAIR logo was designed by Sharon Heyenck, M.S. in Communication Design, Rochester Institute of Technology. Since 1980, it has represented the Association as a professional organization with members actively engaged in an information network. The arrows symbolize the sharing and exchange of ideas among members and others outside the Association. The north east quadrant of the design is highlighted to emphasize the regional orientation. The organized structure of the design symbolizes the disciplined approach to problem-solving which is the contribution made to higher education through the field of Institutional Research.

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. . . all learning and development require an investment of time and effort by the student. Time is a frequency dimension. Effort is a quality dimension in the sense that some educational processes require more effort than others. It's fairly easy to look up a given reference in the library. It's more difficult, takes more effort, to develop a set of references for a report. It doesn't take much effort to look up a word in the dictionary. It takes more effort, more initiative, to ask other people to read something you have written to see if it is clear to them. In both of these examples the activity requiring the greater effort is also potentially more educative. It takes more effort to get to the Grand Canyon than it takes to get to the library! Quality of experience and quality of effort are similar concepts, connected with one another in that the likelihood of having high quality experience depends on investing high quality effort. By measuring 'effort,' we may have the key to judging the quality of the educational process.

Colleges are, of course, accountable for a lot of things. They are accountable for the resources and facilities, the programs and procedures, the stimuli and standards they provide for student learning and development. But surely the students are also accountable for the amount, scope, and quality of effort they invest in their own learning and development, and specifically in using the facilities and opportunities that are available in the college setting. Accountability for achievement and related student outcomes must consider both what the institution offers and what the students do with those offerings.

As Pace later summarizes:

6. The topics, or aspects of college life, represented in the College Student Experiences questionnaire consist of major facilities and major opportunities found on nearly all college campuses.

7. The inventory of student activities is limited to facilities provided by the college and opportunities that exist within the college environment--thus excluding off-campus activities, activities not intended by the college, and aspects of experience that are primarily internal or clinical rather than external and objectively observable.

8. Within each topic or aspect of college experience, the activities are intended to form a scale ranging from activities requiring relatively little effort to ones requiring much more effort and initiative.

9. The form of response is for students to indicate the frequency of their participation in each of the activities during the current school year. (Pace, 1984, pp. 5-7; 22)

Content

The revised 1983 second edition is very similar to the 1979 first edition. Not only does the seven-page questionnaire include the 14 quality-of-effort scales entitled "college activities," but also approximately 1½ pages are devoted to background information. A third section includes questions about how much reading and writing a student has done during the current school year. Three questions on satisfaction with college are included, as well as eight ratings of the college environment drawn from several of the concepts in CUES. The final section is devoted to the student's estimates of his or her gains or progress "in college up until now." Alternatives are marked with the familiar No. 2 pencil so that they may be scored electronically. Note also that the questionnaire is indeed anonymous and consists completely of reports by the student about himself or herself.

Items and Scales

The individual items of quality-of-effort scales seek judgments of frequency of occurrence. The lead simply says, "In your experience at this college during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the spaces to the left of each statement." By allowing one point for "never," two for "occasionally," three for "often," and four for "very often" and summing these integers for each group of items, 14 scale scores may be derived. Table 1 shows the number of item-scale correlations, mean and standard deviation of scores, and estimates of reliability.

Reliability and Validity

Table 1 also shows satisfactory reliability estimates for these scales despite only 10, or at the most 12, items. Various checks have been carried out concerning validity, especially concurrent validity. The pattern of relationships put forth in Pace's recent monograph explicates further the clustering of scales, as well as the independence of each one. The general evidence is building up for the validity of the various portions of the inventory.

Table 1

Quality-of-Effort Scales Basic Psychometric Data

Scales	Number of Items	Item Intercorrelations		Item-Scale Correlations		Distribution of Scores		Reliability Estimate	Percent Variance First Factor	Coefficient or reproducibility
		Range[a]	Median	Range	Median	Mean	Sigma			
1979 edition										
Library	10	04 to 61	26	16 to 62	51	19.2	4.9	79	88	83
Faculty	10	18 to 63	44	36 to 71	64	19.1	5.4	82	100	91
Course learning	10	08 to 59	27	36 to 58	47	29.7	5.0	79	70	84
Arts, music, theater	12	06 to 66	26	32 to 66	46	20.1	6.2	83	--	--
Student Union	10	12 to 77	30	24 to 71	51	20.9	5.9	83	80	86
Athletic facilities	10	25 to 69	46	48 to 73	66	17.5	6.9	89	88	88
Clubs	10	20 to 69	46	41 to 75	67	19.2	6.8	90	89	88
Writing	10	08 to 70	33	19 to 61	57	24.3	5.9	84	82	86
Personal experiences	10	08 to 63	26	24 to 60	51	21.8	5.8	82	82	81
Student acquaintances	10	13 to 67	36	44 to 66	58	23.9	6.3	87	74	81
Dormitory F/S	10	22 to 65	44	50 to 70	64	25.1	6.8	89	86	83
Science lab	10	20 to 66	47	48 to 76	67	23.7	6.8	90	88	82
Conversation topics	10	05 to 59	25	36 to 49	48	25.6	5.4	80	74	78
Conversation information	6	20 to 55	36	45 to 64	58	14.7	3.1	81	100	84
1983 edition										
Science/technology	12	14 to 80	30	47 to 68	56	21.8	7.1	88	--	--
Conversation topics	12	00 to 66	26	27 to 61	49	29.6	5.4	81	62	80

Note: Decimal points have been omitted from all correlations.

Scale Scores and Factor Analyses

Material is available on the general reliability and coherence of the scale scores. Much to my surprise, I found that in our data, as well as in the general data, Guttmann scales were achieved almost completely. Moreover, the factor analyses make good psychological sense in the way that they group the salient features of the scale scores.

Findings and Uses

Descriptive Uses

The direct behavioral descriptions entailed in the quality-of-effort scale items have much to recommend them. Scores on individual items from a sample of students at a particular university can simply be used to describe what students do and how frequently. In several descriptive brochures, Dr. Pace reports data from the scales at UCLA regarding student affairs, transfer students, library, admissions, and faculty questions. At Amherst, we are finding that the basic display of proportions of frequencies for each item as well as the use of some sort of an index such as the combined percents of "very much" and "quite a bit" are very helpful in describing succinctly many of the modal activities of students.

For example, I will soon be sending to our Director of Physical Education and Athletics a summary showing participation of seniors in various aspects of recreational sports, intramural sports, and intercollegiate athletics. Not all of the figures correspond with what we had believed to be the case heretofore. Also, we are making similar materials from the library scale available to the library staff, since new sorts of information have emerged on what is going on with current students in their use and on use of the library.

Gains and Their Prediction

The section of the inventory that first attracted me, is the group of standardized items Pace used covering some 18 areas of student gains from college. Somewhat parallel questions can be found, for example, in the NCHEMS series of questionnaires, but the language, extensiveness, and appropriateness of the Pace "progress" items strike a useful compromise between specificity and generality. As an example, we have

asked alumni of various classes also to respond to the gains questions. We have found some surprises in their responses in contrast to those of current students. As I mentioned in an earlier paper, I was able to contrast some 500 relatively recent Amherst seniors against 200 members of the Class of 1959 at Amherst College using the gains estimates. The contrasts were instructive and, in some cases, heartening. On the other hand, there were several areas such as science where we seem today not to be doing at all as well as 25 years ago in terms of the individual's view of his or her own progress in understanding science.

There is a great deal of interest in student outcomes and "value added" these days, but considerable perplexity about how to get at their measurement. I have found the Pace Scale's gains estimates to be extremely useful for this purpose, but perhaps I should pass along some of Dr. Pace's comments more directly:

> There is another aspect of the College Student Experiences questionnaire that is very timely in view of the belief that the effectiveness of college education should be judged on a "value added" basis. My own opinion is that "value added" is an interesting idea, but an idea not yet well defined. . . . Nevertheless, although it may have been fortuitous rather than foresighted on my part, the question in the Estimate of Gains section of the questionnaire is a value added question. It doesn't ask students to estimate how much they have benefited from college, or how well they can do certain things, or how much they know. It asks how much they have gained, how much they have added to their knowledge, their intellectual skills, and to other abilities and insights as a result of their experiences in college.
>
> What they were like at entrance is self-defined, and what progress they claim is also self-defined; but the response is a value added judgment. When students fill out the questionnaire, they are engaging in recall, introspection, and judgment. We know from both internal and external evidence that their recall of activities and their estimates of gain are credible, and that they respond carefully and perhaps in many cases with personal interest to the content of the questionnaire. Because their responses are congruent with other judgments, and because for some goals the students may well be the only qualified judges of whether they are any different today from what they were when they arrived, we must pay attention to what they say. (Pace, 1984, pp. 102-103)

Thus we have two powerful ideas linked in a single instrument: that of quality of student effort and that of gains made by the student. We may want to investigate how the "process" of students relates to their progress as reported by those students themselves. This can be done not only for a total group of institutions of one type, but also for individual institutions of different types.

Using the 1979 data, Pace shows what happens with a stepwise multiple regression in each of the four groups of gains: personal social development; intellectual skills; general education, literature and arts; and scientific understanding. The greatest component that comes first making the greatest contribution to R^2 in each cluster is that of one of the quality-of-effort measures (see Table 2). Note, too, that other measures whether they be environmental ratings, degree of satisfaction, or student descriptors, also show relationships, albeit somewhat smaller ones.

Breadth

In addition to a single quality-of-student-effort score in one area, it is possible to get a summed measure of the degree to which a student is high in more than one area. This "breadth" dimension is also useful for predicting gains and in teasing out some of the differences found among students at different sorts of institutions.

Other

Oscar Porter, one of Pace's students, has shown in a doctoral dissertation that the profiles of selective liberal arts colleges differ in meaningful ways on the various quality-of-effort scales. It probably already has occurred to the reader that such differences and descriptions would be useful in pointing out the particular "flavor" of a particular institution to those who might apply to it.

Norms and Comparisons

The Higher Education Research Institute has issued each September a summary of the data pooled to date using the Pace Scale. The first edition through 1981, for example, had scale scores on some 10,000 students from 40 colleges, whereas the second edition norms already have some 2,300 student inventories from eight institutions. (Separate norms by race, sex, class, etc., are not yet available.)

Table 2

Major Predictors of Student Gains/Progress Toward the Attainment of Important College Objectives (Predictor Variables Listed in Order of Their Importance)

	Multiple R^2	R^2	Change in R^2
Personal/Social Development			
QE:Pers exp	38	14	14
QE:Athl	48	23	09
ENV. Student	54	29	06
Satisfaction	56	31	02
QE:Conv tps	57	33	02
Years in college	58	34	01
ENV:Voc	59	35	01
QE:St acq	60	36	01
Other variables	62	39	03
Total	62	39	—
Intellectual Skills			
QE:Course	36	13	13
Satisfaction	45	20	07
Year in college	49	24	05
ENV:Crit	54	29	04
QE:Conv info	56	32	03
QE:Sci lab	58	34	02
ENV:Faculty	59	35	02
Sex (male)	60	36	01
QE:Lib	61	37	01
Grades	61	38	01
Other variables	63	40	02
Total	63	40	--
General Education, Literature & Arts			
QE:AMT	43	18	18
QE:Write	50	25	07
ENV:Crit	55	30	05
ENV:Faculty	57	33	03
QE:Conv tps	59	35	02
Major in fine arts/humanities	61	37	02
ENV:Esth	62	38	01
Satisfaction	63	39	01
QE:Lib	63	40	01
Other variables	65	42	02
Total	65	42	--
Understanding Science			
QE:Sci	52	27	27
Major in sciences	56	31	04
Sex (male)	59	34	03
QE:Course	61	37	03
(neg) Major in fine arts/humanities	63	40	03
Satisfaction	64	41	01
Year in college	64	42	01
Major in engineering	65	43	01
QE:Conv info	66	44	01
ENV:Crit	66	44	01
(neg) Lived on campus	66	45	01
Other variables	68	48	01
Total	68	46	01

Note. 1979 data. N=3006.

The scores remain remarkably stable in terms of percent responding. When a group of Amherst seniors was given the inventory in 1979, 1981, and 1983 there were only very few shifts of more than one or two percentage points. Most of these were clearly a function of changed campus policies and circumstances. I examined the numbers of institutions in the Northeast and between the two editions, some 21 have already used the quality-of-student-effort scales.

Features and Limitations

Self-Report

As with other instruments of this sort, the assumption has to be that the student is willing to reveal himself or herself, and further, knows the truth. Generally this seems to be the case and one is reminded of the older slogan as reported by Pace when one wanted to know about the quality of automobiles, the Packard Company insisted that you "ask the man who owns one." If you want to know about a college education, ask the student who is undergoing one or has completed one.

Anonymity

Undoubtedly this is useful for frankness and freedom in response, but it does mean that one's analyses of the information must be "self-contained."

Acceptability

Reports are quite consistent that students find this scale both reasonable and helpful to them. Resistance to the whole or to individual items seems to be practically nil. The instructions state: "You will find, too, when you have finished it that your answers provide a kind of self-portrait of what you have been giving and getting in your college experience" (emphasis added).

Additions

Unfortunately there is no space for added responses to college-produced questions. This feature, found in the ACE Entering Freshmen Inventory, for example, would have considerable merit.

Variability

Rather than yielding maximum discrimination in the usual psychometric sense, the items were selected to be meaningful per se. Thus one may

not attain maximum variability among student scores, but this may be due to most students actually behaving in similar ways. An interesting example is the great agreement among students (over 95%) who say that they strongly agree to or disagree with the statement: "If students expect to benefit from what this college or university has to offer, they have to take the initiative."

Some Limitations

In addition to the nature of the norms and norm groups available, the nature of the breadth score and some possibility for added questions, there are a few other limitations of this new and promising instrument. As yet, not a great deal of research has been carried out beyond UCLA. This should take care of itself as time goes on. Possible other candidates for quality-of-effort scales are not discussed to any great extent. There are areas of student activity that could lend themselves to development of items and scales. The material on courses, for example, is fairly rich, but other items could very well be added to describe in greater, or different, detail, what students do in their preparation for class, their written assignments, their oral preparation, and study for exams.

Appraisal

Here is a promising instrument fashioned with both common sense and careful psychometric underpinnings that incorporates the notion of student behavior as one of the keys to understanding both the process and the products of education.

The major concept of the quality of student effort remains, at this point, only partly tested. How useful it will be depends upon how practitioners at various institutions and those in general education research use the idea, its measures, and its predictive power. At times, quality seems to be a qualitatively differentiated type of behavior; at other times it seems to partake of intensity, frequency, and duration. Further use of the scales will be essential for the needed clarification.

Perhaps one of the greatest values to the institutional researcher is the inexpensive and compact combination of standardized questions on student descriptors; the quality of their efforts; frequency of activities

in writing, reading, and computing; and college environment ratings, all coupled with students' own estimates of how much and in what ways they have profitted from college to date. There are many opportunities for exploration in local studies. Those interested in contrasting types of institutions can have rich information indeed, whereas accreditation visits to individual campuses may well find these data also irresistible. Imagine the possibility of demonstrating differences in student testimony about the results of various programs in order to make more meaningful decisions about their modification.

Conclusion

As with any good tool, we need to learn to use it. It does have multiple uses: Also it is well-made and fits one's hand well, but it cannot do everything. It will help us when we can see how others are using the tool, but, as yet, only a few have copies in hand.

Most of all for me, the College Student Experiences instrument comes from a well-developed and balanced view of what we are about in colleges and universities. One can neither review nor use this instrument without having to think through one's assumptions about learning, development, and students. Usually one will see new ways to assist one's institution in its major efforts. Certainly one will find clues--and new clues at that--as to what students are really doing and thinking on our campuses.

If we had an index of provocation or curiosity ranging from 1 to 10, I would certainly rate Bob Pace's effort on the quality of student effort a solid 10. But perhaps it is only fair that I give him the last word:

> What our research shows is that this value added elements, or, in our terms, the percent of students who make substantial progress toward the attainment of important goals of higher education, is primarily the result of the quality of effort students put into their education. (Pace, 1984, p. 105)

References

Astin, A. W. Why not try some new ways of measuring quality? In Educational Record, 63, 2, 10-15, 1982.

Higher Education Research Institute. Various papers on: Composite comparative data, college student experiences questionnaire. Los Angeles: Higher Education Research Institute, UCLA, August 1980; September 1981; September 1982; September 1984.

Pace, C. R. They went to college. Minneapolis: University of Minnesota Press, 1941.

Pace, C. R. College and university environment scales. Princeton, N.J.: Educational Testing Service, 1963.

Pace, C. R. Measuring outcomes of college: Fifty years of findings and recommendations for the future. San Francisco: Jossey-Bass, 1979.

Pace, C. R. Measuring the quality of student effort. In Improving Teaching and Institutional Quality, Current Issues in Higher Education, 1980, No. 1. Washington, D.C.: American Association for Higher Education, 1980, pp. 10-16.

Pace, C. R. Measuring the quality of college student experiences. Los Angeles: Higher Education Research Institute, UCLA, 1984.

Porter, O. The role of quality of effort in defining institutional environments: An attempt to understand college uniqueness (Ph.D. dissertation). Los Angeles: University of Calif., 1982.

Warren, J. The blind alley of value added. In AAHE Bulletin, September 1984. Washington, D.C.: American Association for Higher Education, 1984, pp. 10-13.

STRATEGIES FOR DEALING WITH THE LIABILITIES OF INSTITUTIONAL PERFORMANCE ASSESSMENT

Sidney S. Micek
Syracuse University

Joseph Grant
State University of New York at Oswego

The internal and external demands for colleges and universities to document and communicate the nature and levels of their achievements are well known by persons involved in and/or concerned with higher education. Within the academy, both faculty and administrators recognize the benefits of being informed about institutional accomplishments for myraid of purposes--program planning, student recruitment, faculty and staff development, facilities improvement, and the building of general goodwill. Outside the institution, such information is valued by an array of constituents and interested publics. Potential students and their parents are quite interested in information about institutional performance of the purpose of trying to decide which college will best meet their academic, career, and personal development goals. Institutional and program accreditation bodies also seek information about institutional performance so they can make more informed judgments about the efficacy of the enterprise and whether or not it should be reaccredited. Finally, government officials and private funders are interested in such information to aid them in decisions they need to make concerning the advancement of academic institutions and higher education in general.

As noted by Romney, Bogen, and Micek in their 1979 article "Assessing Institutional Performance: The Importance of Being Careful," taken singularly, each of these demands could probably be responded to in practical and innovative ways without undue disruption of institutional operations. However, in concert, these demands create a relentless force, requiring the examination of our levels of performance and the need to improve them in ways that are consistent with the missions of our higher education institutions. Although academe is not alone in its need to substantiate and improve its levels of performance, it would be cynical to claim exemption from such responsibilities on the ground that

"we are no worse than some others." Romney et al. go on to say that avoidance, neglect, or apathy with regard to institutional performance assessment is not what we owe our constituencies and not what they are likely to tolerate.

The Institutional Performance Assessment Process

Just how institutional performance assessment ought to be conducted and to what depths one ought to go are hardly clear-cut issues. In general, institutional performance assessment is the measurement of and the judgments about the effective and efficient achievement of the goals and expectations of our institutions' students, faculties, administrators, and constituencies. In a process sense, institutional performance assessment in its simplest form can be thought of as occurring in four distinct stages:

1. Goals are set.
2. Resources are committed to achieve the goals.
3. Resources are expended.
4. Outcomes result.

Figure 1 depicts each of these four stages. Also, the arrows connecting each stage in Figure 1 signify the type of assessment objective being pursued as each stage is linked together in a cyclical fashion.

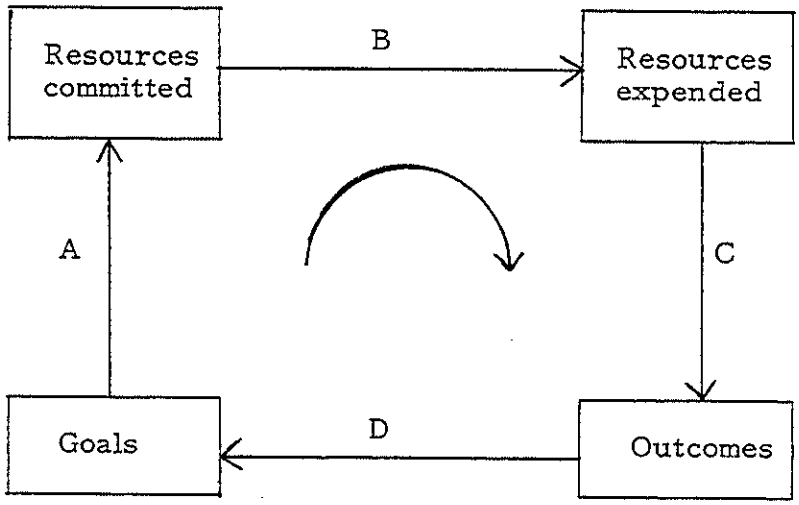
Arrow A To assess the level of institutional commitment to goal achievement

Arrow B To assess the level of resource utilization in working toward goal achievement

Arrow C To assess the level of efficiency in working toward goal achievement

Arrow D To assess the level of effectiveness in achieving institutional goals

Figure 1. The goal-achievement process in higher education.



Given this perspective, institutional performance assessment consists of comparing the end and beginning points of each stage of the institutional goal-achievement process. And if one is concerned with a comprehensive analysis of institutional performance, then none of these stages of the goal-achievement process should be omitted.

Process Liabilities and Strategies for Dealing with Them

While the preceding discussion describes in somewhat general terms the process of institutional performance assessment, it is important to note that certain potential liabilities must be guarded against. In this regard, Romney, Bogen, and Micek (1979) categorized four groupings of potential liabilities or disadvantages associated with the process and outcomes of institutional performance assessment:

1. Political Liabilities. These cautions relate to the negative effects institutional performance may have on formal and informal coalitions within the institution, on the existing balance of power, on current mechanisms for achieving consensus and effecting compromise, and on relationships with authoritative agencies outside institutional boundaries.
2. Methodological Cautions. This set of warnings stems primarily from our understanding of the state-of-the-art of performance assessment

and evaluation, its limitations, and the possibilities for either ignorant or blatant misuse.

3. Economic Concerns. These cautions pertain to the potential costs of the assessment effort, especially as they are contrasted with the potential benefits.
4. Philosophical Caveats. This set of limitations relates primarily to the implications of institutional performance assessment for individual and organizational behavior patterns, for missions and purposes, and for the principles and practices of institutional control and operation.

These authors, then, go on to delineate the array of liabilities within each of these categories. And although they point out that "rarely if ever will all or even a majority of these cautions apply to any given set of institutional circumstances," they conclude by giving this advice: "Proceed with caution." But how should one "proceed with caution"? What strategies might work in dealing with liabilities, disadvantages, and cautions related to institutional performance assessment? The purpose of this article is to answer these questions by presenting some strategies for dealing with these concerns. In doing so, the remainder of the article presents the various cautions, liabilities, concerns, and caveats listed by Romeny, Bogen, and Micek in their earlier articles and, then, suggests some portential strategies for consideration. These strategies are based on our experiences and study related to the process and consequences of assessing institutional performance.

Political Liabilities

When considering institutional performance assessment, the following political cautions potentially exist.

Moral problems. The administrative maxim that "if something appears to be going well, leave it at rest" may well apply in the case of institutional performance assessment. Obsession with assessment, especially when institutional constituencies appear satisfied and when funding is adequate and stable, may foster dissonance among internal interest groups and shatter the tenuous balance of institutional productivity, personal satisfaction, and positive tension in the organi-

zation. Suggested Strategies: Make sure everyone understands why Institutional Performance Assessment and the need for self-renewal is important for growth and survival.

Disruptions of Incentive Patterns. Every institution has its own set of established incentives, patterns developed by explicit policy, tradition, and evolving expectations. Typically, these incentive patterns are closely related and virtually intermixed. Performance assessment has the potential for blindly disrupting this pattern and scrambling the institution's incentive structure in unpredictable and possibly destructive ways. Suggested Strategies: Develop a proper balance between the institution's historical incentive patterns and performance assessment. Look for activities and outcomes that will set an early tone of success and create a positive climate.

Increased bureaucracy, rigidity and inflexibility. A third potential political liability that may be associated with an institutional performance assessment effort pertains to the proverbial tail wagging the proverbial dog. That is, one of the disadvantageous consequences could well be unwanted institutional rigidities. Eyes fixed only upon the accomplishment of a given set of measurable institutional goals my become obdurate to change, to options, or to alternate courses of action. Such tunnel vision often develops a myopic perspective of institutional purpose and activity. To carry the analogy one step further, an associated consequence is the loss of peripheral vision or the loss of the ability to sense and grasp appropriate opportunities. Suggested Strategies: Avoid total commitment to goal-centered approach. Examine unintended outcomes. Avoid a mind set that this is mechanistic, i.e., encourage flexibility and creativity.

Exposé of cherished activities and practices. Over the years every organization develops what are best called cherished activities and pursuits, efforts that are entirely ethical and appropriate. If these are lost in the harsh glare of a public performance review, the stature and impact of the institution could be diminished disproportionately. Suggested Strategies: Make sure those involved in evaluation have high credibility and that they understand the historical fiber of the college, its personality, and its values.

Commitment to results. A major political issue related to institutional performance assessment has to do with the nature and degree of institutional commitment to accept and abide by the results of the effort. Should that commitment be lacking or conditioned, in the first place the assessment process itself is emasculated, and in the second place the results are just so much dust in the wind. Less than full commitment is indeed a serious liability. Suggested Strategies: Before the process begins, make sure everyone who is in a position to act on the results is prepared to do so. Be sure decision makers understand the implications of not acting on results.

Unrealistic expectations. Conceivably, there is the potential for an effect associated with institutional performance assessment efforts whereby expectations for better performance are raised regardless of the actual outcomes of the study or the potential for growth, change, or innovation. Some members of the campus and external community could perceive a performance assessment project as an assurance that change will result when in fact it may not, should not, or indeed cannot occur. Suggested Strategies: Set realistic expectations at the outset. Do not over commit. Keep key decision makers involved and informed throughout the process.

Reduced prerogatives. This type of assessment project, if conducted well, warrants openness and will likely result in the sharing of data about relative levels of achievement. At the same time, however, such a process may result in the community's desire and assumed ability to "second guess" decisions, and may in fact force the management team to make some decisions that it might otherwise choose not to make. Suggested Strategies: Seek concrete suggestions from participants that will add perspective and identify options not previously explored. Make sure everyone is clear about the difference between suggestions and mandates.

External intervention. If openness results from the goal assessment process and the external community does not share in the values and directions desired, intrusion might result, to the current and future detriment of the institution. This is especially true for public insti-

tutions. Educational consumerism is, at best, a risk. Thus the administrative maxim "Don't ask a question if you aren't prepared to live with the answer" has especial significance in the case of institutional goal assessment. Constituency disaffection with current achievements can lead to directions being forced upon the organization. Suggested Strategies: Establish guidelines that denote how and what information can be shared with external publics. Identify who will be the official spokespersons for the assessment effort, and make sure staff are aware of this protocol.

Methodological Cautions

As noted by Romney et al. (1979, 1984), when the question of institutional performance assessment is raised, a proper and complete answer must account for the procedural or methodological considerations in which such efforts are so thoroughly embedded. State-of-the-art evaluation, though remarkably advanced in recent years, signals "Caution" and "Proceed circumspectly" to the informed user. Among the most telling, perhaps disturbing, warnings emanating from evaluation efforts as they pertain to institutional performance assessment are the following:

Misapplication. Frequently, evaluation tolls (e.g., achievement tests or survey questionnaires) are situation-specific; that is, they are developed to meet the needs of a particular set of evaluation circumstances. And, indeed, in those situations they yield the kind of evaluative information sought. It is frequently tempting, however, to use such tools in other, perhaps unrelated situations for which they are neither intended nor appropriate. Moreover, a related disadvantage stems from the all too frequent practice of putting one's entire analytical emphasis in one place. Often institutional performance assessment is not the only important nor perhaps even the most important research topic. One must be equally concerned, for example, with analysis of institutional markets, population trends, and expectations. To consider performance assessment as the sole form of organizational research would be unfortunate and silly, if not downright dangerous. Suggested Strategies: Be clear about the limitations of the evaluation tools you use. Stress the tentativeness of the results.

Measurement limitations. Many aspects of institutional mission and goals may not lend themselves to quantification (i.e., to measurement or to observation). Kenneth Boulding (1966) has claimed that the more important a particular goal is, the less amenable the goal is to quantitative measurement. Efforts to measure institutional goal achievement in a comprehensive fashion may, from the outset, be an impossibility. Moreover, it is difficult to argue that the measures of performance we have are comprehensive, valid, or reliable. Boulding's comments about goals may be paraphrased to reflect the state of the art regarding the indicators of performance themselves. That is, the indicators we have may be secondary in comparison to those we should have or would like to have. For example, we have only the most rudimentary indications of program quality; we know little of the long-range impact of higher education, much less whether or not this impact relates to specifically identified circumstances or the general environment of our institutions. Clearly this means that the current effectiveness of institutional performance assessment may limit our ability to obtain an adequate and accurate measure of performance. Indeed, current capabilities, though attractive and, in some cases, sophisticated, may beguile us into believing that we have the answer when, in fact, the information we have obtained may be deceptively oversimplified. Suggested Strategies: Use multiple indicators, qualitative as well as quantitative. Remember the purpose of the assessment is to provide useful information for decision makers.

Joint-outcomes cautions. A traditional and honored concept in higher education pertains to the achievement of multiple objectives with a single activity. For example, the workings of faculty and graduate students together on a particular study often will provide both learning as well as new knowledge outcomes. We have not yet discovered the keys needed to decipher this jointness puzzle nor have acceptable means been adopted for accounting for it in assessment procedures. Not to reflect jointness or joint outcomes in assessment is inaccurate, while to reflect it is currently beyond our grasp. Suggested Strategies: Be prepared to document and articulate the intended and unintended outcomes of the institution and its programs. Recognize, however, that

often cause-and-effect relationships cannot be attributed to any single unit due to the dynamic environment in which the institution functions.

Unit of analysis concerns. Recent research suggests that performance assessment conducted at the institutional level may be focused on the wrong level in higher education. The findings of researchers, such as Biglan (1973), Smart and Elton (1975), and Hartnett and Centra (1977), suggest that the most relevant focus for assessing performance may be at the discipline or department level, above which varying levels of achievement become considerable diffused through aggregation. Suggested Strategies: Be clear on the difference between institutional performance assessment and program evaluation. Measures valid for one organizational unit may not be valid for another.

Timeliness concerns. We also implore the reader to consider issues related to timeliness prior to initiating an institutional performance assessment effort. First, there is the question of whether the organization is in a phase of its development which, on the one hand, can tolerate and survive an intensive performance assessment effort and which, on the other, actually matches the assumption of the assessment to be performed. Lack of synchronization between institutional life stages and style of performance assessment could result in an exercise of shadow chasing. Suggested Strategies: Organizations in different stages (embryonic, stabilization, elaboration) vary over time in their need for adjustments. It is important to understand where the organization is in its life cycle.

Staff capabilities. A final consideration with regard to methodological limitations has to do with the capabilities of staff to accomplish the ends associated with institutional performance assessment. One must rationally, objectively, and seriously consider whether or not the analytical skills as well as the sensitivity to institutional circumstances are sufficiently represented in current staff to warrant one's launching an institutional performance assessment effort. Suggested Strategies: Recognize that a skilled staff (methodologically and politically) is essential to a quality/credible evaluation effort.

Economic Concerns

We suspect, though our span of familiarity is restricted to higher education in the United States, that concern about costs, financial exigencies, and economic tightness are virtually worldwide. In an attempt to reflect this rather limiting economic outlook, the following constraints and limitations on institutional performance assessment are suggested:

Marginal returns. Bob Zensky noted in his keynote address, the process of assessing performance as represented by the achievement of institutional goals might in fact realize only marginal returns because of insufficient institutional flexibility. The collective faculty, as an institutional resource, are largely fixed; they represent a continuous, rather well-defined economic commitment for as long as one dares to look into the future. Institutional personnel policies and practices such as tenure or collective bargaining may further reduce administrative options and institutional flexibility beyond the point of useful effort to adjust or adapt. In such cases, performance assessment may not be worth the effort, especially if one expects returns related to redirection or redesign of programs. Simply stated, the costs may not be justified by the potential returns. Suggested Strategies: Be sure key leaders are aware of this fact. Become familiar with those resources that are discretionary: money, people, facilities, and so on. Do not overcommit.

Resource consumption. Depending on how efficiently the institutional performance assessment effort is conducted, one could incur sizable personnel and monetary costs, an especially sobering possibility when precious resources are in high demand to address other issues deemed more pressing. Gains of an assessment project may be more than offset by losses in assets and opportunities. The issue of costs relates directly to that of values in that it will be the prevalence of value preferences that will determine to which end monies are devoted. Suggested Strategies: Small is beautiful, especially if it's well done. Use good resource and project management techniques.

Relative resource questions. Given the overriding prevalence of financial exigencies and pressures, institutional authorities must ensure

that currently available resources be put to the best uses possible. The difficult question, of course, is whether or not institutional performance assessment is the best use of tight money. Clearly the alternative demands are legion. Suggested Strategies: The answer clearly lies in an adept balancing of potential resource consumption, likely constituent satisfaction, and gains in political advantage. That balancing is clearly both an institutional prerogative and dilemma. Also be aware of the long and short-run gains and costs.

Philosophical Caveats

Finally, two items are listed that pertain to philosophical cautions (i.e., those cautions and limitations attendant to institutional performance assessment that emanate from ethical and moral codes and from philosophical principles underlying higher educational institutions).

Organizational and institutional autonomy and flexibility. Once the door to institutional performance assessment is ajar, it is likely that it will never be closed again. The end result may be the eventual toppling of some of higher education's most celebrated icons--autonomy and flexibility. Because an organization has embarked on a self-study of its performance, expectations for subsequent action are often heightened. These expectations are especially difficult to defuse and may prove embarrassing, at the very least, when the study results in conclusions that no action, no new programs, or no new emphasis or efforts are required. Unfulfilled expectations will most likely soon lead to external action, interventions, or at the very least public relations headaches. This kind of pressure and state of unrest can lead to permanent loss of flexibility or options because they are taken away by the imposition of external demands or requirements. Suggested Strategies: Keep key leaders involved and committed to the end objective of institutional performance assessment effort--information gathering for organizational renewal. Help keep them in control of the institution's destiny.

Span of control. One must also be concerned to ask whether or not the results of the institutional performance assessment will be associated with the matters over which the organization has a modicum of control. The most obvious example pertains to teaching and learning. Most per-

formance assessment exercises are written to assess student learning, student achievement, and so forth. Yet learning is an individual response to opportunities created and offered by the institution. Learning depends largely on what the student is willing or able to devote to the effort. Accordingly, to evaluate or assess institutional performance only on the basis of student learning is not only inappropriate, it is unfair. Suggested Strategies: Only agree to be held accountable for those things you directly control. However, this should not eliminate the pursuit of lofty goals

A Concluding Comment

In no way are the strategies for dealing with the liabilities of institutional performance assessment that have been suggested here meant to be a complete listing. Rather, they are intended merely to provide some positive ideas for moving ahead with the internal and external demands and mandates for institutional performance assessment in higher education. If there is one final suggestion we would like to make on the subject, it would be "Proceed with caution, but do proceed."

References

Biglan, A. Relationships between subject matter characteristics and the structure and output of university departments. Applied Psychology, 1973, 204-213.

Boulding, K. The ethics of rational decision. Management Science, 1966, B161-B169.

Harnett, R. & Centra, J. The effects of academic departments on student learning. Journal of Higher Education, 1977, 491-507.

Romney, L. C., Bogen, G., & Micek, S. S. Assessing institutional performance: The importance of being careful. International Journal of Institutional Management in Higher Education, 1979, 78-89.

Smart, J. C. & Elton, C. F. Goal orientations of academic departments: A test of Biglan's Model. Journal of Applied Psychology, 1975, 580-588.

Wagner, W. & Weathersby, G. Optimality in college planning: A control theoretical approach. Berkeley, Calif. Office of the President, University of California, 1971.

THE STUDENT PERSPECTIVE: EDUCATIONAL MORTGAGES - PAYING FOR HIGHER EDUCATION THROUGH INCREASING DEBT BURDENS

Judith Dozier Hackman
Yale University

Educational loans are beginning to resemble "educational mortgages." The present and projected growth of loans required to finance a student's education, especially for people attending graduate and professional schools in private universities, is creating a serious debt burden for many graduates. The extent of this burden may make it increasingly difficult for students to repay their debts and may negatively affect both their choice of careers and the quality of their postgraduation lives.

Objectives

At Yale, we have been looking closely at the educational loans of students. In this presentation, I will share some of our research with three purposes in mind:

1. To illustrate the growing magnitude of student loans.
2. To suggest ways that others might examine the debts of students.
3. To stimulate discussion about ways to finance higher education.

Method

Data Collection

In order to meet the preceding goals, we will examine the cumulative loans of graduates from three professional schools: Fine Arts, Social Services, and Health Care. To preserve their anonymity, the specific schools are renamed, and some of their details have been modified. But the general level of debts and projected income are real. The three schools were chosen because they are representative of the variety among professional schools at Yale and elsewhere in (a) length of study (two, three, and four years), (b) tuition level (for 1983-84 ranging from approximately $7,500 to over $10,000), (c) projected average starting income (for 1984 graduates ranging from around $12,500 to over $25,000);

and (d) debt burden--projected payments as a percentage of starting and later income (for 1984 graduates ranging from 12.5 to 20.7%).

Each year we have asked financial aid officers in the Schools of Fine Arts, Social Service, and Health Care to send us loan and income data for their graduates (See Figure 1 for a copy of the Cumulative Debt Survey instructions):

Loan Data	Income Data
Prior educational loans (primarily undergraduate debts acquired before attending Yale)	1. Average or typical starting income
In-school loans (bank loans and loans funded by the university.)	
Total loans	

Where available, we also have acquired national data on income levels and income growth for various professions. In addition, information about Yale graduates' income over time is available for participants in the Tuition Postponement Option loan program (a Yale income-contingent loan that requires reporting of annual income).

Findings and Discussion

Tables 1 and 2 summarize our analyses. There have been two types of loan growth over the past three years: First, the absolute amount of loans has increased; and second, the relationship between loan repayments and starting income has grown.

Growth in absolute loan amounts. Table 1 lists the average, minimum, and maximum educational loans for each of the three schools by graduation class, separately for Prior Loans, In-School Loans, and Total Cumulative Loans. Average borrowing for loans taken In-School and Total Cumulative Loans has increased for each school and each graduation class. Prior Loans also have increased each year (with the exception of the Health Care graduates of 1984).

What forces are driving these increases? There are at least three major reasons why educational loan requirements are greater and why even higher borrowing can be expected in the future (Routh Memo, March 1984):

1. Rising Tuitions and Growing Self-Help Levels. As tuitions rise and scholarship budgets tend to remain a fixed proportion of tuition income, self-help levels have increased at greater rates to fill the need gap.
2. More Costly Loans. The present caps on amount of federal Guaranteed Student Loans (GSL) and the lack of significant growth in National Direct Student Loan funds are forcing students at high-tuition schools to turn to other sources such as institutionally created loans and federal Auxiliary Loans to Assist Students (ALAS). For Yale students, both the ALAS and the Yale Student Loans (YSL) presently have moderate-rate interest (12%) and no in-school subsidy. The net effect is an even greater loan commitment than would be true if higher levels of GSL were available. (GSL loan maximums are $2,500/year, $12,500 total for undergraduates, and $5,000/year, $25,000 total for professional and graduate students. Although current GSL loans carry 8% interest rates, rates used here are those prevailing for the three graduating classes studied: 9% for 1984 graduates from the two-year fine-arts school, and 7% for the other graduates. GSL loans have in-school federal government subsidies as do NDSL loans. Interest for NDSL is 5%. ALAS loans carry 12% interest and accrue simple interest while a student is in school.)
3. Higher Previous Indebtedness. Many students enter professional schools with considerable indebtedness, primarily in the form of undergraduate loans. Undergraduate borrowing has been fanned by the Factors 1 and 2 described and also by increases in "loans of convenience." (From the implementation of the Middle Income Assistance Act in 1978 until the reestablishment of a GSL needs test in October 1981, there was a substantial increase in the number of Undergraduates who undertook loans regardless of need. Even now, any family with income of $75,000 or less may borrow, regardless of assets, and 25-30% of undergraduate GSLs are "loans of convenience.")

Growth in Repayment-to-Income Ratio

In addition to the growing levels of student loans, the relationship between projected payments and available income has become increasingly

serious. Table 2 gives reported average starting salaries for the three schools examined here. For graduates who have very low starting salaries, relatively high payment-to-income ratios are even more serious as their discretionary income is more limited than alumni with higher starting incomes.

For the three schools, loans and, therefore, loan payments have grown at a faster pace than starting income. In the worst case (School of Social Services) income has stood still while loans have grown by an annual average of 13.4%. In addition, this particular school is one for which national 1978 income data showed virtually no real growth during eight years of employment.

Although space does not permit here, it also is important to look at changes across years after graduation. Graduates in professions were pay grows quickly over time may experience difficulties for a few years and then find that loan repayments become much more manageable. For these students, graduated payments or income contingent loans are especially attractive. For professions with little or uncertain salary progress, the picture is more bleak.

How Much Educational Debt Is Manageable?

The definition of "manageable educational debt" varies. Some people argue that the value of an education is worth a major investment and that borrowers should and can handle substantial "educational mortgages." Hartman (1971) reasons that graduates would be willing to accept a level of repayments equivalent to the increase in earning power provided by their education. He estimates that up to 15% of the typical college graduate's starting before-tax income would not be an overly burdensome loan payment.

Others who have studied student borrowing propose different formulas for estimating manageable debt limits. A recent Educational Testing Service report (1984) suggests that tolerable educational loans are those that have repayments equal to or less than 6.5-12.0% of After Tax Income, or 5.0-9.5% of Gross Income. Andre Daniere (1969) in the 1960s proposed a similar percentage. According to Horch (1978, p. 3), Daniere "examined consumer expenditure profiles and concluded that

families spend about 90% of their after-tax income for consumption, leaving a residual of 10%." A priori, he concluded it would be unreasonable to expect borrowers to devote all of their residual income for educational debt repayment and suggested that 6% of before-tax income, or 7.5% of after-tax income, could be devoted to retiring educational debts, without being "overly burdensome." Related but more complex analyses have been developed by Dwight Horch (1978, 1984) at Educational Testing Service and by Roberta Popick (1983) at Northwestern University. Each of them first calculate available after-tax income using basic tax rates for different income levels and then apply Bureau of Labor Statistics consumption budgets (low, middle, or high) to estimate available discretionary income (described by the BLS as covering such items as education, alcohol, and cigarettes). In practical terms, Horch's analysis found that students going into lower-paying professions could handle loans with payments of about 5% of future after-tax annual income whereas students entering higher-paying professions could devote about 12% of after-tax income.

The ratios of average loan payments to starting income examined in present report for the three sample schools <u>all</u> exceed manageable educational debt as defined by Daniere, Horch, and Popick, although some are within Hartman's 15% limit.

Summary and Recommendations

The verdict is not yet in on manageable educational debt levels. But it is clear that students and their institutions are concerned about growing dependence on loans to finance education. It is very important that we continue to monitor the size and the effects of educational loans.

Without continued attention and creative student financing alternatives, the future course of student borrowing seems quite troublesome. As both students and institutions increasingly rely upon higher levels and more expensive forms of student loans, the ability of graduates to manage their educational debts may become more precarious and burdensome.

Table 1

Cumulative Debts for Graduates of Three Professional Schools
Average, Minimum, and Maximum
Prior and In-School Educational Loans

School	Graduation Year	Prior Loans No.	Prior Loans Mean	Prior Loans Min.	Prior Loans Max.	In-School Loans No.	In-School Loans Mean	In-School Loans Min.	In-School Loans Max.	Total Loans No.	Total Loans Mean	Total Loans Min.	Total Loans Max.
Fine Arts two-year program	82	18	$3,107	$ 400	$ 8,900	40	$10,698	$2,000	$13,600	40	$12,096	$2,000	$22,000
	83	19	3,220	385	11,696	46	11,559	5,000	16,000	46	12,889	5,000	24,696
	84	19	2,765	300	8,500	34	13,171	5,000	16,000	34	14,716	5,000	21,100
Social Service three-year program	82	30	3,550	1,100	9,000	72	8,998	3,400	17,500	72	10,477	3,600	17,900
	83	47	3,432	300	11,300	102	10,554	2,000	18,500	105	12,090	3,200	26,782
	84	38	3,599	500	13,239	82	11,977	3,500	30,000	83	13,480	3,500	30,000
Health Care four-year program	82	b	3,475	192	6,800	b	21,506	5,000	42,725	b	22,896	5,000	47,925
	83	37	5,996	500	26,695	88	23,918	5,000	59,670	88	26,439	5,000	65,600
	84	47	5,783	230	20,295	94	27,026	5,000	57,500	94	29,918	5,000	68,650

[a]These cumulative debts are the principal borrowed and do not include interest that accrues before repayment begins.

[b]Data for 1982 medical school graduates were taken from a sample so that actual number taking each type of loan is not known.

Table 2

Average Debt Burdens for Graduates of Three Professional Schools

School	Graduation Year	Starting Income Estimated Gross[a]	Average Cumulative Debt Total Loan	(%)	Annual Payment[b]	Payment/ Income
Fine Arts						
two-year program	82	$12,500	$12,096	%	$1,685	13.5%
	83	13,000	12,889	7	1,963	15.1
	84	13,494	14,716	14	2,241	16.6
Social Service						
three-year program	82	15,000	10,477		1,460	9.7
	83	15,000	12,090	15	1,685	11.2
	84	15,000	13,480	11	1,878	12.5
Health Care						
four-year program	82	24,000	22,896		3,555	14.8
	83	24,910	26,439	15	4,494	18.0
	84	25,860	29,918	13	5,417	20.7

[a]Starting income for 1984 Fine Arts graduates is estimated by inflating 1983 gross income with projected GNP deflators.
Most Health Care graduates commence repayment during their third year after graduation, so actual 1984 third-year income is used for the 1982 graduates, and third-year income for 1983 and 1984 graduates is projected.

[b]Average Fine Arts loan payments are computed by assuming that most loans are at the GSL rate (7% for 1982 and 1983 graduates, 9% for 1984 graduates, with fixed payments for 10 years with in-school interest subsidies).
Social Services loan repayments are calculated at 7% for all three classes, because students in three-year programs will have entered before the rate rose to 9%.
Health graduates are assumed, following Yale loan policies, to have the maximum of $20,000 in GSL (all at 7% interest), followed by ALAS loans (12% loan with in-school accrued simple interest and 10-year fixed repayment period).

Figure 1. 1984 cumulative debt survey.

Because of continuing concern about student loans, we are again including the cumulative borrowing of each graduating class as a regular part of our annual collection of financial aid data. Please include all students in the Class of 1984 (including December 1983 graduates) who have borrowed at any time, from any source, during their enrollment in your school. Do not include students who had previous loans but who did not borrow while enrolled in your school. Also, do not include students other than Class of 1984, who may have withdrawn or otherwise will not continue their studies in 1984. Please note that we are asking for a total survey rather than a sample (negotiable for Yale College and Graduate School).

Name. Please give us the name so we can do follow-up studies and match to computer-generated data. We will treat confidentially.

Sex and Financial-Aid Status. Self-explanatory. Please use the same financial aid status as you do on the "grid"; 1983- 84 status prevails.

Yale Loans (Combined). This refers to all loans made with Yale funds (GSL/FISL, ALAS, NDSL, HPSL, NSL, YSL, domestic and foreign) while the student was enrolled in your school. Lump all such loans together into a single figure. Do not include bank or other third-party loans.

Bank Loans (at Yale). Enter the total of all bank loans (GSL, FISL, ALAS, HEAL, LSAAP) undertaken while the student was enrolled in your school.

Prior Loans (Combined). Enter total of all loans (institutional, federal or bank) undertaken while enrolled elsewhere, whether prior to enrollment in your school or while on exchange or in joint degree candidacy. This will presumably be the hardest item to derive, but it is also the most important in the sense that we can't get it anywhere else. We assume that it will appear either in your need analysis document (FAF or GAPSFAS), a loan application (GSL), or on any institutional form you may have.

Grand Total. This is the sum of the three previous columns and also the sum of all loans the student had outstanding upon termination. In other words, fit all loans into one of the previous three categories.

Miscellaneous. Please duplicate the survey document and number the pages in upper right-hand corner. Do not include parent loans of any kind. Please feel free to add any narrative statement concerning your perceptions of loan burdens. Are you surprised or concerned by the results of your sample? Are currently enrolled students borrowing at substantially higher rates than the Class of 1984?

Starting Salaries (Important). Please give us any information your school may have concerning typical starting salaries or salary ranges for the Class of 1984. If appropriate, please provide such data for different categories of graduates (e.g., law clerks vs. large firms, or performing musicians vs. music teachers). And please indicate the source of your data (school survey, national statistics, hearsay?).

Data Collection Format

School _____ Page_____

	Name of Student	Sex M/F	FA? Y/N	Yale Loans (Combined)	Bank Loans (at Yale)	Prior Loans (Combined)	Grand Total
1.							
2.							
3.							
4.							
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20.							

Source. Donald McM. Routh, Yale University, 5/29/84.

References

Daniere, A. The benefits and costs of alternative federal programs of financial aid to college students. In The economics and financing of higher education in the United States: A compendium of papers submitted to the joint economic committee. Washington, D.C.: U.S. Government Printing Office, 1969, pp. 576-578.

Educational Testing Service. Student loan limits: Estimated manageable student loan borrowing limits for the class graduating in 1983. Princeton, N.J.: Educational Testing Service, 1984.

Hartman, R. W. Credit for college. New York: McGraw-Hill, 1971.

Horch, D. H. Student loan limits: Estimated manageable student loan limits for the class graduating in 1984 and the class entering in 1985. Princeton, N.J.: Educational Testing Service, 1984.

Horch, D. H. Estimating manageable educational loan limits for graduate and professional students. Princeton, N.J.: Educational Testing Service, 1978.

Popick, R. A model for estimating manageable debt principals. Evanston, Ill.: Northwestern University, 1983 (mimeograph).

INSTITUTIONAL PERSPECTIVE FROM THE FINANCIAL-AID OFFICE: AN OVERVIEW OF STUDENT AID AND THE ROLE OF EDUCATIONAL LOANS

Donald McM. Routh
Yale University

Yale University consists of an undergraduate college of 5,100 students, and an equal number of students distributed among the Graduate School of Arts and Sciences (almost 2,100 students in 56 departments) and 10 professional schools that range in size from just over 100 in the School of Art to more than 600 in the Law School and enroll a combined total of 2,900 students. The 1984-85 term bill (room, board, and tuition) in Yale College is $13,950; for financial aid purposes, we use an estimated budget of $15,200 plus travel. (See Table 1 for a definition of student budget and other financial aid terms.) Graduate and professional school tuitions range from $6,800 in the Divinity School to $10,500 in the School of Medicine, with total budgets on the order of $15,000-18,000 and, for students with families, as high as $24,000.

Yale's high costs are offset by a strong commitment to financial aid. For the twenty-first consecutive year, a "package" of financial aid that met the demonstrated need in full was awarded to every student who was accepted for admission to Yale College. Approximately 40% of each class requires and receives such assistance. Although not all of the graduate and professional schools are able to maintain similar full-need policies, the numbers of students who do receive financial aid are much greater. In the graduate school, which is the only School in which need is not a necessary criterion, 74% of all students receive fellowship support. In the professional schools, which are need-based, assistance is granted to over 70% of all students.

Despite the $26 million scholarship budget, financial aid at Yale is highly dependent upon "self-help"--and upon educational loans, in particular. (See Table 2 for a description of the various types of educational loans currently granted at Yale.) In 1984-85, the basic self-help expectation in Yale College is $3,500 for freshmen and $3,750 for upperclassmen; most students earn about $1,000-1,200 and borrow the rest. Graduate students generally borrow only to supplement their stipends, if at all, but loan levels for professional students are very

Table 2

Summary Deacription of Conventional Students Loans
Currently Granted by Yale--September 1984

Name and acronym	Maximum loan	Source	Rate	Grace Period (in months)	Defer[a]	Cancellation
Guaranteed Student Loans (GSL)[b]	$2,500/yr to $12,500 to undergraduates $5,000/yr to $25,000 cumulatively to graduate and Prof'l students	Yale - by borrowing	8%	6	Yes	None
National Direct Student Loans (NDSL)	$6,000 cumulatively to undergraduates ($3,000 first two years) $12,000 grand total	90% federal 10% Yale	5%	6	Yes	Death, permanent disability, bankruptcy, and teaching or military service under certain conditions
Health Professions Student Loans (HPSL)	$2,500 plus tuition per year (no career maximum)	90% federal 10% Yale	9%	12	Yes	Death, permanent disability, bankruptcy, or practice in shortage areas (if funded)
Nursing Student Loans (NSL)	$2,500 per year up to $10,000	90% federal 10% Yale	6%	9	Yes	Same as HPSL
Auxiliary Loans to Assist Students (ALAS)[b]	$3,000 per year up to $15,000 graduate and Prof'l students	Yale - by borrowing	12%	None	Yes	None
Parent loans for Undergraduate Students (PLUS)[b]	$3,000 per year up to $15,000 (per child)	Yale - by borrowing	12%	None	No	None
Yale Domestic and Foreign (YUSL)	None	Yale - by borrowing	9%	6	Yes	None
(New) Yale Student Loans (YSL)	None	Yale - by borrowing	12%	None	Yes	Death or permanent disability

Source. From Budget Office and UDFA (Rev:10/10/84).

Note. All loans have maximum repayment terms of 10 years, exclusive of grace periods and deferments.

[a]If yes, deferment is unlimited for full-time study or for two to three years each for such things as temporary disability, unemployment, or financial hardship and for Peace Corps, VISTA, and military service, full-time duty in the Commissioned Corps of USPHS and a list of 32 possible internships.

[b]GSL, ALAS, and PLUS are insured by the Connecticut Student Loan Foundation (CSLF) for death, permanent disability, bankruptcy, and default. All other loans are uninsured.

high, ranging from just under $5,000 per year in drama and divinity to more than $9,000 in law and $12,000 in medicine.

To put these loan levels into slightly different perspective, despite the double-digit inflation and stagnation of federal and state support for student aid, which have caused us to increase scholarship expenditures in Yale College by 129% since 1979-80, the self-help levels have increased by only 43% during the same period. Indeed, Yale's self-help ranks very close to the mean among Ivy League and other high-cost private colleges. However, because scholarship funds in the professional schools are generally tied to a fixed ratio of tuition income, loan levels in those schools have risen at a much more rapid rate. By means of the Mark Jacox model, we have estimated that Yale will need a very substantial amount of new student loan capital during the next 10 years.

Despite the University's best efforts, there are at least three major reasons why educational loan requirements have increased so markedly, and why even greater borrowing can be expected in the future:

1. Rising Tuitions and Growing Self-Help Levels. As tuitions rise and scholarship budgets tend to remain a fixed proportion of tuition income, self-help levels have increased at greater rates to fill the need gap.
2. More Costly Loans. The decade-old maxima on federal Guaranteed Student Loans (GSL) and the lack of significant growth in National Direct Student Loan (NDSL) funds are forcing students at high-tuition schools to turn to additional sources, such as institutionally created loans and the new but more costly federal Auxiliary Loans to Assist Students (ALAS). For Yale students, both the ALAS and the Yale Student Loans (YSL) presently have moderate-rate interest (12%) and no in-school subsidy. The net effect is an even greater loan commitment than would be true if higher levels of GSL or additional amounts of NDSL were available.
3. Higher Previous Indebtedness. Many students enter professional schools with considerable prior indebtedness, primarily in the form of undergraduate loans. Undergraduate borrowing has been fanned by the two factors 1 and 2 as well as by increases in "loans of convenience."

As a consequence of these factors and projections, Yale has undertaken a concentrated review of student loans during the past two years from the standpoint of three concerns. First, we have become increasingly concerned about the problem of debt management. How much are students actually borrowing? To what extent are they able to cope with the repayment requirements of the loans that they have undertaken? What do we know about their scheduled payments as a function of their incomes? And what is the relationship, if any, between their income-repayment ratios and their actual records of default? These are some of the questions that Judith Hackman has addressed in her Cumulative Debt Study.

Second, we have taken a fresh look at student loan terms. Is the standard 10 year fixed repayment schedule really appropriate for all student borrowers, regardless of the amounts they have borrowed or differences in their short or long-run income expectations? Should we be providing more options for extended or graduated repayments? Is it time to consider again the possible advantages of income-contingent repayment? As a result of her research on Yale's short-lived Tuition Postponement Option (TPO) of the mid-1970s, Rena Cheskis has obtained some interesting and surprising suggestions for the structuring of future institutional loans from TPO alumni.

Finally, to the extent that Yale will inevitably increase its student and parent lending in the future, what are the most likely and most attractive resources of educational loans? What is the optimum hierarchy of loan funds in the University portfolio? How can we best use available federal and state resources, including tax-exempt bonds? What is the role of the Student Loan Marketing Association (SLMA or "Sallie Mae") and of various state agencies in making secondary markets or otherwise providing additional sources of student loan funds? Mark Jacox will address some of these issues in his paper on Student Loan Budgeting.

The results of these and comparable studies may very well lead to changes in financial aid policy. Certainly we should consider such findings as we continue to structure new institutional or other non-governmental loans for students. We may find it advisable to vary even more than we currently do the levels of self-help and the types of loans among the schools of the University or even among different programs

within a school. And it is possible that such research may contribute to changes in governmental programs or to decisions made by agencies such as SLMA or by consortia of college and university lenders.

Table 1

A Layman's Guide to Financial-Aid Jargon

1. Need. Often referred to as "demonstrated need," this is the difference between the student's budget and the estimated family contribution, as determined by the college.

2. Need Analysis. The process of determining need by establishing a budget and calculating a family contribution.

3. Uniform Methodology (UM). A nationally accepted system for calculating a family contribution, approved for award of federal funds. Many colleges make systematic adjustments to the UM, especially in the case of divorced/separated parents, nontaxable income and multiple siblings in college.

4. College Scholarship Service (CSS). A service of the college board that gathers family financial information in a uniform manner on a financial aid form (FAF) and distributes it to designated colleges and scholarship/loan agencies. Although CSS processes data and calcualtes family contribution according to the UM, CSS awards no funds and the final determination of need is at the discretion of the college or agency. The other major undergraduate service is American College Testing (ACT), but many colleges, especially in the Northeast, do not accept ACT financial aid documents.

5. Financial Aid Form Need Analysis Report (FAFNAR). A computer-generated CSS document that summarizes the FAF data and performs a UM need analysis, that is then distributed together with a photocopy of the FAF to the designated colleges and scholarship/loan agencies.

6. Graduate and Professional School Financial Aid Service (GAPSFAS). A service of the Educational Testing Service that is comparable to the CSS and that is used primarily by graduate and professional students. The application is also called GAPSFAS and yields a Summary of Applicant's Resources (SOAR).

7. Independent Student. Also called "self-supporting," anyone who for some reason is not expected to receive support from parents or guardians. The federal test is that, for the year of enrollment and the preceding year, the student must: (1) not have lived with either parent/guardian for more than six weeks; (2) not have been declared as an IRS exemption; and (3) not have received more than $750 in cash or maintenance support. Many private colleges exercise stricter standards of independence (e.g., an orphan or perhaps age 25 and married) and

usually require documentation of self-support for 3-5 years. Graduate and professional schools vary widely in definition and enforcement.

8. Dependent Student. Anyone who is not independent. The basic principle in financial aid, especially including federal and state governments, is that students and their parents/guardians have the primary responsibility of paying for their own education.

9. Family Contribution. Total family resources for educational expenses in a given year and consisting of parents' contribution and students contribution.

10. Parents' Contribution. Estimated resources from the income and assets combined from the parents or guardians, jointly or individually (if divorced or separated), in a given year as determined by the college.

11. Student's Contribution. Estimated resources from the student in a given year and consisting of summer savings, a share of precollege assets such as savings and trusts, any educational benefits such as Social Security or VA, and any "outside" scholarships from federal, state, or other third-party sources.

12. Budget. A college estimate of the cost of attendance for a given period of time (usually 9 or 12 months). It includes actual costs for tuition, room and board, required fees and modest allowances for books, personal expenses, and travel from the student's home to the college.

13. Financial Aid Package. The combination of resources that a college puts together to meet a student's need. It usually consists of designated amounts of jobs (CWSP or other campus employment), loans, and scholarships.

14. Self-Help. That portion of the financial aid package that includes job and loan. In some cases, the college may make a designated self-help award and allow the student to determine the actual amounts of job and loan.

15. Scholarship. Financial aid for which the student does not work and that does not have to be repaid. Often called "gift aid" or "grant," although some colleges award grants for services rendered (such as music or athletics). Most scholarships are based upon need, although some colleges (not Yale) may award merit scholarships to students who have no need or have financial aid in excess of their need.

16. Guaranteed Student Loan (GSL). The primary federal loan program, loosely based upon need but generally available in high-cost colleges to families with incomes of up to $75,000 or more. Undergraduate maximum is $2,500 per year and $10,000 for four years. Because of 5% "loan origination fee" and an insurance premium, the actual GSL proceeds will be closer to $2,350. GSL is repaid in 10 years after graduation at 8% interest; deferments are made for graduate study,

military, and so forth. GSL applications are available from hometown banks; Yale is a backup lender.

17. National Direct Student Loan (NDSL). Similar to GSL except made directly by college with federal funds at 5% interest. Based upon UM need only; four-year maximum is $6,000. Yale awards only to those who need loans in excess of GSL.

18. Auxiliary Loans to Assist Student (ALAS). A new unsubsidized federal loan for graduate and professional students; up to $3,000 annually with $15,000 maximum at 12%. Lender may accrue and capitalize interest, but these loans are costlier than GSL.

19. Yale Student Loans (YUSL or YSL). Uninsured loans made from income from restricted endowment or from University borrowings. Rates and repayment terms are comparable to GSL in the case of YUSL and to ALAS in the case of YSL.

20. Parent Loans for Undergraduate Students (PLUS). Essentially an ALAS for parents directly; up to $3,000 annually per student. Repayment begins within 60 days at 12% interest. Available from banks; Yale is a limited backup lender.

21. College Work-Study (CWSP). Term-time or summer employment in the college or in nonprofit agencies supported, up to 80%, with federal funds.

22. Pell Grants. The primary federal scholarship program. The FAF or other approved application is processed by federal contractor, who issues a Student Aid Report (SAR), which the student then submits to the college. Generally available to families below $25,000- $30,000. The maximum grant is $1,900 per year.

23. Supplemental Educational Opportunity Grant (SEOG). Another federal scholarship in which the college awards federal funds directly to eligible students. The maximum grant is $2,000 per year and may not exceed need. No separate application is required.

Source. Yale University UDFA (NEAIR Version: 10/10/84).

The Alumni Perspective: Selecting Appropriate Loan Features to Match Future Income Profiles

Rena Cheskis
Yale University

Background

In recent years there has been a growing concern over at least two new issues in student loans--the growing student debt burden and the student loan default rate. These two topics are not unrelated, of course. Many university researchers have recommended that loan offices develop prediction models for loan default. This would entail putting individual students' social background characteristics into a statistical model that would predict their likelihood of default. It would then be up to the loan office and the university policymakers to decide if students who are poor loan risks should be denied monies altogether or given a different balance of loan versus grant.

Research at Yale has led us in a slightly less mechanical direction. We see the necessity for a more holistic approach, believing that policymakers and officers who implement loans must look not simply at the student's current characteristics, but into the future in order to develop a sensitivity to the life-style dynamics of differing groups of students. As an example, we think that it is not logical to expect a student who attends a professional drama school after a private four-year college to make large fixed-payment loan installments immediately upon graduation. Besides the fact that the theater job market is quite poor, the probable high level of the student's loan debt would make it close to impossible to meet large loan payments. In such a case as this, we would recommend that the university think carefully about the balance of the student's loan and grant aid, and more importantly, help the student choose loan features and a repayment schedule that will realistically fit into the student's future plans.

Objectives

What we would like to show in this study is that different types of loans are better for different kinds of people, and that awareness of these very real differences in eventual lifestyle will reduce the loan default rate and minimize a university's risk in underwriting its own loan

programs. With this objective in mind, we will present some very simple research results which indicate that borrowers with more or less discretionary money in their households have very different preferences for loan features and that they select the loan features that most closely correspond to their life-styles and pocketbooks.

Method

The data we will be using in this study are extracted from a 1983 survey of borrowers who participated in an experimental Income-Contingent loan program offered by Yale in the 1970s. They were a diverse group of borrowers. Some took no other loans while at Yale; others participated in many loan programs at Yale and elsewhere. Both undergraduates and students in Yale's graduate and professional schools participated in the special loan program and in this survey.

Although the survey was multipurpose, one of its goals was specifically to garner input from borrowers concerning the loan features that they would like to see in future designs of Yale-sponsored loans. This goal was accomplished by giving the survey population a list of loan options and asking them to rate each feature on a five-point scale as to whether they would exclude or include it in a new loan design. Each of the features were rated separately, regardless of whether they could compatibly coexist in a single loan program.

We will be sharing with you some analyses based on three types of loan features: payment type, payment size, and repayment period. The exact survey wording of each loan feature is contained in Table 1 but let me summarize the options. For payment type, survey respondents rated Fixed, Graduated, and Income-Contingent types. For payment size and repayment period, they rated Large, Moderate, or Small payments in conjunction with Short, Moderate, or Long payback periods.

Our method of presentation is quite simple. For each feature, we paint a portrait of the characteristics of the population who rated it highly. There were many features that we could have chosen, but in our tables we emphasized two groups of characteristics. In Table 2 we present characteristics that are indicative of the household economic situation. Percent Not Currently Employed could indicate that the

Table 1

Loan Features

Designing a loan option

Below are listed various loan features. Some are unique to income-contingent loans, others are from conventional loans, and some features are found in both income-contingent and conventional loans. If you were designing student loans, which features would you consider including? Please rate each numbered feature (even if it is not compatible with other features in the same group).

1. Payment type

    a. Having payments of equal fixed amounts over a set period of time (e.g., for a loan of $1,800 in principal and interest, paying $180 annually for 10 years).

    b. Having payments of graduated amounts over a set period of time (e.g., for a loan of $1,800 in principal and interest, paying annually graduated payments of $135, 145, 155 . . . $225 over 10 years).

    c. Having payments of different amount over time, with the amount of payment linked directly to income (i.e., income-contingent payments).

2. Payment size and repayment period

    a. Making larger payments over a short period of time (10 years or less).

    b. Making moderate payments over a moderate period (11-20 years).

    c. Making smaller payments over a long period (21-35 years).

Source. Excerpted from "Survey of TPO/CRO Loan Participants," The Provost's Task Force on Financial Aid, May, 1983.

Table 2

Profile of Survey Respondents (by Selected Characteristics)
Who Would Include Designated Feature in New Loan Program

School	Payment type			Payment size and repayment period		
	Fixed	Graduated	Income-Contingent	Large 10 years	Moderate 11-20 years	Small 21-35 years
Mean loan debt	$10,190	$10,081	$9,622	$9,871	$9.835	$10.121
Percent not currently enployed	8.6	8.8	10.3	8.3	9.1	10.9
Percent married	58.6	57.5	54.4	59.1	56.3	53.2
Percent with income over $40,000	40.3	41.5	33.8	43.2	36.5	31.4
Percent of respondents listing this feature	63.4	66.0	82.9	52.2	81.9	50.2

Source. Office of Institutional Research 9/84.

borrower is still a student or that the borrower is a nonworking spouse. Together with Percent Married, we can get an idea of how many incomes are coming into a household. Of course, the more earners, the higher the total income, and, usually, the higher the discretionary income. For a straight income measure, we chose something unorthodox. While some Yale graduates have minimal incomes, a large proportion have very large incomes. Therefore, rather than choose a top-baised mean income as a measure of the group's income, we have used the proportion who earned over $40,000 in 1983. Our final characteristic is the mean loan debt of the borrower, which is roughly indicative of how involved the household is in loan repayment. In Table 3 we show the School of attendance of the borrower, with School being simply a surrogate for what we intrinsically know about the job market and salary picture for specific fields.

Findings

For Payment type in Table 1, we find only small differences in the Percent Not Currently Employed or the Percent Married for the groups of people who highly rated Fixed, Graduated, or Income-Contingent payment types, although it appears that survey respondents with the most likelihood of having a two-income household were less attracted to Income-Contingent payments. In addition, people with higher incomes, regardless of how many earners, were less likely to approve of Income-Contingent payments than of Fixed or Graduated ones.

The second part of Table 2 shows that the most popular type of payback was moderate-size payments over a moderate time period. You might say that this is expected because, when given a choice, people prefer moderate options. However, the particular loan program in which these people were involved matches the Income-Contingent option, namely, small payments with a long payback. So any overpreference for the Income-Contingent option would have offset the natural tendency towards the middle position. Therefore, we conclude that people really do prefer moderation in loan features. We also find that people who prefer the moderate option are intermediate in terms of cash flow between those who prefer the large and small options. But, people with

Table 3

Percentage of Survey Respondents
(Classified According to Yale School of Attendance)
Who Would Include Designated Feature in New Loan Program

School	Payment type			Payment size and repayment period			Income index
	Fixed	Graduated	Income-Contingent	Large 10 years	Moderate 11-20 years	Small 21-35 years	(Divinity = 100)
Architecture	43.7	66.7	100.0	44.4	94.7	58.8	235
Art	77.0	61.5	85.2	53.9	76.0	60.0	162
Arts and sciences	64.8	57.6	85.4	59.2	87.6	51.8	196
Divinity	63.8	45.4	93.1	46.1	89.9	62.5	100
Drama	55.1	42.8	93.3	50.0	86.2	50.0	166
Forestry	55.0	60.0	80.9	66.7	90.0	40.0	178
Law	75.0	75.3	75.7	66.7	77.3	49.3	353
Medicine	64.5	77.1	74.5	73.9	78.3	46.7	322
Music	50.0	61.1	70.0	52.6	61.1	26.4	171
Yale College	61.4	68.7	82.5	56.5	81.4	49.7	230
Percent of all respondents listing this feature	62.4	66.0	82.9	57.2	81.9	50.2	

Source. Office of Institutional Research 9/84.

less money often opt for easier payback (i.e., small payments over a long period of time).

Turning to Table 3, we see the percentage of students from each school who rated a loan feature highly. For each school, we have included an index of mean income (with Divinity as the base index), for the graduates who are currently earning salaries in order to give an indication of the rank in salaries in different fields. This index is not, however, a measure of household income nor is it a reflection of a household's discretionary income.

Drama and divinity, two schools with low income profiles, were among those most likely to prefer Income-Contingent loans and the least likely to prefer Graduated loans. From other survey information, we know that not only are their salaries low, but their income growth is negligible. In this situation, it is logical that Graduated payments would be feared, since they are graduated with an ideal income growth curve and not with the graduates actual growth curve, as are Income-Contingent payments. But, even though drama and divinity graduates did prefer Income-Contingent payback, they did not express preference for the Small payment size and Long payback period option that the Yale Income-Contingent loan offered. In fact, no school preferred small payments over a long period of time. Instead, the majority preferred the Moderate payment/payback option.

At the opposite end of the income ladder are the schools of law and medicine. The law borrowers had absolutely no preference about payment type. Their high success of job acquisition immediately upon graduation combined with high initial salaries likely gives them the cash inflow to pay back loans with relative ease, regardless of whether they are either Fixed, Graduated, or Income-Contingent. Medicine graduates, on the other hand, show a small relative dislike for Fixed payments. This may perhaps reflect their post-graduate years of residency in which their salaries are relatively low, but during which loans must be paid back. Both law and medicine borrowers did express a dislike for long payback compared to other options. Subjective comments included with the survey indicated that people with comfortable incomes prefer to pay off their loans and get them out of the way.

Summary and Recommendations

From our brief examples, we can see that loan borrowers with life-styles that provide them with more or less money to spend have different preferences about the loan features that are best. Presumably, this means "best for them." Since we know that students attending different schools have somewhat predictable differences in future life-styles, especially in terms of job availability and potential salaries, it seems reasonable for loan administrators to try to customize loan types to the student's future financial situation, as best as it can be foreseen. Admittedly, this may be an unrealistic goal when granting aid to a freshman who has no definite future plans. Students in graduate or professional school or seniors with definite career or graduate school plans are better targets for this loan customization approach.

In addition, recognition of a borrower's future payback burden should also play a part in the decision to give the borrower a specific ratio of loan and grant, with special features. For example, and undergraduate who intends to go on to graduate school in the Humanities, usually considered a six or seven-year proposition, is not a good candidate for a loan that accrues interest while still in school; by the time the student finishes school, eight or nine years of accrued interest on any size loan could be too much of a burden to handle.

In conclusion, in order to minimize loan default, which entails not only a loss of revenue in the case of a university-sponsored loan, but also the risk of alienating alumni and possibly reducing alumni-giving, loan officers should make every effort to be sensitive to individual needs in these days of growing student debt and loan default.

THE BUDGET OFFICE PERSPECTIVE: BUDGETING FOR STUDENT LOANS

Mark F. Jacox
Yale University

Background and Objectives

In response to growing tuition burdens on students, private universities are increasingly concerned about the role institutions can play in helping students finance their educations. In recent years, a greater proportion of student aid has been provided through loans. The purpose of this paper is to examine the extent to which universities can become involved in supporting students through student loans and to review what alternatives these institutions face. The paper briefly addresses lending and financing alternatives available to educational institutions and presents a model to project student loan needs and to analyze financial statement results.

The figures used in this study do not necessarily reflect the most recent terms and conditions actually available in the marketplace, nor has any attempt been made to analyze recent tax legislation or to reach conclusions about the availability of various sources of funding. The intent is to outline the major considerations that apply to decision making about student loan programs.

Although the analysis of lending and borrowing alternatives can be treated separately, an institution will want to optomize its overall strategy to satisfy program as well as financial goals. The model included in this paper focuses on projecting student loan needs as the basis for subsequently weighing alternative strategies. Each lending and financing alternative (shown in Table 1) is discussed from the standpoint of financial costs and returns, with brief references to nonfinancial considerations where they are warranted.

Lending Alternatives

1. On the surface, the least burdensome alternative for an institution is not to lend money to students at all, thus avoiding the risk of loan defaults inherent in any lending program while also eliminating the need to develop an administrative support system or to choose between the benefits of a loan program and other program needs. To

Table 1

Lending and Financing Alternatives

	Characteristics
Lending Alternatives	
1. No lending	No support system. Strain on aid to satisfy academic goals.
2. National Direct Student Loan (NDSL)	University matches with 10% own funds. High return on invested funds. Risk offset by ability to assign to federal government. Low cost to student. Administrative costs.
3. Guaranteed Student Loan (FISL, GSL)	Guaranteed against default. Allowance paid to university. Moderately low rate to student. Saleable to SLMA. Cost = cost of capital + administration.
4. Auxiliary Loans to to Assist Students (ALAS)	Guaranteed against default. Allowance paid to university. Nearly market rate to student. Only for graduate studies. Cost = cost of capital + administration.
5. Internal Loans	Rates determined by university. Cost = cost of capital + administration. University bears risk of default.
Financing Alternatives	
1. Private Gifts	Trade-offs vs. other needs.
2. Operating Funds	Trade-offs vs. other needs.
3. Federal Grants	Hidden costs?
4. Borrowing in Open Market	Market rates and terms. Danger of balancing assets/liabilities and anticipating rate changes.
5. Tax-Exempt Loan Authorities	Lowest rates. Availability?

the extent that the availability of loans is needed to attract good students, this may not be a realistic alternative. An institution may, however, restrict its activities to helping students secure loans from outside lenders.

2. Most schools are eligible to receive federal support in the form of NDSL grants. (See Table 1). These loan grants provide funds to the institution which, although, technically, callable by the federal government are, practically speaking, outright grants to be matched by the institution. They are augmented annually, repaid to the institution to replenish loan funds, and carry low interest rates for students. The return on invested funds can be viewed as the interest being paid by the students (3-5% of the entire balance) in relation to the institution's funding contribution, which is only 10% of the total being lent. Thus this alternative has real advantages to both borrower and lender.

For example, for each $100,000 in NDSL loans made to students, the institution must invest $10,000 of its own funds. The return on invested funds, at 5% on the outstanding balance loaned, would be approximately 36% if the loans were deferred for 4 years and repaid over the following 10 years.

3. Loans with government guarantees against default (GSL, ALAS) provide a second form of federal assistance to lending institutions. (See Table 2 for a summary of GSL and ALAS terms.) The government removes the risk of default from the institution and provides the institution an allowance of 3.5% over the current Treasury Bill rates. In addition, GSL can be sold through SLMA, removing the burden of administering collections from the institution while reducing pressures to borrow funds or set aside funds with other potential uses.

An analysis of the return on GSL lending relies on projections of annual loan needs, the anticipated level of sales to SLMA, expectations of Treasury Bill rates, the institution's cost of capital, and the cost of administering the program. To break even, the cost of administering a loan program needs to be less than the spread between the total return on notes outstanding and the cost of funds invested in the program (either borrowed or internally generated applying the cost of capital).

From date of issuance to the date repayment begins, GSLs earn the lender an origination fee (5% as an advance against subsequent

Table 2

Comparison of GSL and ALAS

Source	Type	GSL	ALAS
Revenue generated during the period before repayment begins			
Federal government	Origination fee[a]	5%	0
	Allowance[a]	T-Bill + 3.5%	T-Bill + 3.5%
	Interest subsidy	7-9%[b]	0
Borrower	Interest payments	0	12%
Total return	Maximum	T-Bill + 3.5%	T-Bill + 3.5%
	Minimum	7-9%	12%
Revenue generated after repayment begins			
Federal government	Allowance[a]	T-Bills + 3.5%	T-Bill + 3.5%
Borrower	Interest payments	7-9%[b]	12%[c]
Total return	Maximum	T-Bill + 3.5%	T-Bill + 3.5%
	Minimum	7-9%	12%[c]

[a]Origination fees are subsequently netted out of allowance payments. Therefore, the difference between the GSL and ALAS allowance is one of timing, not of amount.

[b]Depending on date of issuance.

[c]Applied to amount capitalized (face value plus interest not paid from date of repayment).

earnings), a special allowance (Treasury Bill rate plus 3.5% net of origination fee), and an interest subsidy equal to the rate students would be paying if the loans were in repayment. The special allowance is paid as long as the loans are outstanding (until sold or fully repaid). The interest subsidy is paid only until the students begin to repay the loans. The total return is defined by a maximum of the Treasury Bill (T-Bill) plus 3.5% and a minimum of the notes' interest rate if T-Bill + 3.5% is lower.

ALAS loans are essentially the same as GSL except that they are available only for graduate and professional studies, the minimum total return is protected by a 12% floor, and a borrower may choose to pay

interest as it is due or to have all accrued interest capitalized at the time of loan repayment. The interest earned during the period prior to repayment is paid by the government under GSL, but by the borrower under ALAS.

4. The last type of loan considered here is an institution's own lending to students. Although this is an area open to considerable creativity, only one type of loan, with level payments and accrued interest capitalized at the time of repayment, will be discussed. Such loans may earn market rates of interest or lower (subsidized) rates set by the institution to further academic policies.

As with ALAS loans, the financial value of these loans depends on the spread between interest charged to borrowers and the institution's cost of capital less administrative costs. In the case of the institution's own loans, however, considerable risk is added. That risk can be included in the analysis as a projection of loan losses or as a higher cost of capital.

In the end, however, the relative merit of any of these loan types must be considered in the context of the school's program requirements, institutional policy the financing alternatives used, and other competing uses for such funds.

Financing Alternatives

Funding for student loans may come from federal grants, private gifts, income from restricted endowments, operating surpluses or reserves, or from borrowed funds. Each source bears some cost to the institution. Gifts are generally the preferred source of funds, although these have an implicit cost to the extent that such funds might otherwise be given for unrestricted general purposes or other specific funding needs. The institution needs to weigh the benefits of the student loan program therefore, against other programs and needs.

Federal grants are also relatively low-cost alternatives. For example, NDSL requires that 10% of the loans granted under the program must be funded from the institution's resources. The dangers are that administrative overhead (such as increased reporting requirements) is not covered, and once the expectation that grants will be received is built into a program, funding may diminish or disappear, straining other funding sources.

Operating surpluses or reserves are another source of funding for loans. Implicit in their use, however, are trade-offs against other program funding or reductions in fees such as tuition or room and board.

For most institutions, the supply of money available from the preceding sources is severely limited. To cover a substantial lending program, an institution normally will have to consider borrowing from outside lenders such as banks, insurance companies, and pension funds or through tax-exempt loan authorities. Terms of such borrowings will include a variety of rates and maturities linked to the institution's credit rating.

The goal of an institution engaged in substantial lending is to generate positive cash flows that it can protect against market changes by flexibility in its loan assets and liabilities and by predictability in its lending and borrowing rates. To protect these fund flows, institutions need to secure the lowest rates available. The cost of borrowed funds will depend on the institution's credit rating, the type of instrument used, and current market rates.

Although no specific formula can predict a credit rating reliably, evidence of the general financial and academic health of the institution is required, such as levels of endowment and expendable fund balances, a history of balanced operating results, relative debt burden, the quality of management, and student admission and yield levels. To aid in analyzing some of these conditions, the following model was designed to project pro forma financial statements under conditions defined by the user.

Concern with interest rates is most critical if an institution lends to students at rates fixed at the outset while borrowing at rates pegged to current indices. If it has lent out funds for relatively long terms at set rates, while the interest rates on the funds it has borrowed continue to rise, eventually the institution will lose money on these transactions. The institution should, therefore, attempt to balance the rates and maturities of its lending and borrowing, and, to the extent possible, obtain rates that are fixed or provide generous earnings spreads. For many institutions, borrowing through a tax-exempt state loan authority will provide the lowest rates available. Statewide capitation limits in

recent tax legislation, however, may restrict the availability of such funds to schools in some areas.

The Model

The model is designed to assist in analyzing and budgeting student needs and costs and to provide a means of identifying danger singals associated with certain circumstances and expectations. The budget model consists of three components: an input section, which uses data gathered through an annual loan survey to calculate new loans distributed each year; a repayment section, which incorporates the terms of the loan types discussed in the preceding section, and an output section, which integrates the first two and calculates loans entering repayment each year, projecting funds flows and creating pro forma financial statements.

The model is set up to run using LOTUS 1-2-3, and it is broken into three files for use on machines with limited memory capacities. Table 3 summarizes the model's contents.

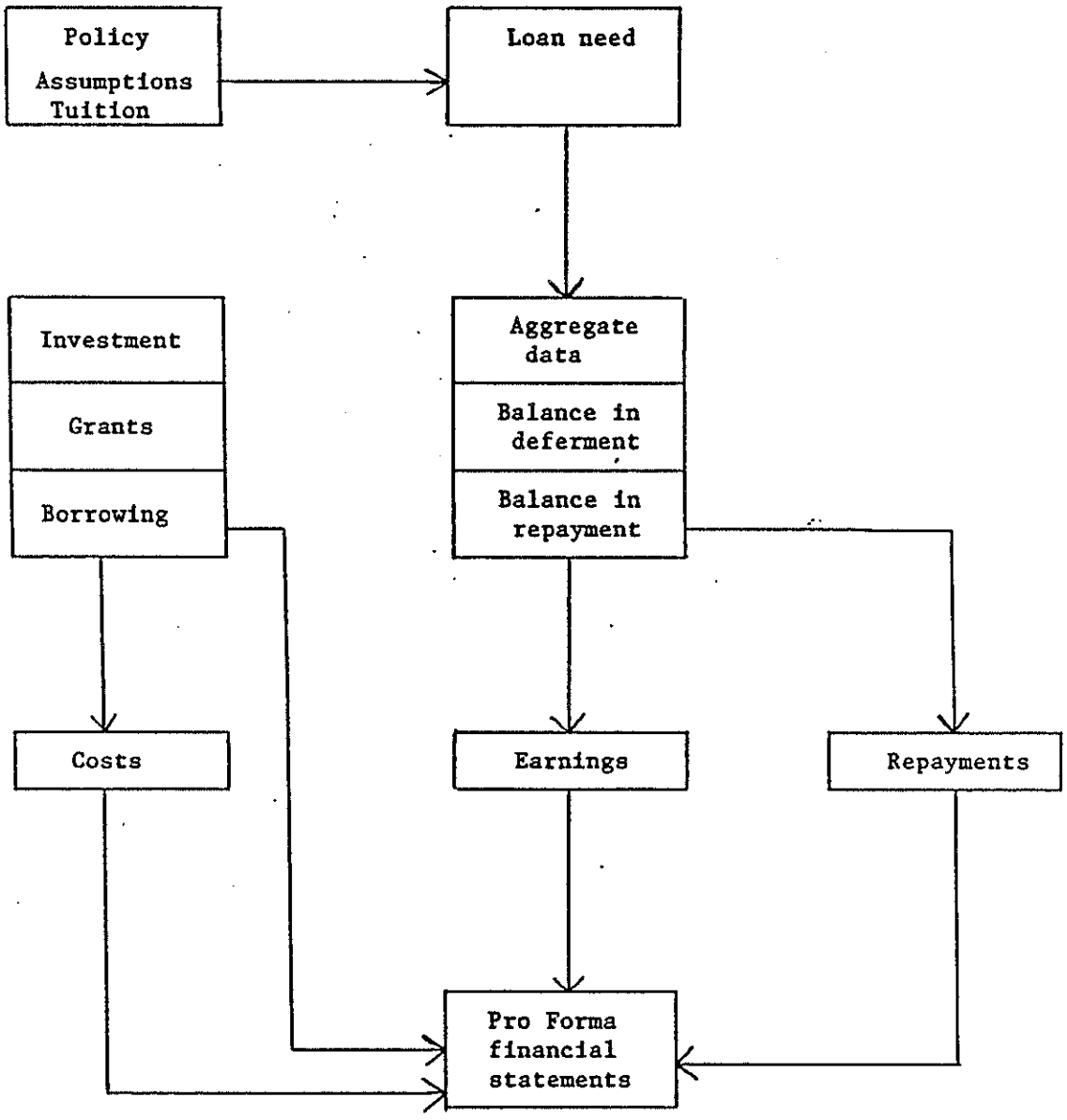
The input section separates programs into undergraduate, graduate, and professional programs of various lengths. Loan types are applied according to a loan-use hierarchy, which can be made specific to each program. Loan need is gathered from programs and applied in "buckets" of loan need per student ($0-5,000; $5,000-8,000; and over $8,000) in order to approximate the limits of primary lending programs. Although the model can be tailored to any specific circumstances, the version included in this discussion uses the following assumptions:

1. Loan need grows at the same rate as projected increases in tuition rates. This assumption ignores the possibility that self-help levels, nonloan sources, and family income levels may grow at different rates, thus affecting the rate of growth of student loan needs.

2. The loan hierarchy for all programs specifies that GSL loans are to be used first, followed in order by NDSL, ALAS (where applicable), and institutional loan programs. An institution can, of course, vary this hierarchy and include other aid types such as fellowships, scholarships, and work-study.

3. All lending under these types is performed by the institution, whereas, in all likelihood, some borrowing could be handled by outside lenders.

Table 3. Loan model summary.



4. For simplicity, all accrued interest is capitalized at the time of repayment, and only three rates are used: 5% for NDSL, 8% for GSL, and 12% for ALAS and institutional loans.

5. Loan repayments are deferred for one year after graduation. All repayments are calculated for ten years, at a fixed rate and level payments.

6. A fixed percentage (95%) of GSL are sold to SLMA each year.

Using the new loan output from the first section, the calculation section projects loans entering repayment by length of program and lending type. It incorporates the accrual and capitalization of interest, the deferal of loans until after graduation, and sales of GSL loans. Its output is used to calculate the repayment schedules in the final section of the model. These projections are then used in the calculation section to produce pro forma financial statements. Once financial statements are produced, the user can vary inputs and assumptions and test for sensitivity to different kinds of changes. The user is able to assess the effect of changes in market conditions or loan programs on the institution's financial position and to determine what kinds of circumstances would render a program undesirable.

Loan need is driven largely by institutional policies. While the assumptions used in this model tend to reflect Yale's policies, the model can be modified to suit other sets of assumptions.

Conclusion

The analysis in this paper only begins a study of student loans. Further work is necessary to characterize lending patterns over time and at different institutions. As more data become available, research can tell us more about the relationships between student loan needs and changes in the general economy and in the economics of higher education. This paper has used rather simple assumptions concerning some of these relationships that limit its predictive value to a general examination of alternatives. More reliable measures await the testing of the logic embodied in these assumptions.

ARTICULATING THE CAMPUS PLANNING AND BUDGETING PROCESSES: A CASE STUDY

Michael F. Middaugh
Office of Institutional Research and Planning
SUNY College of Technology

This paper was not written to be an intellectual smorgasbord of the current literature on strategic planning and budgeting in higher education. Rather, it is intended to be a documented history of how one institution examined itself and the environment in which it operates and developed processes for charting its future within the context of existing political and fiscal reality.

The SUNY College of Technology is the youngest of the 64 units in the State University of New York System. Founded in 1966, the College is an upper division institution offering baccalaureate study in engineering technology, computer science, business and public management, applied sciences, and nursing. The College also currently offers a master's degree in computer and information science, with master's level study in design stages for business and engineering science. While the educational mission and curricular offerings of the College are now clearly focused, this has not always been the case. The events surrounding that focusing process clearly precipitated the need for systematic planning and budgeting processes and, more precisely, processes that are fully integrated and articulated. A brief synopsis of those events will provide the necessary context for describing the main body of this paper.

The College accepted its first transfer class in Fall 1973, having spent its first seven years as an outreach site for graduate teacher education programs offered by another SUNY unit. Originally called Upper Division College at Utica/Rome, the institution was envisioned by its first president as a capping stone for most professional curricula offered at the lower division level in the state's public community and agricultural and technical colleges. During the early years, the College's enrollments grew exponentially from 450 full-time equivalent students (FTEs) in 1973 to nearly 2,300 FTEs in 1982. When the College opened its doors to undergraduates in 1973, it had four approved programs of study. That number had grown to 23 by 1980. Moreover,

the programs represented a curricular diversity characteristic of the two-year lower division institutions. In addition to the programs within the institution's current focused mission, programs were offered leading to the bachelor's degree in criminal justice, human services, and vocational-technical education, with master's level study offered in teacher education and vocational-technical education.

During the early 1970s, New York State acquired a 450-acre parcel of land outside of the City of Utica, and hired a consulting firm to develop a master planning document for the construction of a campus intended to serve 6,000 FTE students by 1980. During the halcyon period of higher education from 1970 through 1977, the growth in enrollments and programs at Upper Division College, coupled with the development of plans for construction of a permanent campus to replace the existing leased facilities, produced a portrait of a future with unlimited potential for growth and expansion. And then the bottom fell out.

The fiscal crisis in New York State in 1976 brought a freeze on capital construction within the State University System. At the same time, postsecondary institutions were beginning to come to terms with the impending decline in college-bound high school seniors owing to the demise of the postwar baby boom. Suddenly, the College's future was beset by clouds of doubt. By the end of the 1970s, the institution, housed in a nineteenth-century woolen mill and faced with the same enrollment difficulties as other SUNY units, became the focus of some very difficult political questions. Could the State University of New York justify construction of a sixty-fourth campus in a period of decline? Would this embryonic unit compete for the same students as other SUNY campuses, thereby producing a duplication of services in the face of shrinking fiscal resources? The solution to these dilemmas was as much political in nature as it was rational.

The concrete action steps growing out of that solution produced the environmental conditions that nurtured the development of the College's current planning and budgeting processes.

In April 1981, the State University Board of Trustees, responding to a mandate for construction of a permanent campus for the College of Technology within an environment of reduced fiscal resources, passed a

resolution permitting construction of a campus while narrowing the educational mission of the institution. Specifically, the resolution stated that:

> The goal of the University will be to build and equip a facility that will adequately house upper division study in the engineering technologies, computer science, applied science, management and general education, and graduate study in the engineering sciences, computer science, and management science, not to exceed 1,400 full-time equivalent students.

The focusing of the mission, coupled with the mandate to reduce enrollments from the 1982 peak of 2,263 FTEs to 1,400 FTEs by the time the new campus opened in 1985, necessitated a reexamination and realignment of the existing programs at the College. The Trustees' resolution provided clear guidance:

> The College of Technology shall withdraw from and transfer to other appropriate institutions those programs that are not closely allied to its central mission, as determined by the Board of Trustees, and are more in line with the missions, resources, and expertise found on other campuses.

The resolution resulted in the discontinuance of the programs in criminal justice and human services, the transfer of the program in vocational-technical education to another SUNY unit, and the return of the graduate teacher education program to its cooperative sponsor. These steps required a phased reduction in enrollments in nonmission programs while permitting growth and vitality in those curricula that were to remain. Similarly, financial and human resources to support the College in its focused, more technologically oriented mission would have to be forthcoming. Hard decisions faced the institution, and the need was obvious for a planning and budgeting process that would enjoy campus community support and, at the same time, be flexible and realistic enough to permit institutional adaptation to changing environmental circumstances.

In 1982 the College inaugurated its second president, an individual who is fully committed to data-based decision making and strategic planning. Nine months after taking office, the president reorganized his administrative staff, changed the title of the Director of Institutional Research to Assistant to the President for Institutional Research and

Planning, and set out to establish at the College of Technology a broadly participatory planning, budgeting, and evaluation process.

Coincidentally, the College of Technology was undergoing reaccreditation by the Middle States Association of Colleges and Schools. The decision was made to use the institutional self-study process as a launching pad for design and implementation of a campuswide planning process. The self-study task forces were asked to identify the major issues and problems facing the College in both immediate and future time frames and to develop alternative recommendations for addressing them. These task force reports were assembled into a single document in early 1984 by the Assistant to the President for Institutional Research and Planning.

During the months while the self-study task forces were assembling their reports, the President and Assistant to the President worked actively to define the context for institutional planning and to design the organizational structures to facilitate the process. In defining the planning context, George Keller's book, Academic Strategy: The Management Revolution in American Higher Education, proved extremely helpful. Keller offers 10 admonitions to practitioners preparing to implement a planning process. They are significant and bear repeating. Specifically, he noted that strategic planning is not:

1. The production of a blueprint.
2. A set of platitudes.
3. The personal vision of the president or board of trustees.
4. A collection of departmental plans, compiled and edited.
5. Done by planners.
6. A substitution of numbers of important intangibles.
7. A surrender to market conditions and trends.
8. Done on an annual retreat
9. A way of eliminating risks
10. An attempt to read tea leaves and outwit the future.

These observations, seemingly obvious on face, struck home. The College of Technology had a history of producing five-year plans and allowing them to gather dust in the intervening 4 years. The five-year

plans were invariably the synthesis of division and departmental five-year plans, which also went unheeded and unused. Indeed, during its first 9 years, the planning direction of the College was the vision of a strong, autocratic president whose administrative style was probably essential to secure the political survival of the institution but which, having secured that survival, was now an impediment to the growth and development of the College within its current environmental context.

The new College president sought to open the planning process. The Office of Institutional Research and Planning was clearly identified as a resource office to assist planners; planning was not to be centralized in that office, but to be coordinated by it.

The Assistant to the President for Institutional Research and Planning devoted nearly all of his time to reading books and journals and attending workshops dealing with strategic planning. Especially helpful were visitations to Kings College in Wilkes-Barre, Pennsylvania, where a campuswide planning process was recently implemented, and attendance at an NCHEMS workshop on planning. An annotated bibliography on planning distributed at the NCHEMS workshop has subsequently been embellished by this author, who will be happy to share it with the reader upon request. The upshot of all of this preparatory activity was the design of a planning process for the College of Technology and the addition of an eleventh commandment to Keller's original list of 10 traits not characteristic of strategic planning. Specifically, the president and his assistant insisted that planning on the campus would <u>not</u> be divorced from the budgetary process, but would be an integral complement to it.

Those contemplating initiating a planning process, or redesigning an existing process to accommodate more quantitative analysis and concomitant involvement of the Office of Institutional Research should understand from the outset that territoriality will be a real issue. It took no small expenditure of energy to convince campus constituencies at the College of Technology that the Office of Institutional Research and Planning was not attempting to (a) seize control of planning for academic programs, (b) seize control of the budgetary process, (c) create an organizational structure that would result in nothing more than "busy work" for harried administrators. In developing a process appropriate for an individual campus, the designers should be prepared for a period

of extended negotiating and educating to assuage fears among various campus constituencies that their traditional areas of responsibility are being eroded or encroached upon.

The College of Technology has developed a planning, budgeting, and evaluation process which will enable it to pursue aggressively its educational mission within an external environment that is constantly changing. The College has developed the necessary structures to monitor that environment (e.g., student markets, employer needs, fiscal resources, etc.) and do so in a manner that permits it to adapt without yielding to market pressures or abandoning its central mission.

The task force reports from the College's institutional self-study process were distributed to all deans, department heads, program coordinators, and senior office managers. These unit heads were advised to use the information in the task force reports, enhanced by their own intimate knowledge of their operations, to achieve the following ends. Specifically, each individual was to produce a document for discussion purposes that would:

1. Define human and fiscal resource needs for the next 12 to 18 months in precise and specific terms.

2. Describe in detail how the resource requirements relate to the unit's planning objectives.

3. Describe in detail how the unit's planning objectives are related to the College's mission, goals, and objectives as identified and ratified by the campus community in the institutional self-study process.

4. Specify criteria against which the unit can be evaluated to measure progress toward stated planning objectives.

Each campus planner was invited to review his/her planning document with the president and his executive council. The dialogue accompanying this collaborative review yielded several fruits: (a) The president and his senior staff were directly informed of unit planning directions and resource requirements. It became clear that information of this quality had not always filtered its way to the top in the past. As a result, considerable frustration and resentment accompanied resource request denials, which frequently occurred without explanation. (b) Campus planners were given immediate feedback from the president

as to the viability of their planning direction, the prospect for immediate funding, and the likelihood of future funding should immediate resources not be forthcoming. (c) Each planning unit became aware of the activity of others. The concern that some units were getting preferential resource treatment would not be put to rest as discussion and debate over allocations occurred in an open forum.

Having achieved a broad overview of the general planning direction of each of the campus' operational units, a formal planning cycle was put into place, a cycle consistent with the New York State fiscal year and the bureaucratic machinery that accompanies generation of a state budget. The first step in implementing that planning cycle was the creation of a Campuswide Planning Committee. That committee had to be broadly representative, and the decision was made to populate it on the basis of incumbency in specific campus positions. Specifically, the committee is comprised of the following individuals:

1. Four faculty members appointed by Faculty Assembly on basis of service on Faculty Assembly Standing Committee on Planning and Budgeting.
2. Each of the five academic deans.
3 Dean of Students.
4. Director of Library Services.
5. Director of Academic Support Services.
6. Director of Computing Services.
7. Director of Business Affairs.
8. Director of Personnel.
9. Director of Facilities.
10. Director of Public Safety.
11. Director of Development.
12. President of Student Government.

In addition to the 19 individuals formally appointed to the Campuswide Planning Committee, the Assistant to the President for Institutional Research and Planning serves in an ex officio capacity to provide support and analytical resources to the Committee in its deliberations. The Campuswide Planning Committee serves as the primary advisory body to the president and his executive council in making resource allocation decisions within a given fiscal year. As a

state agency, much of the College's annual budget is formula driven, with only a small portion of that budget given over to discretionary dollars. Therefore, it is imperative that the campus community understand which portions of the budget are mandated expenditures and which portions are allocated at the discretion of the President. Within the latter category, it is equally important that the campus community understand that discretionary allocations are made on the basis of institutional priorities and that these priorities reflect the institutional mission, goals, and objectives. It is the Campuswide Planning Committee that makes the initial pass at prioritizing resource requests.

The Campuswide Planning Committee annually holds hearings to discuss with all academic administrative managers their resource requests for the coming fiscal year. Dialogue between the Committee and the manager focuses on how the request(s) relate to the institutional mission, goals, and objectives and how the request(s) impact upon the unit's five-year plan. Each year, during the hearings, the manager is expected to provide the Committee with evaluative evidence of progress toward stated planning objectives and to update the five-year plan in light of that progress (or lack of it). Figure 1 is a diagrammatic representation of the relationship between the activities of the Campuswide Planning Committee and the various planning units across the College.

The College's fiscal year is consonant with that of the State of New York (i.e., April 1 through March 31). Therefore, the hearing schedule and subsequent deliberations must fall within that budgeting cycle. Figure 2 displays the time line for the various activities integral to linking the planning and budgeting processes at the College of Technology.

The planning and budgeting process at the College is now firmly established. While not without its flaws, the process is nonetheless superior to its predecessors in that it enjoys broad campus support and has clearly established a linkage between institutional direction, institutional expenditures, and the educational mission of the institution. The process is constantly being refined in an attempt to achieve maximum institutional stability in the face of a constantly changing external environment.

Figure 1. Components of the college planning process

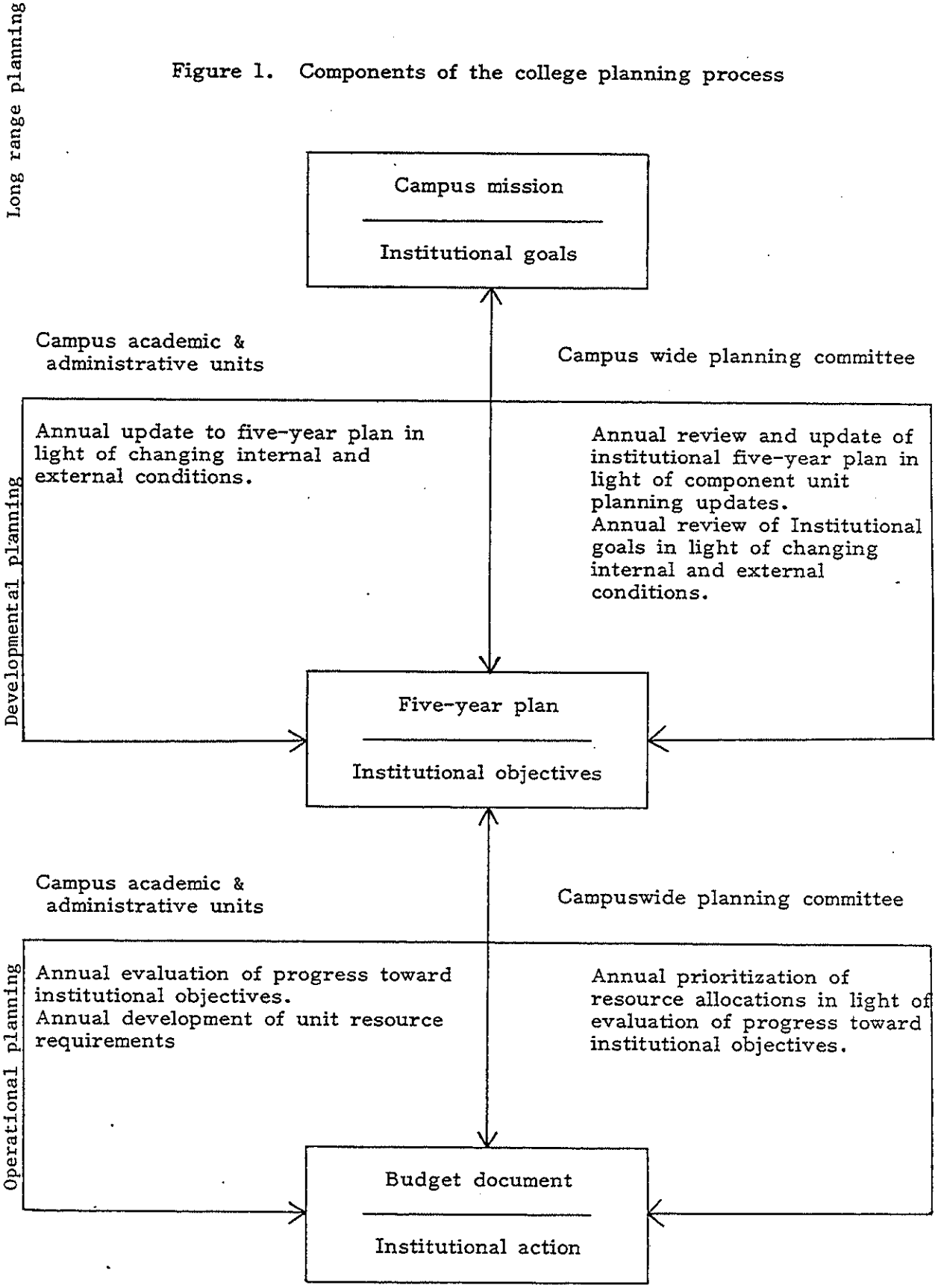


Figure 2. Annual time line for activities of Campuswide Planning Committee within College's planning, budgeting, and evaluation cycle.

January	January 15	Executive budget released; campus is made aware of probable funding level for next fiscal year.
February	February 1-March 15	Campuswide Planning Committee holds hearings to obtain resource requests for coming fiscal year, accompanied by annual update of unit five-year plans.
March	March 31	End of old fiscal year.
	April 1	Start of new fiscal year.
April	March 16-April 1	Office of Institutional Research and Planning synthesizes hearings transcripts and draft planning documents into single plan for presentation to executive council.
May	May 1-May 15	Campuswide Planning Committee works with Executive Council on final set of priorities for resource allocations to be included in preliminary budget request.
June		
July		
	July 15	Preliminary budget request for coming fiscal year submitted to Central Administration.
August		
September	September 1	Final budget request for coming fiscal year submitted to Central Administration.
October	October 15-December 15	Executive Council apprises Planning Committee of Prospects for Executive Budget, and the two bodies jointly examine allocation priorities and scenarios prior to release of Executive Budget.
November		
December		

Reference

Keller, G. Academic strategy: The management revolution in higher education. Baltimore, Md.: Johns Hopkins University Press, 1983.

INSTITUTIONAL PLANNING AS A PARTICIPATIVE PROCESS: A COMMUNITY COLLEGE SELF-STUDY

Alan J. Sturtz
Office of Institutional Research, Planning, and Development
South Central Community College

Introduction

As monetary cutbacks, shifting educational needs, and financial and programmatic accountability become increasingly significant concerns, a sound basis for decision making becomes a necessity. As an agency of the state of Connecticut, South Central Community College does not develop its plans independently, but rather must fit within the context of the policies and goals of the Board of Trustees of Regional Community Colleges. It is South Central's responsibility to describe its goals, show how they are of benefit to the region and the state, evaluate its current success in achieving these goals, and provide a basis for estimating the future needs of the people of Connecticut.

The major problem that South Central Community College will face in the remainder of this decade will be the scarce financial resources appropriated by the state legislature and administered under the auspices of the Board of Trustees of Regional Community Colleges. Limitations on personnel and financial resources, coupled with increasing enrollment, will make it difficult to effectively maintain and improve institutional quality. If the College is to continue to be flexible with regard to needed programs and services, its various needs will have to be coordinated, documented, justified, and prioritized to use available personnel resources, physical facilities, and equipment effectively.

The overriding purpose of the Institutional Plan is to provide guidelines for the development of South Central Community College through the 1980s and to serve as the basis for its continued strengthening. The plan is designed primarily to develop the academic and related support areas necessary for both degree and extension offerings needed in the College's service region. This focus is supported by the goals of the Academic Affairs, Student Services, Community Services, and Administrative Services divisions of the College.

1980-1981: The Self-Study

When South Central Community College was preparing for an accreditation visit by the New England Association of Schools and Colleges in 1981, it did not have an effective long-range planning process; no detailed planning documents were developed previous to the self-study. Short-range planning, while effective within the various departments or divisions, was plagued at the institutional level by insufficient communication of planning efforts across divisional lines. Funds obtained under Title III (Strengthening Developing Institutions Program) of the Higher Education Act were committed in 1980-1981 to implement a long-range planning process. The process was to be modeled on the three-year planning cycle developed by the National Center for Higher Education Management Systems (NCHEMS) and would use the existing organizational structure of the College. It was recommended that the self-study be used as the basis for the College's first three-year plan. In future years, information contained in the self-study would be revised by a Planning Council (at that time, ad hoc) in light of changing demographic and educational trends.

The Planning Council became a permanent committee of the College in 1981; the concept of the three-year format-specific objectives (Year 1); general projections (Year 2); and assessing the College's potential (Year 3)--is still being developed.

1981-1984: Development of the Planning Cycle

The Planning Council

Since November 1981, the planning process at South Central Community College has been accelerating. In order to meet external deadlines for federal funding, a long-range institutional plan--initiated in 1980-81, with the College's Self-Study Report as the basis for first year assumptions--was developed. The Planning Council, chaired by the Director of Institutional Research, Planning, and Development (IRPD), became the pivotal committee for the institutional planning process. Its structure was designated by the President of the College to include an elected, representative body of faculty, nonteaching professional staff, mid-level administrators, classified staff and students, and executive

management--deans of the College and the Director of Community Services. (The Director of IRPD is also in the management group.)

Although it was created as part of the self-study process, the Planning Council was first convened in Fall 1981 and was confronted with an unwieldy document. This document included all the "objectives" each department or division at the College desired to accomplish under the goals developed during the self-study process. Part of the problem was that departments wanted to accomplish as new objectives many of the tasks they were doing as routine day-to-day functions. A more focused approach would have to be developed.

Phase 1: Review and Appraisal

The Planning Council set itself to the task for which it would become responsible: to review the MISSION for the Regional Community Colleges as set out in the state statutes (public institutions have to cope with this); review the role and scope of South Central Community College within the context of the Mission (this statement was developed by the College under guidelines prepared by the Board of Trustees); and develop planning assumptions upon which institutional GOALS would be developed and prioritized. The assumptions are based on reports published by the Office of Institutional Research, Planning and Development and include information concerning:

1. The service region.
2. College funding.
3. Student profile and enrollment.
4. Facilities and resources.
5. Staffing.
6. Programs and services.
7. Governance.

Based on a discussion of these planning assumptions, institutional goals were developed. For the 1982-87 cycle there were 11; for the 1983-88 cycle there were 12. It became evident that the development and the accomplishment of so many goals was extremely unrealistic: the Planning Council was establishing goals that were too specific and departments were looking to develop objectives to complete for each goal. During the Fall of 1983, discussion in the Planning Council centered

around the premise that some goals were really statements of objectives that should be accomplished under broader goals. A review of the assumptions and previous goal statements resulted in the development of six goal statements in the current plan. The Planning Council realized that these six goals were broad enough to carry the College through the rest of the decade; the major emphasis in the planning process now would be to let one division know what another division was doing.

The 1983-84 cycle included an expanded number of participants in the planning process. The chairperson of the Planning Council met with the chairpersons of the various standing committees in the College's governance structure to get a different perspective on what needed to be accomplished. The interesting part of these conversations was that they addressed the College's goals from the perspective of academic standards, curriculum and instruction, recruitment and retention, and governance. Also, the committee chairpersons were asked to attend the meetings of the Planning Council and provide input.

In true collegial fashion the goals were throughly discussed for clarity and intent. Prioritization was arrived at by consensus.

Phase 2: Divisional Goals

This phase begins with the Deans of Academic Affairs, Student Services, and Administrative Services calling meetings of their department heads to discuss the institutional goals. Their task is to meet with their faculty and staffs to develop divisional goals--which become institutional objectives--and to plan the activities for carrying out those objectives. This process takes place at the beginning of the spring semester. During 1983-84, for the first time, the chair of the Planning Council met with the respective deans and their department heads to discuss the assumptions and goals and to answer questions about the process. (I was available to meet with individual departments to discuss the development of objectives and budgets.) Department heads are also asked to prepare two-year budgets for their departments, including justifications for all new personnel, educational and institutional equipment, and regular line-item expenses. This blue-sky part of the planning process lasts about two months. Reality, in the form of the institutional allocation from the Board of Trustee, sets in in mid-June

when the College discovers that the funds it receives from the state does not cover the requests for supplies, equipment, and professional activities.

Phase 3: Reformatting

The divisional goals are reviewed by the Director of IRPD to make sure they are stated in the form of measurable objectives (rather than daily activities) and prioritized under the appropriate institutional goal for funding (if necessary). Part of the process is the discovery of how much can be (and later must be) accomplished without the immediate expenditure of funds. This is also the phase where the three individual parts are combined into a single institutional document.

Phase 4: Approval

The planning document is then presented to the President for his final review and approval. It should be stated here that the President and the Executive Council are given periodic updates on the development of the plan by the Director of IRPD. According to the approved priorities for institutional objectives, funds for operating expenses and institutional and educational equipment are then allocated to the deans by the President; the deans must then review their priorities for allocation of funds to meet divisional objectives. The document is then distributed to the college community.

Phase 5: Renewal

The process commences again during the fall semester, using changes in the meeting format, the inclusion of different groups of staff, or some other combination of factors to increase communication and facilitate the entire process. Revisions are to be expected in the event of changes in the parameters of the planning assumptions or the fulfillment of the stated goals/objectives. I have found it advantageous to talk with different groups and constituencies in the College community and to get more groups to talk with each other; this increases the potential of the process to not only be understood, but to be meaningful to all concerned. This will probably be the format of the 1984-85 planning cycle.

Conclusions

Planning is deliberate process done differently in different institutions. It takes its form from the personalities resident in the institution. Planning also is an acquired skill; it is a slow, incremental process. There is no single "right" way to move your organization smoothly toward its objectives--the process involves more art than science, but flexibility and some means of measuring "success" are prerequisites (Linkow, 1983).

In Fall 1982, all members of the College community were asked to respond to a survey regarding six areas of concern. With regard to long-range planning, 55% of the survey respondents agreed that long-range planning has involved more College staff throughout the process; however, 70% disagreed that the planning process has provided a clear direction for program development, resources management, and decision making. In defense, it is difficult to establish a clear direction when almost 80% of the operating budget goes for personnel services and fixed charges.

The College's Planning Council develops the planning assumptions and formulates the institutional goal statements based on the most current information available. This document of assumptions and goals is distributed to the entire College community through the deans and division/department head. All academic, support, and administrative units of the College develop and submit plans for their independent and interdependent needs and activities. The broad-based goals and objectives articulated in the resultant planning document, therefore, establish priorities for budgetary expenditures and personnel allocations at the College. In a time when the requisites of the economy and the job market are constantly changing, the plan establishes academic as well as support program priorities. While this plan presents detailed actions for the current academic year and guidelines for the ensuing five years, the direction for that period is not inexorable set.

References

Linkow, P. R. Implementing a long-range plan. The Grantsmanship Center News, January/February 1983, p. 18.

South Central Community College. Self-study report, (Unpublished manuscript). February 1981, pp. 14-17.

South Central Community College. Special report to the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges. February 1983, pp. 7-9.

ACADEMIC PERFORMANCE OF COMMUNITY COLLEGE TRANSFEREES

Thomas V. Fernandez
Department of Physics
Nassau Community College

Marjorie K. Raab
Office of Academic Program Study
Nassau Community College

Barbran Smith
Department of Math
Nassau Community College

Introduction

From the time that Nassau Community College graduated its first class in 1962, the College has been following the performance of its transferees. A comprehensive report, the Follow-up study of students graduating from Nassau Community College between 1962-65 (Lane, 1968) was the College's first attempt to determine how well NCC students fared when they continued their studies toward a baccalaureate degree. Next, a study, Comparative academic performance at the baccalaureate level between graduate transferees at Nassau Community College and native students at selected public/private institutions (Fernandez, Raab, & Baldwin, 1977) followed a different tack, comparing transfer and native students at the baccalaureate level. In 1981, a study of NCC's nongraduate as well as graduate transferees culminated in a report of Academic Success and Persistence of Graduate and Nongraduate Transferees 1974-77 (Baldwin, Fernandez, & Raab).

The current effort of the Academic Program Study (APS) Office in this area developed as an outgrowth of the forementioned studies. This report is an effort to initiate an annual flow of data to NCC from participating four-year colleges (those to which most of the College's students transfer). Additionally, and effort is being made through the SUNY Association of Institutional Research and Planning Officers (AIRPO) organization to establish a uniform method by which SUNY community colleges could request and collect data about their students who transfer.

Research Questions

The rationale for conducting this study was to determine the following:

1. How does the student transferee's NCC community college performance compare with his/her performance at the baccalaureate institution?

2. How does the performance of the NCC community college graduate transferee compare with that of the nongraduate NCC community college transferee?

3. What percentage of the community college NCC transferees graduated from the baccalaureate institutions within a two-year period/three-year period?

Methodology

A letter was sent from Dr. Sean Fanelli, President of NCC, to the presidents of sixteen baccalaureate institutions. All agreed to cooperate, although usable date were only received from eleven.

A descriptive outline and a record layout were forwarded to the research contact individual at each of the institutions.

Population

Students transferring with 40 or more credits to the following baccalaureate institutions comprised the population for the study:

Baccalaureate Institution	Usable N
C. W. Post	152
CUNY John Jay	8
CUNY Queens	83
Hofstra	251
New York Institute of Technology	91
Pace	12
SUC Brockport	12
SUC Old Westbury	61
SUNY Albany	49
SUNY Binghamton	43
SUNY Stony Brook	72

Criteria for institutional selection: colleges/universities receiving the largest numbers of NCC transferees and/or receiving transferees from NCC programs currently undergoing program review.

Data could not be used if (a) the 40-credit transfer criterion was not met, (b) the Social Security number was not correct, or (c) necessary data and/or program areas were missing.

Program Areas

The population was distributed according to the baccalaureate program (HEGIS) areas in Table 1. Usable data, combined in Table 1, provided the percent of students in each program area. All other data were compiled and reported for individual participating baccalaureate institutions.

Table 1

Population by Baccalaureate Area

Program areas	Percentage
Business	44
Education	7
Health & Social Services	5
Humanities	4
Liberal Arts	8
Math & Computer Science	7
Natural & Applied Science	8
Social Science	16

The baccalaureate programs classified under the preceding program areas are as follows:

Baccalaureate program	HEGIS code
Business	
Business	0500 - 0599
Business & commerce technologies	5000 - 5099
Education	
Education	0800 - 0899
Health & social services	
Health	1201 - 1299
Law	1400 - 1499
Library	1600 - 1699
Military	1800 - 1899
Public affairs	2100 - 2199
Humanities	
Communications	0600 - 0699

Baccalaureate program	HEGIS code
Humanities (continued)	
Fine arts	1000 - 1099
Foreign language	1100 - 1199
Letters	1500 - 1599
Theology	2300 - 2399
Liberal arts	
Liberal arts	4900 - 4999
Math & computer science	
Computers	0700 - 0799
Math	1700 - 1799
Data processing technologies	5100 - 5199
Natural & applied science	
Agriculture	0101 - 0199
Architecture	0200 - 0399
Biology	0400 - 0499
Engineering	0900 - 0999
Physical science	1900 - 1999
Social science	
Psychology	2000 - 2099
Social science	2200 - 2299

Analysis

In order to study the performance of NCC graduates and nongraduates at the baccalaureate institutions, an SPSS BREAKDOWN program was run with the NCC GPA as the criterion variable categorized by college, program area, and graduate status. The program was then repeated with the baccalaureate GPA as the criterion variable.

The program, SPSS CROSSTABS, was performed for baccalaureate graduates who were NCC graduate or nongraduate transferees, in order to determine their length of stay.

To compare student transferees' community college performance (cumulative GPA) with their performance at the baccalaureate institution, an SAS CORR was performed using the variables of baccalaureate GPA and NCC GPA by school and graduation status (see Table 2).

Sample

Table 2 cites the results for your institution. Transferees who obtained a degree from NCC are differentiated from those who did not graduate.

For each group, the total number (N) is provided, with the GPA at NCC and at the baccalaureate institution. The number and percentage of students who graduated from the school are recorded.

Table 2

Correlations of GPA

	NCC grads					NCC nongrads				
HEGIS Area	N	NCC GPA	BACC GPA	BACC GRADS Two years	Three years	N	NCC GPA	BACC GPA	BACC GRADS Two years	Three years
Business	127	3.24	2.80	82(65%)	2(2%)	20	2.92	2.60	16(80%)	0(0%)
Education	16	3.41	3.30	11(69%)	0(0%)	1	2.11	2.31	0(0%)	0(0%)
Humanities	17	3.37	2.92	11(65%)	0(0%)	1	3.03	1.90	0(0%)	0(0%)
Social science	23	3.30	2.92	12(52%)	0(0%)	3	2.93	3.21	2(66%)	1(33%)
Natural and applied science	11	3.26	2.71	3(27%)	0(0%)	2	2.91	1.54	0(0%)	0(0%)
Math/Computer	25	3.09	2.72	15(60%)	2(8%)	3	2.88	2.47	1(33%)	1(33%)
Service	--	--	--	--	--	--	--	--	--	--
Liberal arts	2	3.26	3.33	0(0%)	0(0%)	0	--	--	0(0%)	0(0%)

Correlations of GPA

NCC graduates	.65153
NCC nongraduates	.32754
Overall	.63545

The program area indicated is the area at the baccalaureate institution. Table 2 does not indicate the number of transferees who changed areas upon transferring; such a flow chart is planned for the future.

Results

In answer to the first research question ("How does the student transferee's community college performance compare with his/her performance at the baccalaureate institution?"), overall results show that the correlation between the GPA of transferees at NCC and the GPA at the baccalaureate institution is .49154.

In answer to the second research question ("How does the performance of the community college graduate transferee compare with that of the nongraduate community college transferee?"), results show that the correlation between GPA at NCC and at the baccalaureate institution is higher for graduates (.52497) than for nongraduates (.32565).

In answer to the last research question ("What percentage of the community college (NCC) transferees graduated from the baccalaureate institutions within a two-year period/three-year period?"), results of the CROSSTAB show that 50% of the NCC transferees graduate from the baccalaureate institution within two years and an additional 10% (60% total) within the third year.

Additionally, results show that 51% of NCC graduates graduate from the baccalaureate institution within two years and a total of 60% within three years.

As to NCC nongraduates, 42% graduated from the baccalaureate institution within two years and a total of 54% within three years.

Forthcoming analysis

It is anticipated that as baccalaureate survey data are collected on an annual basis, the N's will become large enough to perform a multiple regression analysis. The resulting equation may then be used for predicting success at the baccalaureate institutions.

References

Baldwin, J., Fernandez, T., & Raab, M. Comparative academic performance at the baccalaureate level between graduate transferees at Nassau Community College and native students at selected public/private institutions (Unpublished manuscript). Nassau Community College, New York, 1977.

Baldwin, J., Fernandez, T., Parbus, J., & Raab, M. Academic success and persistence of graduate and nongraduate transferees 1974-1977 (Unpublished manuscript). Nassau Community College, New York, 1981.

Lane, F. Follow-up study of students graduating from Nassau Community College between 1962-1965 (Unpublished manuscript). Nassau Community College, New York, 1968.

PERSISTENCE AND ACADEMIC PERFORMANCE OF UPPER-DIVISION TRANSFERS TO AND NATIVE STUDENTS OF A PUBLIC FOUR-YEAR INSTITUTION

Carol Wurster
Office of Analytical Studies
State University of New York at Old Westbury

As an extension of a transfer study requested by a local two-year community college, a decision was made to attempt to track the transfers from the two other local two-year institutions as well as the first-time to Old Westbury students who had attained junior status by the Fall 1980 semester.

The criteria for transfer students were first semester at Old Westbury of Fall 1980, transfer from on of the 3 two-year institutions, more than 56 transfer credits, and a full-time credit load. For first-time Old Westbury students, the criteria were first semester at Old Westbury of Fall 1978, no transfer credits, successful completion of at least 56 credits by Fall 1980, and a full-time credit load. Among the other data selected for each record were sex, birth year, ethnicity, last semester attended, GPA, major, and graduation date. A search was made of the data base, and 96 records were selected; 66 transfer students and 30 first-time students.

An examination of enrollment reports indicated that a total of 86 new full-time, upper-division transfers were enrolled in Fall 1980 semester. The 66 selected by the inquiry represented 76% of the group. There were 421 first-time, full-time students enrolled in the Fall 1978. By 1980, according to a cohort study run for SUNY/Central Administration, only 151 or 36% were still enrolled. The 30 selected by the inquiry represent 20% of the persisters and 7% of the original cohort. Since the graduation rate for first-time, full-time students entering in Fall 1978 is 15% over five years, this data appeared correct.

The two groups were compared demographically with each other and with the student body as a whole. The native students were representative of the entire population while the transfers differed both ethnically and by gender.

Academically, the transfers tended to enter the professional programs at twice the rate of the native students. Seventy percent of the transfers and sixty percent of the native students have graduated.

There was no significant difference between the GPAs of the two groups that graduated. However, the average GPAs of those who did not graduate were lower for the transfers than for the "natives."

The transfers were separated according to their former institutions. The only demographic difference was that the average age was approximately five years older for one institution. Academically, the transfers from all three institutions were very similar.

Since this was the first attempt at tracking and comparing transfer students with native students, we did not expect to come up with any startling revelations. The number of records in both groups was disappointingly small and inhibited any statistical inferences. However, it has given us a beginning with which to study the progression of the growing number of transfer, as well as native, students progression.

We will, in the future, examine succeeding groups of entering transfers and native students. Since 1978, the College has made mandatory a proficiency placement exam in reading, writing, and mathematics; new degree programs in computer and information science and accounting have been put in place; articulation agreements have been negotiated with the two-year schools; the open admissions policy has been eliminated in favor of minimum high school average or college GPA. This has resulted in more data available regarding each student's past and current academic performance. The College's focus is now on attracting two-year transfers and improving the academic qualifications of first-time students; data derived from more current admissions should yield a very different picture from what was obtained in this initial study and enable us to determine the effects the new policies have had on the quality of students, their persistence, and the demand for increased course offerings and expanded schedules.

A PROCEDURE FOR THE EVALUATION OF THE ACADEMIC PERFORMANCE OF TRANSFER STUDENTS FROM TWO AND FOUR-YEAR COLLEGES AND FOUR-YEAR "NATIVE" STUDENTS AT AN INDEPENDENT UNIVERSITY

Pauline Lichtenstein
Office of Research and Planning
Hofstra University

Overview

The impetus for this study was the request by a neighboring two-year public college for follow-up information on its transfer students.

The request came at a propitious time since it had been about 10 years since the last of a number of evaluations had been conducted to describe and assess the academic performance of students who transfer to a four-year independent university. Available research indicates that for transfer students grade point average (GPA) at time of transfer, the total number of credits accepted at time of transfer, and the students' chosen major at the university relate to the quality of academic performance. In addition to these three variables, data indicate that the nature of the institution from which the students transfer (two or four-year, public or private) may also relate to academic success. For freshmen, past research indicates that both rank in high school graduating class and SAT total score are related to academic success.

For the years 1977-80, the University's files were reviewed and 1977 and 1978 native freshmen and 1979 and 1980 transfer students were selected for this analysis. The following data were obtained:
For transfers:

1) Previous institution attended
2) Public or private
3) Two or four-year
4) Total number of transfer credits at entry
5) GPA from pervious school at time of transfer
6) HEGIS code by semester at University
7) Cumulative number of credits by semester at the University
8) Cumulative GPA by semester earned at the University
9) Zipcode of permanent address
10) Date of graduation

For natives:

1) SATM, SATV scores
2) Rank in high school graduating class
3) Zipcode of permanent address
4) Total number of cumulative credits by semester
5) Cumulative GPA by semester
6) HEGIS code by semesters at the University
7) Date of graduation

There are two major components to this study as reported here. The first part is concerned with admissions criteria. The predictor variables were the variables used in the admissions process. For 1979 and 1980 transfer students, two achievement measures--graduation rate and GPA at graduation for graduates--were studied separately as a function of the number of credits transferred and GPA at entry for transfer students from two or four-year schools. Graduation rate is defined as the percentage of students graduating.

Using the fall of 1977 and 1978 freshmen populations, the relationship between the high school decile and SAT scores at the time of enrollment at the University, and graduation rate and graduation GPA was analyzed.

The second part of this study is concerned with a comparison of transfer students and native freshmen who finished two years of college. Students who transferred in with 58-64 credits and native students who had accumulated 58-64 credits were used in this part of the study. The junior year performance and major field as well as the cumulative GPA at graduation are compared among transfers from two and four-year colleges and native students. Junior year GPA and GPA at graduation are also related to cumulative GPA at the end of two years and to major field for the same group of students.

Additional research is planned using the same data files. Breakdowns between private and public four-year colleges, whenever the numbers are large enough, are still to be analyzed. Predictive equations are planned for all freshmen and all transfers relating academic performance to the variables already analyzed by cross-tab procedures.

Description of the Population

This study was conducted at a four-year independent university. Its freshman class in the last five years has had about 1,200 students with almost 60% of them from the top two deciles of their high school graduating class. The number of transfer students enrolled has been about 750 students since 1980.

About 60% of the transfer students are from two-year colleges and 40% from four-year colleges--with about an equal split from public and private four-year colleges. In a given year, students transfer from more than 200 four-year colleges. Aside from the local schools, many four-year schools have only one transferee. Although students transferred from about 40 public two-year colleges, the local colleges supplied about 90%.

In order to compare transfer and native students it was decided to select students with junior class standing--transfer students who transferred in with 58-64 credits and freshmen (natives), who had accumulated 58-64 credits. There were 330 transfer students and 657 native students who were at the beginning of their junior year. Among the junior transfer students 78% (256) were from two-year colleges and 22% (73) were from four-year colleges. The proportion of transfers to natives was somewhat smaller for the junior transfers and the proportion of two-year transfer students among the junior transfers was somewhat higher. The public-private split among the four-year transfers remained at about 50-50. Again, the number of colleges from which four-year junior transfer students transferred was very large and about 90% of the two-year junior students came from the three local two-year public colleges.

Review of the Findings

In the interest of confidentiality and anonymity and since the main thrust of this paper is one of procedure, I have taken the liberty of presenting only the format of the tables--without the actual data. It is expected that the reader, who so wishes could insert the data for his/her college. The following discoveries were made as a result of the examination of the admission crieteria for:

All freshmen to the University (see Table 1):

- High school decile is related to rate of graduation from the University
- SAT scores is less related than high school decile but still somewhat related to rate of graduation
- SAT total score is related to GPA at graduation from the University
- High school decile is less related than SAT total score, but still somewhat related to GPA at graduation

All transfers from two-year colleges (see Tables 2 and 3):

- Number of transfer credits and transfer GPA are highly related to graduation rate from the University
- Transfer GPA is related to GPA at graduation from the University
- Number of transfer credits is not related to GPA at graduation from the University

All transfers from four-year colleges (see Tables 2 and 3):

- Number of transfer credits and transfer GPA are only moderately related to graduation rate from the University
- Transfer GPA and number of transfer credits are moderately related to GPA at graduation from the University

Comparisons of performance for all two and four-year transfer students (see Tables 2 and 3):

- Graduation rate from the University for two-year transfer students is somewhat higher than for the four-year transfer and the GPA at graduation is about the same

Comparisons of academic performance of junior-level transfer students from two and four-year colleges and junior native students (see Tables 4-9):

- Graduation rates and GPAs for juniors are higher than for all students (Table 4)
- Two-year college junior transfers enter the University with the highest GPA; it drops in the third year to the lowest GPA and rises at graduation but remains the lowest GPA of the three groups

- Four-year college junior transfers enter with GPAs at the lowest level but their GPAs continue to rise through the third year and graduation, so that the final GPA is between the other two groups

- Native junior GPAs start between two and four-year transfer students, but rise to the highest at the third year and at graduation

- For two-year college junior transfers there is a strong relationship between the transfer GPA and both the third-year GPA and the graduation GPA

- For four-year college juniors, there is very little relationship between the transfer GPA and both the third-year GPA and Graduation GPA

- For native juniors, there is a very strong relationship between the cumulative two-year GPA and both the third-year GPA and the graduation GPA (which is the only one calculated for all the years at the University)

Comparisons of major field specialization of and junior native students junior-level transfer students from two and four-year colleges (see Tables 10-12):

- Business is the most popular junior-year major for all three groups, but it is most important for transfers from two-year colleges and least important for the native juniors

- The pattern of the average GPA for the junior year and by major at graduation is different for all three groups

Table 1

Relationship of Graduation Rates and Graduation Cumulative GPA to High School Decile and SAT for All Native Freshmen (in percentages)

	Decile						
	1	2	3	4	5	Below 5	Total
Graduation rate (as a percentage)							
SAT							
1400-1600							
1200-1390							
1000-1190							
800-990							
<800							
Total							
Graduation cumulative GPA							
SAT							
1400-1600							
1200-1390							
1000-1190							
800-990							
<800							
Total							

Table 2

Relationship of Graduation Rate to Cumulative GPA
at Transfer
and Number of Credits Transferred
for All Transfers from Two and Four-Year Colleges

	Cumulative GPA at transfer for all transfers from two-year colleges								
	4.00-3.75	3.74-3.50	3.49-3.25	3.24-3.00	2.99-2.75	2.74-2.50	2.49-2.25	2.24-2.00	< 200	Total
No. Credits Transferred										
65 & over										
58-64										
30-57										
1-30										
Total										

	Cumulative GPA at transfer for all transfers from four-year colleges								
	4.00-3.75	3.74-3.50	3.49-3.25	3.24-3.00	2.99-2.75	2.74-2.50	2.49-2.25	2.24-2.00	< 200	Total
No. Credits Transferred										
65 & over										
58-64										
30-57										
1-30										
Total										

Table 3

Relationship of Graduation Cumulative GPA
to Cumulative GPA at Transfer
and Number of Credits Transferred
for All Transfers from Two and Four-Year Colleges

	Cumulative GPA at transfer for all transfers from two-year colleges									
	4.00-3.75	3.74-3.50	3.49-3.25	3.24-3.00	2.99-2.75	2.74-2.50	2.49-2.25	2.24-200	< 200	Total
No. Credits Transferred										
65& over										
58-64										
30-57										
1-30										
Total										

	Cumulative GPA at transfer for all transfers from four-year colleges									
	4.00-3.75	3.74-3.50	3.49-3.25	3.24-3.00	2.99-2.75	2.74-2.50	2.49-2.25	2.24-200	< 200	Total
No. Credits Transferred										
65& over										
58-64										
30-57										
1-30										
Total										

Table 4

GPAs of Native Junior Transfer Students
from Two and Four-Year Colleges Native Juniors

	Second-year Cumulative GPA	Third-year GPA	Graduation Cumulative GPA
Two-year college transfers			
Four-year college transfers			
Native juniors			

Table 5

Relationship of Graduation Rates
of Native Juniors and Junior Transfers from Two and Four-Year Colleges
to Two-Year Cumulative GPA

	Transfers				Native	
	Two-year college		Four-year college			
	Number graduated	Percent graduated	Number graduated	Percent graduated	Number graduated	Percent graduated
Two-year cumulative GPA						
3.50 & over						
3.25-3.49						
3.00-3.24						
2.75-2.99						
2.50-2.74						
2.25-2.49						
2.24 & under						
Total						

Table 6

Junior Year Performance
of Native Juniors and Junior Transfers from
Two and Four-Year Colleges

	Two-year			Four-year			Native		
	N	Percentage	Cumulative GPA (%)	N	Percentage	Cumulative GPA (%)	N	Percentage	Cumulative GPA (%)
Junior year									
3.75 & over									
3.50-3.74									
3.25-3.49									
3.00-3.24									
2.75-2.99									
2.50-2.74									
2.25-2.49									
2.00-2.24									
Under 2.00									
Total									
Average									

TABLE 7

Relationship of Junior-Year GPA to Two-Year Cumulative GPA of Native Juniors and Junior Transfers from Two and Four-Year Colleges

	Transfers						Natives		
	Two-year college			Four-year college					
	N	Year	GPA	N	Year	GPA	N	Year	GPA
Two-year cumulative GPA									
3.50-4.00									
3.25-3.49									
3.00-3.24									
2.75-2.99									
2.50-2.74									
2.25-2.49									
2.24 & under									
Total									
Average Junior-year									
Average two-year cumulative									

Table 8

Cumulative GPA at Graduation
of Native Juniors and Junior Transfers from
Two and Four-Year Colleges

	Two-year			Four-year			Native		
	N	Percentage	Cumulative GPA (%)	N	Percentage	Cumulative GPA (%)	N	Percentage	Cumulative GPA (%)
Final Cumulative GPA									
3.75 & over									
3.50-3.74									
3.25-3.49									
3.00-3.24									
2.75-2.99									
2.50-2.74									
2.25-2.49									
2.00-2.24									
Under 2.00									
Total									
Average									

Table 9

Relationship of Graduation GPA
to Two-Year Cumulative GPA of Native Juniors and Junior Transfers
from Two and Four-Year Colleges

	Transfers				Native	
	Two-year college		Four-year college			
	Number graduated	Percent graduated	Number graduated	Percent graduated	Number graduated	Percent graduated
Two-year cumulative GPA						
3.50 & over						
3.25-3.49						
3.00-3.24						
2.75-2.99						
2.50-2.74						
2.25-2.49						
2.24 & under						
Total						

Table 10

First-Semester Major Field of Native Juniors and Junior Transfers from Two and Four-Year Colleges

	Two-year		Four-year		Native	
	N	Percentage	N	Percentage	N	Percentage
Major						
Business						
Education						
Humanities						
Science						
Social science						
Total						

Table 11

Relationship of Junior-Year GPA to Major Field at Beginning of Junior Year for Native Juniors and Transfer Students from Two and Four-Year Colleges

	Two-year		Four-year		Native	
	N	GPA	N	GPA	N	GPA
Major						
Business						
Education						
Humanities						
Science						
Social science						
Total						
Average						

Table 12

Relationship of Cumulative GPA at Graduation to Major Field at Graduation for Native Juniors and Junior Transfer Students from Two and Four-Year Colleges

	Two-year		Four-year		Native	
	N	Graduation	N	Graduation	N	Graduation
Major						
Business						
Education						
Humanities						
Science						
Social science						
Total						
Average						

ATTRITION REPORT AT A FOUR-YEAR INDEPENDENT INSTITUTION

Marilyn Poris
Office of Institutional Research
Marist College

A study was conducted in Fall 1983 by the Office of Institutional Research at Marist College. The purpose of the study was to shed light on the attrition situation for the college's executives. Trend descriptive statistics were sought in addition to areas of concentration, rationale for leaving, predictors, subsequent activities, and evaluations of a variety of Marist operations. Additionally, information was sought concerning internal attrition or "major switching."

Subjects

The study population was comprised of all undergraduate students at Marist who had matriculated, were not enrolled in Fall 1983, and who had not received a degree.

Method

A lead letter was sent, followed by a questionnaire in two weeks, and a second mailing to nonrespondents two months later. The questionnaire was devised by the IR Office with input from the college executives. A reliability coefficient (Cronbach-SPSS) of .96 was calculated and a factor analysis (principal factoring with interation, varimax orthogonal and obliques rotations) of evaluation responses was conducted to clarify issues.

Twenty-five nonrespondents were randomly selected and interviewed by phone so as to test respondent bias. Three telephone interviewers were trained to eliminate interview bias, and inter-rater reliability (Ebel's formula) was calculated at .94.

Of the nearly 1,000 students contacted, responses were received from 355 or 35%. Chi square analyses were conducted and response distribution was determined to be representative with regard to year of matriculation, sex, and major. Response bias has been addressed, and the results could be considered generalizable to the Marist attrition population.

Results

Marist's overall retention rate has leveled at approximately 60% for the last three years. That overall statistic masks the following variation:

1. Fifty-seven percent of first-time students persist.
2. Sixty-five percent of transfers persist.
3. Certain academic programs digress significantly from their share of the enrollment pool.
4. Significantly more women than men leave before completion.
5. Sixty percent of noncompleters leave by the end of the first year.
6. The proportion of low-achiever attrits is decreasing while the proportion of high achievers is increasing.
7. The proportion of commuters in the attrition pool is increasing while the proportion of residents is decreasing, though the overall statistic is not statistically significant.
8. Full-time/part-time status is not a predictor.

Reasons For Leaving

Stated reasons for leaving Marist can be found in Table 1.

Table 1

Reasons for Leaving Marist College

Reason	Percentage of total
Financial	28
Personal problems	12
Unhappy at Marist	10
Academic dismissal	7
Employment	6
Other	5
Bridge	4
Limited program	4
Not ready for school	4
Another major	4
Insufficient challenge	3
Poor professors	3
Moved	2

Table 1

Reasons for Leaving Marist College
(continued)

Reason	Percentage of total
To go away	2
Unhappy commuter	2
Limited class participation	2
Administration	1
Limited science resources	0.5
Intend to return	0.5

These stated reasons were further analyzed by department and by GPA, which yielded notable discrepancies. It should be remembered that reasons given for leaving an institution are frequently "acceptable," and one must probe for verification. This was done through follow-up analysis, examination of comment and suggestion sections, and statistical analysis of evaluation responses. Throughout the study, an alpha level of .05 was used.

Subsequent activities of Marist's attrition students are listed in Table 2.

Table 2

Institutions of Attendance After Marist College

Institution type	Percentage of noncompleters
SUNY	16
New York private	20
New England private	8
Other private	3
CUNY	3
Community college	15
New England public	3
Other public	5
Not continuing	20
Intend to continue	7

The frequency of finances (28%) as a reported reason for attrition can now be reviewed in another perspective. About one-third of non-completers continue in a private institution, thereby incurring similar

financial responsibility. Another one-third, approximately, leave for personal reasons or academic difficulties. This leaves about another one-third, as compared with 28%, who have left, doubtless, due to a combination of financial pressure and other reasons (i.e., insufficient challenge). Apparently, financial difficulties need to be accompanied by other problems to cause attrition.

Subsequent educational activities were examined over time and found to be consistent. There appears to be no trend or change of pattern as a function of time away from Marist. What does become evident is a learning process as to what is needed by the individual to produce a "best fit." Those who become our noncompleters did not review those variables prior to entering college.

Women tended to be more critical of professors and programs than men were; it was stated earlier that significantly more women than men leave the institution prior to completion.

When evaluations were analyzed by factor, a tendency among noncompleters was revealed. They regarded Marist as an "average" school, which was supported by the fact that low-GPA students and high-GPA students dominated the attrition pool. Apparently the combination of finances/personal problems becomes sufficient when accompanied by "medicority." Those students further verified lack of academic challenge by reporting that they would not recommend the institution to peers unless expectations and/or supervision were altered.

In the comment section, 53% of the respondents indicated that they experienced a refocusing of their aspirations due to their Marist experience. Consequently, they sought a "better fit."

Respondent suggestions for improvement can be found in Table 3.

Table 3

Suggestions for Improvement

Suggestions	Percentage of respondents
Wider selection of courses/programs	16
Raise standards	11
Improve library	9
Improve academic counseling	8

Table 3

Suggestions for Improvement
(continued)

Suggestions	Percentage of respondents
Improve housing/study/living space	8
Improve student-staff relations	8
Update student activities	5
Integrate transfers/commuters/adults	5
Improve food	3
Develop academic skills	3
Lower cost	2
Stimulate class participation	2
Address career expectations	2

Once again, reasons other than stated ones emerge.

Predictors

A randomly selected sample of completers was drawn (of equal size) and analyses of variance were conducted on assorted "assumed" predictors.

SAT scores were tested and no difference was found on the math component. The verbal SAT did, however, prove to be different. Entering high school averages and rank did not prove to be predictors. HEOP and Validation tag (prior designation) did prove significant indicators. A Validation student is one who, through prior performance/guidance counselor advisement may have academic adjustment problems. The Admissions Office attaches the tag upon entry and these students may elect a mentor. A series of three visits has proved effective with regard to academic success.

A battery of test inventories is administered to entering students. Scores on several factors were tested as predictors. Those found to be predictors of attrition at Marist were study habits and anxiety. Hypothesized predictors that when tested failed to generate significant differences were study attitudes, academic comfort, intellectual disposition, introversion, impulse expression, and age.

Once defined, the individual predictors were entered into a stepwise regression analysis. The order of importance proved to be:

1. Prior designation.
2. Sex.
3. Study habits.
4. Anxiety.

Discussion

According to the results described in this paper, there appears to be no single simple cause of attrition. The decision to leave before completion is a complex one resulting from a set of variables.

To amplify the results, recent contributions made by Pascarella and Chapman (Research in Higher Education, 1983) were reviewed. They found compensatory factors as motivators for persistence; those students with problems had positive areas that counteracted the effect and they consequently chose to persist. One such motivator was nonacademic involvement with peers/faculty, the need for which was cited frequently by respondents in this study. Another motivator was an institutional commitment, which can be interpreted in this study as the noncompleter's view of Marist as average. A third motivator cited was a sense of career identity coupled with achievement toward that objective. In this investigation, respondents referred to refocusing and a change of major, which supports the Pascarella and Chapman conclusion. It should be remembered that factors indignenous to noncompleters comprise institutional attrition as opposed to dropping out of higher education.

Internal Attrition Discussion

Throughout the investigation, internal attrition was the term given to the situation whereby a student remained at the same school but changed majors. Patterns of flow were sought along with causes. The same process of lead letters, questionnaires, and telephone contact was employed.

Approximately 15% of the students at Marist change their major. Flow and academic rationale were replicas of the external attrition study; the same academic disciplines were gaining/losing at similar rates. Females changed at a significantly higher rate than males. Evaluation responses, however, yielded some differences between the external and internal groups; students who left the school rated the Personal Growth factor and Student Life more negatively than did those who changed majors but persisted institutionally. The internal attrits apparently found compensatory motivation to stay.

Replications of the study are needed at other institutions to determine if specific conclusions are generalizable beyond Marist. In the absence of replication, results of this study provide the institutional executives with information to shape agendas. In addition, the results support the current literature and focus on the contribution that attrition is a complex condition and truly a multivariate study. To address the issue, institutional leaders need to maintain perspective of its totality.

EXPLORING A MODEL OF ATTRITION FOR REGENTS COLLEGE DEGREES

Elizabeth Taylor
Institutional Research Office
Regents College Degrees
New York State Education Department

The purpose of this paper is to explore a model that would satisfactorily explain attrition at Regents College Degrees. Regents College Degrees (RCD) of the University of the State of New York is the oldest and largest national external degree program in the country. The RCD program presents a unique research situation because it does not reside on a traditional campus with faculty or students. Instead, an administrative staff is located in Albany, and faculty and students may be located anywhere in the United States or in some places overseas.

A preliminary study was conducted in 1983 to determine the number of characteristics of students who leave the program, and their self-reported reasons for leaving, as reported at the previous NEAIR meeting. The focus of this paper is to update these results and to explore a modification of Tinto's (1975) model in order to better explain the results.

Rate of Attrition

Regents College Degrees differs from other more traditional colleges in that there are no semesters or breaks. Students may enroll or withdraw at any time during the year. The staff in Albany has several means of assessing the students' learning on a continuous basis including the verification of transcripts and the development of tests of college-level learning.

Because there are no clearly marked times when students may withdraw, students are defined as having dropped out of the program if they have not paid their annual records fee (ARF) within a set amount of time. The annual records fee is similar to a registration fee and is paid yearly on the anniversary of the student's enrollment. Currently, if the student does not pay within four months, he is recorded as inactive in the computer files, and his records are separated from the other active or graduated students. Prior to 1982, students had an extra year to pay the annual records fee. Thus these earlier students

had not paid a fee in two years before their status changed. Using this system, it is impossible to pinpoint when a student becomes inactive. A broad range of time exists when students may have decided to leave the program; we can only determine when they decide not to re-register.

The rate of attrition is determined on a yearly basis by degree program. Figure 1 shows the attrition pattern compiled over the last eight years for each group of students. The Bachelor of Science in Technology degree has only been offered as of the summer; thus there are no attrition figures for that program.

The large drop in the number of active students seen in the figures for 1982 may be due partly to the new billing cycle, which marks students inactive when the annual records fee is four months overdue, rather than one year. However, the annual number of inactive students still out strips the number of actives from 1979-81, and again in 1983. There are also more inactives than graduates each year from 1978 onward. Thus there has been a net loss of active students in the last three years.

Characteristics of Inactive Students

Because RCD students do not reside on or near a central campus, their characteristics must be determined through secondary sources, such as enrollment forms, transcript information, and mailed surveys. All three of these sources have been used to compile the following information. Mailed surveys have been found to be the most useful in terms of opinions of the program. Transcripts and enrollment forms can indicate longevity and basic demographics.

Based on some previous studies of inactives, in 1983 it was decided that it would be appropriate to survey students as they became inactive. Thus, beginning in March, questionnaires are sent each month to students right after fee status changes are made. The responses to these questionnaires along with several previous studies help to draw a picture of inactives as a group.

To date, about 44% of the surveys sent to inactives have been returned (2,022 out of a total of 4,574). Of these, 38% are codable responses. Between 200 and 300 students become inactive each month.

Table 1

Reasons for Withdrawal

	N=648 AA/AS, BA/BS		N=726 ADN/BS(n)		N=184 BS(b)		N=1558 Total	
	n	Percentage	n	Percentage	n	Percentage	n	Percentage
Could not earn the credit I expected for my life or work experience	130	20	90	12	37	20	257	16
Had too many problems with the program	151	23	117	16	40	22	308	20
Had to make to many decisions by myself about my academic program	70	11	79	11	17	9	166	11
Could not transfer all the credit I expected for coursework form the schools I attended	140	22	na	na	37	20	177	21
Decided to attend another institution	83	13	114	16	25	14	222	14
Not enough money to pay for records fees, etc.	211	33	320	44	53	29	584	37
Not enough time to study and work at the same time	152	23	166	23	44	24	362	23
Not enough time to study and meet my family commitments	100	15	143	20	30	16	273	18
Other	260	40	339	47	82	45	681	44
Reasons only common to one degree area	na	na	230	32	29	16	259	28

Demographic Characteristics

Inactive students do not vary greatly from active students or graduates on most of the basic demographic variables as recorded on survey and enrollment forms. As with the other two groups, most are in their mid-thirties. About 85% are employed, and about 40% are employed in a professional/technical area. The 1983-84 survey indicates that only 26% had changed employment status during the 12 months previous to receiving the questionnaire, and only 3% felt that RCD was a significant factor in that change.

Inactives did vary from graduates on gender and military status. Although males and females comprise equal percentages in the active and inactive student populations, they differ from graduates. In the graduate population, 81% ar men and 19% are women. Also, graduates are more likely to be on active military duty.

Length of Time in Program

A small study of student folders suggest that withdrawal occurs most frequently after the second evaluation of the transcripts is completed. The files of 36 students who were enrolled in either the associate or baccalaureate degree programs or the Credit Bank, and who became inactive between March and December of 1983, were selected for in-depth review. These files were selectively sampled from the group of inactives who had responded to the survey of inactives during 1983.

It was found that the average length of time in the program varies from one to two and a half years, depending on degree program. It took students about a year to be recorded as inactive after the last time they were evaluated. Both the associate and baccalaureate of science degree programs students had an average of two evaluations; while the baccalaureate of arts students averaged only one.

The information from these folders suggest that these students entered the Regents College Degree cycle by submitting transcripts for evaluation. Many received a first evaluation and began to work toward fulfilling the degree requirements. However, after getting a second evaluation, most did not submit any more evidence of credit accumulated, and chose not to pay their annual records fee the next time it came due.

Opinions of the Program

As part of the 1983-84 survey, inactive candidates were asked to indicate their level of agreement with a series of positively worded statements about the program.

There were some variations in responses between the individual degree programs. Inactives in the Nursing Degree programs were more likely to consider the current fee structure inappropriate. This most probably reflects the fact that some Nursing Performance Examinations are expensive compared to paper-and-pencil tests. Inactives in the business degree program were more likely to think that the program did not apply as many of their previously earned credits to their degree requirements as they expected. As a whole, more of these inactives also disagreed with the statement that the degree requirements were flexible enough to meet their needs than inactives in other degree programs.

Reasons for Becoming Inactive

Discovering why students withdraw from Regents College Degrees is complicated by the fact that students do not complete coursework through the college. Instead, necessary coursework may be done at a variety of institutions, and college-level learning can be demonstrated through examination. Thus students cannot be dismissed for academic reasons. Withdrawal is voluntary.

In order to determine why students choose to withdraw it is necessary to ask the students themselves. With an external student population that is worldwide, the easiest method to use to reach students is through the mail. Thus a mailed survey was constructed. After piloting a number of potential reasons for becoming inactive, eight were chosen much more frequently than the others. These eight reasons, plus an Other category, are listed; in Table 1 with the responses from each of the degree program areas.

As can be seen, students from the nursing degree program were more apt to feel that they did not have enough money and plan to attend another institution. They also felt that they did not have enough time to study and work at the same time. Students in the liberal arts and business degree programs were more similar in their

responses, with the exception of the Other category. Students in nursing and business degree programs both had other more personalized reasons to add to the list.

Modeling the Withdrawal Process

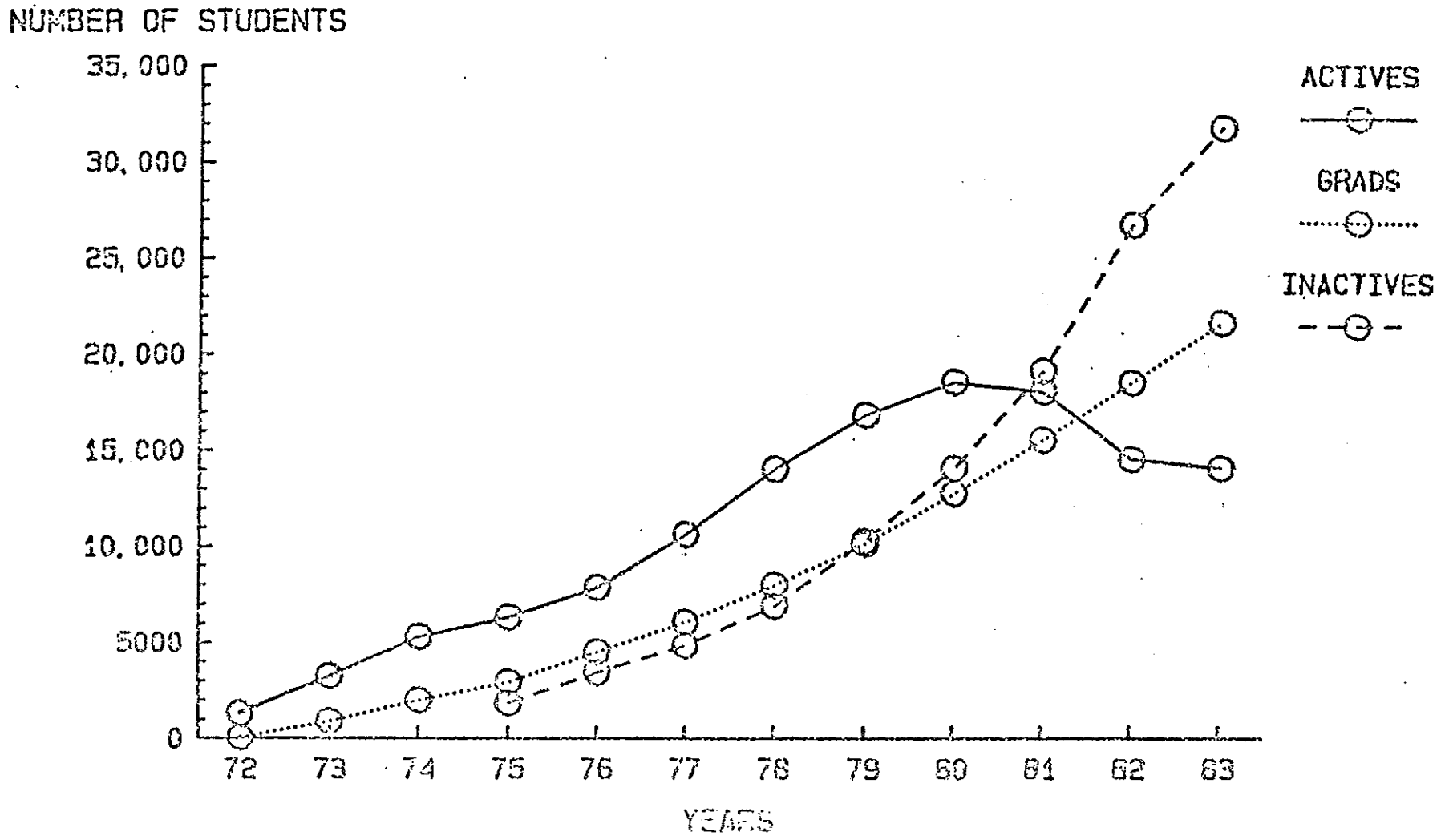
Given the information on when and why students withdraw, a model can be suggested to describe the process of attrition at Regents College Degrees. This model seems to fit the RCD process in Tinto's 1975 model of attrition.

Tinto describes his model as charting the process of dropout from college, which he views as "a longitudinal process of interactions between the individual and the academic and social systems of the college during the person's experiences in those systems (as measured by his normative and structural integration) continually modify his goal and institutional commitments in ways which lead to persistence and/or varying forms of dropout." (Tinto, 1975, p. 94). As described by Tinto, persons enter college with a variety of backgrounds which may or may not influence their performance. Based on the person's background and on the college environment, a person then forms a commitment toward the college, and a goal for completing his or her education. These commitments and goals are based on the person's integration into the academic and social systems of the college. The degree of commitment and integration will determine the decision of the individual to withdraw.

Tinto's model was designed with a traditional college campus in mind. He focuses on the kinds of academic and social integration with faculty and peers that take place on a conventional campus. Of course this type of integration does not take place for Regents College Degrees students, since there are no campus-based programs. However, the categories that Tinto uses to describe the process of withdrawal are relevant to withdrawal from any type of institution.

Tinto specifies five basic areas to focus on: background, commitments, academic system, social system, and dropout decision. These areas can be adapted to more closely reflect the types of student experiences at Regents College Degrees. Figure 2 shows Tinto's model expanded to include these experiences.

FIGURE 1.
TOTAL NUMBERS OF ACTIVE, INACTIVE AND GRADUATES BY YEAR



These students were also more likely to strongly disagree with the statement, "The program applied all the previously earned credit I thought it should have toward my degree requirements."

These findings can be translated into the categories in Tinto's model. Background variables such as family or employment commitments, did not as strongly influence students' goal or institutional commitments as did academic variables. In other words, students who withdraw due to problems outside of RCD were more likely to plan to continue their educations through RCD in the near future. Students who cited academic problems with RCD or with studying independently were less likely to plan to continue with RCD at a later date.

The academic category can be broken into two areas: the academic system at other institutions, and the academic system at RCD. Students experiencing difficulty with studying independently were also more likely to feel that the program does not offer enough help to candidates preparing for examinations and that there were not enough opportunities to earn credit for knowledge acquired from nonacademic sources. Students who were experiencing difficulty with RCD services, such as poor advisement, tended to react negatively to all of the statements about program policies. Dissatisfaction with either aspect of the academic system tended to have more overall negative results than problems meeting family or employment commitments.

Conclusion

There are certain problems associated with determining the attrition rates and causes in an external degree program. Rates of attrition are based on a calendar year, rather than on semesters. In addition, students cannot be placed on a traditional four-year time line. Instead, the group of withdrawn students must be examined on a whole, and attrition rates must be figured for the group as a whole, based on a timetable of fee payment.

In addition, students cannot be academically dismissed from a program that does not offer coursework. Thus inactives must be viewed as voluntary withdrawals.

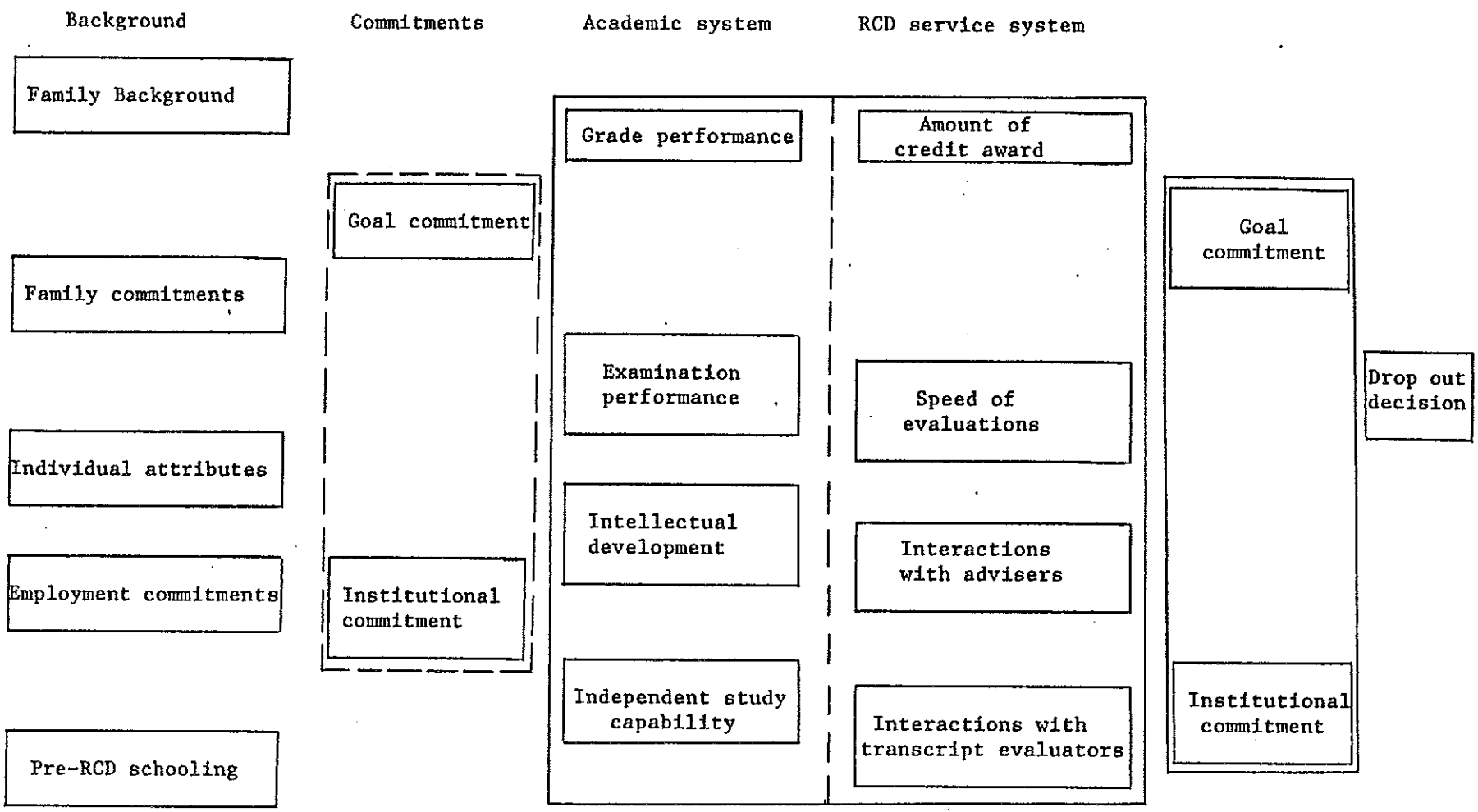
Based on these constraints, it is possible to look at the characteristics of the Regents College Degrees inactive population. Demographically, they are more like active and graduated students than not, with the exception of differences in the ratio of men to women for graduates, and the number involved in active military service. However, as a group, they tend to disagree more strongly with college policies than was evidenced by the other two groups.

Because of the nature of an external student population, mailed surveys were chosen to find out why students withdrew, as evidenced by self-report. As might be expected, most cited inadequate funds to pay the annual records fee. However, almost a fourth of the liberal arts and business degree students also had problems with program services. A particular problem was receiving the amount of credit that the student expected either for life or work experience or from transfer credits.

By using Tinto's (1975) model, it can be seen just when attrition is most likely to occur in the student's course of study. Potential explanations of why students leave are also more cogent. Though no one set of personal characteristics has emerged to distinguish students who leave from those who remain active or graduate, certain situational variables and expectations seem to characterize the leavers. These include family commitments and expectations about the number of credits to be transferred from other institutions.

The model proposed helps to clarify when students are most likely to leave and why they leave. Using this information may help identify students who have special concerns to be met if they are to remain in the program.

Figure 2. RCD modification of Tinto's Model



Reference

Tinto, V. Dropout from higher education: A theoretical synthesis of recent research. Review of Educational Research, Winter 1975, 45, No. 1, pp. 89-125.

THEN AND NOW: A REPORT ON THE ONGOING STUDY OF THE AMHERST COLLEGE CLASS OF 1959

Robert F. Grose
Office of Institutional Research
Amherst College

Introduction and History

Background

This year marks the thirtieth year since conversations began among three young psychologists in the Amherst College Psychology Department: Robert C. Birney, Haskell R. Coplin, and Robert F. Grose. Filled with their new graduate school knowledge, they were interested in applying their skills to the study of college students. The initial emphasis for the Class of 1959 study came from the Committee on Guidance and Counseling appointed by President Charles W. Cole. The Committee found that little was known about the "whole area of undergraduate motivation," and it urged these three to define more clearly the experiences, behavior, and motivation of undergraduates at Amherst.

By the summer of 1955, the trio had prepared questions to ask the members of the incoming class. Students also took a variety of personality tests. By the end of their freshman year, a full questionnaire was given and information gathered on how students spent their time in a recent week. And so it went for some four years. (Table 1 lists many of the instruments.)

Goals and Methodology

Most of the data were obtained from the self-reports of the students. They cooperated generously, and they are still doing so. The original goals were not only to discover what we could about motivation, but also if possible,

1. To develop the variety of patterns of behavior that students evidence as they go through college (some would call this "developing a typology" of students).

2. To generate hypothese for further research.

3. To develop measures suited both to the general college population and uniquely to the students at this college.

Table 1

Summary of Percentage of Returns for Data

No.	Date	Class size	Item	Percentage returned
1.	January 1955	307	CEEB--Math, Verbal	100.0
2.	September 1955	307	Edwards Personal Preference Schedule	100.0
3.			Inventory of Beliefs--No.1	100.0
4.			TAT--McClelland	100.0
5.	October 1955	307	Minnesota Multiphasic Personality Inventory	97.7
6.	December 1955	307	Brown & Holtzman Survey of Study Habits and Attitudes	80.8
7.			Time Study No.1	80.5
8.	May 1956	302	Questionnaire No.1	77.4
9.			Time Study No.2	65.2
10.			Personality Research Inv. No.1	75.5
11.	December 1956	285	Inventory of Beliefs--No.2	67.4
12.			Time Study No.2	64.6
13.	May 1957	287	Questionnaire No.2	84.3
14.	March 1958	266	Myers-Briggs Type Indicator	75.0
15.			Personality Research Inv. No.2	72.0
16.	May 1958	264	Questionnaire No.3	85.9
17.			Sociometric No.1	80.7
18.	November 1958	260	Beardslee-O'Dowd Occupation Inv.	54.6
19.	January 1959	259	Taylor Orientation to College Scale	86.5
20.			Survey of Sexual Behavior and Attitudes	41.7
21.			Sociometric No.2	76.1
22.			Political Attitudes Survey	77.0
23.	April 1959	258	Questionnaire No.4	83.7
	Of these	258	all four questionnaires returned	58.5
24.	June 1959	258	Final vocational choice	99.2

4. To try to ascertain the role of the abilities measured by such tests as the College Boards.

In 1965, some 10 years after the students had matriculated, they received as alumni a questionnaire from Professor Birney to ask them about their current activities, education, and views of the College. In 1979, I carried out a somewhat similar questionnaire to describe the alumni members of the class as they approached their twentieth reunion. Finally, with the twenty-fifth reunion scheduled for the first week in June of 1984, I sent two additional questionnaire--one in the Fall of 1983 in connection with material for a biographical directory, and then a more extensive one in January 1984.

Reports

Results of these inquiries so far have only partly been reported. A first appraisal of the class was issued by the three authors in 1960 with a later report on a "Ten-Year View of the Class of 1959" in the Amherst Alumni News by Birney in 1967. Other reports were made by this author to the class at the time of their twentieth and twenty-fifth reunions; the later resulted in a document entitled "Amherst and After" (available from the Amherst College Office of Institutional Research).

The Class of 1959 in College

Admission

As the 1960 report recounted, "By March 1, 1955 some 1,375 young men from some 652 secondary schools across the country had completed applications. They had dutifully filled out the large green form and had written carefully about their extracurricular activities, occupational aspirations and the advantages in a small college." The College on its part planned a class of 250. The 536 acceptances, however, did not yield 250, but the rather amazing number of 307! Amherst needed all sorts of rearrangements to squeeze them into the limited dorm and laboratory space. Nonetheless, we kept track of all 307 individuals, their abilities, activities, preferences, and interactions; they are a very talented group.

Curriculum

To understand this class and its reactions to college, one must also be aware of the particular curriculum then in place at Amherst College. Students took a common freshman year with multiple sections in the same courses. One of these was in introductory English writing course that required several papers a week with a semantic emphasis and, even more, an emphasis on the student becoming aware of himself as a writer. All students took a rigorous course integrating calculus and physics with common courses also in the humanities and history, plus a foreign language. Sophomore year was likewise mostly required, although some options appeared such as a choice between (a) evolution of earth and man versus (b) a chemistry/biology sequence. An American studies course required the student to take a position on public issues, both historic and present, and sent him to original documents to help him decide. An elective senior honors program was a tradition in which a student worked to the equivalent of up to three courses during his senior year by carrying out an experiment or doing a scholarly thesis.

The possibilities of having common grades for an entire class for two years does suggest some opportunities to study changes, growth, and the influence of ability.

Sample Findings

Particularly helpful to us were measures that indicated how students actually spent their time. The choices involved in college are reflected in the allocation of a student's time in various activities. How one spends his time continues its validity as a revealing indicator for the class both in and out of college. Diaries and time inventories from the members of 1959 showed the intense demands of freshman year, especially the first semester. (An example: median hours for class and study combined were 64 hours in December 1955 and 55 hours in December 1956.)

The senior attitudes, time allocations, and practices can also be said to be behavioral outcomes of the years at Amherst. We grouped the class into three divisions according to their reported study time in senior year. The first group (42%) reported study for their courses well above the basic 30 hours beyond class time expected as a rule of thumb for class hours involved. These individuals were labeled "the

scholars." The second group (26%) reported time quite close to the demand level, and they were labeled "students." That left 32% in the remaining group whose reported study time was well below that implied by course credit hours; not surprisingly, we called these "nonstudents." The differences being reported are rather large with medians of extra-class study of 45 hours, 30 hours, and 15 hours and we felt that even an error in a report still left little chance for misclassification. (Although these are self-report materials, they seem to correspond well with other observations.)

The "scholar" was marked by leadership and a service role in the community directly after college and in student organizations as an undergraduate. He also had a high level of faculty contact and a preference for tests of self in one-on-one sports as well as being above average in course study time.

The "student" emerged as a "solid citizen," showing some identification with faculty interests, including careers in education. He was in many respects like the scholar in spirit if not always in action. More a follower than a leader, he was more given to team and spectator sports than to individual competition.

Finally, the "nonstudents" more frequently in 1965 reported careers in business and had focused as undergraduates on social growth and personal relationships, preferring group action such as varsity team sports to individual pursuits. The "nonstudents" apparently preferred people to ideas. They had favorable attitudes toward fraternity groups and low contact with faculty on personal matters.

It remains to be seen just how these characterizations have carried forward into later years. We will be able to link the particular group characterization to the material coming from each individual's reports of his later life.

As can be seen in the accompanying Table 2, the vocational choices varied somewhat over time with education gaining enormously and science and engineering decreasing from the initial interest. Tracing individuals and their preferences through a period of years will be a challenging and, we hope, profitable enterprise in another phase of the study.

Table 2

Vocational Choices Over Time

Vocational choices[b]	1959 on Admission application	1959 Freshman year	1959 Time of commencement	1959 Reports of current positions	For comparison: Class of 1981 (Est.)[a] intentions
	1955	1955-56	1959	1984	1982
Science and engineering	21.8%	17.3%	4.3%	3%	5%
Don't know or no answer	21.2%	16.1%	3.6%	—	3%
Medicine	21.5%	19.9%	20.9%	20%	10%
Law, Government	13.1%	9.3%	15.4%	13%	15%
Business	8.8%	15.2%	26.1%	22%	29%
Professional*	6.0%	10.1%	8.7%	6%	6%
College teaching*	0 %	.8%	14.6%	16%	—
Other education*	—	—	—	6%	—
Total education*	—	—	—	22%	10%
Miscellany	2.6%	3.3%	2.4%	2%	7%
Public official	.9%	2.7%	2.4%	2%	1%
Arts/Communications	3.3%	5.4%	1.6%	11%	9%
Travel/Fellowships	—	—	—	—	5%
Number in class	307	302	258	299	419
Number responding	307	241	253	263	386

Sources. 1960 Report, current questionnaires, and Data Book II of OIR, Amherst College.

[a]The 1981 figures are in part based on division of those going on to professional school or graduate work into proportions similar to recent years.

[b]The 1960 report notes "over half of (those) going into other professions are going into secondary school teaching."

Individual work in senior honors showed an interesting relationship with the three-part classification. Scholars showed 59% of their number in honors whereas the students showed 52%, but the nonstudents only 27%.

Members of the Class Today

Careers

Although a great deal of information is available on what the members of the Class of 1959 at Amherst are now doing, I would like to focus here on only several variables. Twenty percent of them are now doctors as against 22% planning in 1955 to go into medicine; science and engineering have dropped as already indicated; lawyers constitute 13% of the present class, just the same percent that thought they would be interested in law on admission in 1955. Business is over one-fifth of the class, whereas only 9% said they were interested in it originally; professional categories remain about the same at 6%; education goes from practically zero to 22% (e.g., 16% are in college teaching). Miscellaneous totals 3% and there are other scattered ones. Arts and communication now total over 10%. We also examined the Amherst majors for job categories and found few scientific lawyers or social doctors.

In the views of members of the class, Amherst seemed to have prepared them broadly rather than specifically, and they cite especially communication skills, analytic thinking, preparation for advanced study, and also interestingly enough, the high standards set by the faculty and the development of a more questioning attitude. Only about half said they saw a clear direct relationship between Amherst work and current careers.

Seventy-nine percent received advanced degrees after Amherst and another 11% did some postbaccalaureate work after Amherst. In other words, 90% at some point, attended graduate or professional schools. Back in 1956, only some 65% declared their intention to enter postgraduate training.

Group profiles or group distributions, however, are not as complete a picture as we will find when we have the opportunity to trace individual career intentions and career decisions through a 30 year period. This will be one of the next steps in our study.

I asked how important certain job characteristics were for each individual and also whether these characteristics were indeed present to a great extent in his job now. For example, 93% indicated that it is very important to have a challenging job and 82% indicated that indeed challenge was present to a great degree in their positions. Agreement was generally the case, with a prevalence of independent action in that 87% reported they could plan their own work to a great degree and 90% consider that very important. Only a few planned to make career changes in the next five years, but about one-half have done so to date.

Another question was on how many hours they spent working and this came to some 46½ hours at the job location with another 8½ in activity related to the job but at home or somewhere other than the work place, yielding a total then of some 55 hours for a work week. (Reminiscent of the work week of 55 hours sophomore year?) The family was very important, being the next most frequent activity, as one might imagine. I also tallied a variety of activities, as can be seen on the accompanying sample page of a questionnaire: 97% have been married; 91% have children; and 49% served in the armed forces at one time or another. Much less frequently are these individuals involved in a political office, although two-thirds have taught a course and over 60% have published a journal, magazine, or newspaper article. They have moved somewhat more into the conservative camp with some 42% at age 47 labeling themselves conservative, as against only 31% back at age 22.

Overall, how are things with them? Generally very good indeed; 61% say great or very good and another 30% indicate good. When they are asked to describe themselves, they also select rather pleasant adjectives, such as happy, successful, hard-working, contented, friendly, intelligent, skillful, sensitive, caring, and energetic.

Looking Back at Amherst

Curriculum

One of the major emphases of the questionnaires in the last year has been the views of the members of the class as they appraise their Amherst academic experience. For example, alumni were asked to rate

what they recall their evaluations of their freshman and sophomore courses back in 1955 and 1956 and how they would now evaluate them. The major increase in esteem was clearly that of the English 1-2, that freshman course in which a great deal of writing was required. This high regard was confirmed by the number of voluntary observations in the extensive open-ended questions, as well as by other ratings. Positive influences were also cited in order, as coming from diversity of students, required courses freshman year in general, fraternity experience, courses outside the major, courses within the major, roommates and relations with faculty, as well as sports. In another question, faculty, courses, the student body, and athletics also all rated high.

But we are interested also in the individual's experience, and we asked a number of open-ended questions. For example, we asked, "What episodes or experiences while a student at Amherst are now considered to have been especially growth-provoking, maturing for you?" Individuals responded with a whole variety of responses, not only curriculum and courses, but also such admissions as "reacting to advertisity," whether flunking or a near miss, or responding to some uncomfortable situation. Specific events were often cited. Being recognized or having friends also made the difference for some. Mention was made of one's growing self-awareness and self-approval as students found themselves gradually mastering the tasks assigned.

The alumni gave us some suggestions for changes at the College both then and now. Some also indicated that yes, the had considered leaving while at Amherst. When I asked if they would return to Amherst, 12% said no and another 12% were not sure, but 76% said yes. What sort of time did they have at the College? Eighty-four percent checked off good or better, and when asked how satisfied they were, a total of 83% mentioned extremely satisfied or very satisfied.

Gains

By utilizing some of the questions of the Pace College Student Experiences scale, I was able to get reactions to different areas of study and growth, both on the part of our Class of 1959 members 25 years later and by several classes of seniors who recently graduated from

Amherst. The questions were of the general form, "In thinking over your experiences at Amherst, to what extent do you feel you gained or made progress in . . . ?" The respondent checked off either "very much," "quite a bit," "some," or "very little." Eighty percent to 92% of both groups answered "very much" or "quite a bit" to such things as gaining (a) a broad and general education, (b) ability to think analytically, (c) ability to put ideas together, and (d) the ability to learn on one's own. Yet in the areas of understanding the nature of science and technology and of quantitative thinking, there were marked differences between the older students and the younger ones. An example: as gaining from Amherst "very much" or "quite a bit" in "understanding the nature of scientific method and experimentation"--70% of the Class of 1959 endorsed these two, whereas only 35% out of 497 seniors of the Classes of 1979-1983 did so. On the other hand, progress in understanding one's self, developing values, and under- standing other people were reported more frequently by current seniors than by the Class of 1959 members.

These are but a few fragments from the many comparisons already made and the many more that need to be made. The connecting of the alumni data with earlier activities, majors, attitudes, study and the other time measures has only just begun.

Next Steps

Logistics

Currently we have a wealth of undergraduate material on punched cards that has not yet been translated to computer tape. We plan to be able to consolidate records across those gathered in 1955-1959, 1965, 1979, and 1984. We are still sorting those materials out and hope to find sufficient personnel and financial support to go ahead with this essential merging part of our project.

The Future

We were very interested in establishing the continuities of personality across time. We are also interested in discovering those choice points in terms of major career shifts about which we may have more predictive data than we realize. Also we wish to evaluate "time spent" measures across the years. A number of authors are developing notions of

student development and these, in part, could be tested against the longitudinal data now collected. Of course we have considerable information about student and alumni reactions to a one-of-a-kind curriculum. This curriculum has been changed greatly at the college; thus any generalizations may be rather limited in their current application. Yet some of the essential processes can still be said to be at work, and we return to those difficult questions first posed by the Guidance Committee in 1954-1955.

Limitations and Possibilities

Limitations

Such a study has certain inherent limitations. Clearly, one is the unique character of a particular class in a particular small college. One does not have a sizeable N from which to generalize for certain sorts of variables. The Class of 1959 entered Amherst 20 years before coeducation began. Also, a high proportion of the data comes from self-report techniques. Many self-reports are quite accurate; others may be less so. Sampling and response rate, although quite good in many respects, are not perfect. We will need to know more about the missing "cases" as time goes on. Fortunately, one can follow up on several of the characteristics of individuals through the Alumni Office and/or through classmate contact.

Although interviews have not been used, we do benefit from several voluntary communications from the members of the class. A "letter book" was produced on the occasion of the twenty-fifth reunion in which most of the members of the class wrote a letter to his class that was printed along with the rest to be read by the entire class.

Possibilities

There are possibilities beyond the analyses of already collected data in terms of potential future communications to the members of the class. For example, we gave the Myers-Briggs Type Indicator (a self-description based on Jungian principles) in March of their junior year. Although somewhat expensive, it would not be impossible to send out another copy of this test to the class and compare the pairs of profiles over a period of some 25 years or so. A promise to return both scorings to the individual could be an effective incentive.

In all, in terms of what the Class of 1959 tells us, they seemed to have gained a great deal from their experiences at their small college. They testify in various ways to the effectiveness of their education as well as the nature of their own efforts to gain such an education. We continue to be indebeted to the class as it cooperates with our sometimes pesky questionnaires. They have been superb, not only as respondents, but also as perceptive and helpful critics and collaborators. Their past and future cooperation will allow us to continue our attempts to decipher not only the nature of the college experience for this group, but also its effects in their later lives.

A COMPREHENSIVE APPROACH TO OUTCOMES STUDIES: A SECOND LOOK

Bayard O. Baylis
Office of the Registrar/Institutional Research
The King's College

Ronald J. Burwell
Department of Sociology
The King's College

At the 1983 NEAIR Conference, one of the coauthors of this paper introduced the comprehensive student learning Outcomes Project of the King's College, a four-year, Christian liberal-arts college. As outlined in that presentation, the faculty and administration agreed on the following four assumptions:

1. Existing and future course and noncourse learning experiences should be formed on the basis of feedback concerning the student attainment of goals.

2. Institutional integrity demands an assurance that certain things are occurring in student learning and personal growth. The College implicitly and explicitly claims that its graduates will exhibit certain qualities and competencies.

3. Periodically, the College must be accountable to external agencies for the success in carrying out its mission. Student outcomes information is an integral component in the establishment of any claim to success.

4. As an institution, the College must model an approach to growth and development that it desires for individual students. The College must, through institutional action, exhibit efforts to make honest evaluations of itself. The institution must model a decision-making process that is based on knowledge of how the institution is doing.

A faculty committee selected 17 areas in which it believed student outcomes should be studied at the King's College. These areas were:

Linguistic competency
Liberal arts knowledge
Integration of knowledge
Aesthetic understanding and appreciation
Physical well-being
Maturing faith in Jesus Christ
Major competency
Biblical knowledge
Cultural understanding and appreciation
Critical and creative thinking

Active expression of Christian faith
Developing personal values
Concern for social responsibilities
Educational satisfaction
Developing self-understanding and self-actualization
Entering into a life-long process of pursuing truth
Career development

The faculty Student Outcomes Committee developed a long-range plan to evaluate student outcomes in each of these areas and initiated data collection in January 1983. The results of that pilot study were also presented at the NEAIR Conference this past year. In the second year of testing, the Committee decided to repeat the use of the objective test of the College Outcome Measures Project of the American College Testing Program (ACT-COMP), the Watson-Glaser Critical Thinking Appraisal, and the Higher Education Measurement and Evaluation Kit (KIT) by C. Robert Pace and Associates. The Committee also added a test of biblical knowledge.

The following table summarizes a comparison of the 1983-84 results on the ACT-COMP.

Table 1

Comparison of ACT-COMP Scores
of Seniors at the King's College

Scale	January 1983 N = 122		January 1984 N = 124	
	Raw score	Percentile	Raw score	Percentile
Total score	187.44	51	186.47	50
Functioning within social institutions	63.19	43	63.53	49
Using science	64.09	56	63.12	51
Using arts	60.59	63	59.94	55
Communicating	54.42	57	52.37	47
Solving problems	75.77	47	76.26	53
Clarifying values	57.27	53	57.40	55

An interesting phenomenon occurred. The correlation between the raw scores of the two years is $r = .9956$ with a regression equation of $y = 1.08x - 5.56$. This would indicate a high degree of correspondence among the raw scores. However, the percentile rankings fluctuated to a

much greater extent. The authors are still investigating this, although they note with more than a passing interest the fact that the 1983 test results were normed against a group of 8,510 seniors at 70 institutions, whereas the 1984 results were normed against a group of 15,581 seniors at 73 institutions.

The results of the Watson-Glaser Critical Thinking Appraisal showed a decline over the two years from a mean raw score of 62.2 in 1983 to a mean raw score of 59.4 in 1984, with a combined mean raw score of 60.7. Table 2 places the King's score in perspective with some of the post high school norms presented in the Watson-Glaser manual.

Table 2

Selected Norms for Watson-Glaser Critical Thinking Appraisal

Group	$\bar{X}$	N
Third-year medical students	66.6	127
The King's College (1983 seniors)	62.2	54
Public College in New England	62.0	122
The King's College (Combined)	60.7	117
National sample of sales representatives of large business machine company	59.6	146
The King's College (1984 seniors)	59.4	63
Upper division students (4-yr. college)	59.2	417

All of the other post high-school norms in the Watson-Glaser manual were lower than the preceding ones.

The Outcomes Committee is concerned about the slight declines noted in the ACT-COMP and Watson-Glaser Appraisal. The authors are currently engaged in further research in an attempt to determine reasons for this decline. One of the areas under consideration is the fact that the entering data in terms of SAT scores and high school rank for the Class of 1984 were also slightly lower than for the Class of 1983.

A comparison of the KIT scales from 1983 and 1984 reveals a general overall agreement. There were no significant differences on any of the subscales. However, slight changes could be seen in two areas. The first was a movement on the part of the students from a more

conservative stance (politically, religiously, etc.) in 1983 to a less conservative stance in 1984. The students at The King's College would still be judged as very conservative in relation to college students in general, but they appear to be less conservative than they were before. The second area was a slight decline on the campus moral subscale. The 1984 seniors at The King's College felt slightly less positive toward the College than the 1983 seniors. However, it should be noted that both groups were much more positive toward the institution than college students in general. Further work is being considered in these areas.

Traditionally, the College gave entering students a test of biblical knowledge (standard test produced by American Association of Bible Colleges). The primary use of this test was for advanced placement in religion courses. However, since scores were available for most entering students, it was possible to give a retest to seniors and to compare the change over a period of several years. Typically, the average King's student will complete about five or six courses in the general area of Bible and religion. Thus senior scores should show some improvement over freshmen scores. In the Spring of 1984, a select sample of the senior class ($\underline{N}$ = 54) was given the biblical knowledge test. As a group, the Class of 1984 showed a 20% increase in their scores on the test. This result seems to indicate that some attainment is taking place in the area of biblical knowledge.

Since the College now has two years of data in several areas, it should be in a better position to analyze its strengths and weaknesses with respect to these specific student learning outcomes. The Outcomes Committee does not believe that this task belongs solely to the Committee. Therefore, the Committee is attempting to involve various committees and departments and work with these groups in interpreting the data. At present, no direct action has been taken to change the curriculum. However, the authors do believe the College will especially need to look at what it is doing in the area of helping students to achieve social awareness and concern, and ability to function in social institutions.

This past year, two new features have been integrated into the outcomes project. The first is the introduction of a large-scale data base drawn from existing archival data. The second is the inclusion of

a student satisfaction survey that was initiated by the Retention Committee of the College.

Several years ago, one of the authors, together with another faculty member, began a research project to explore the use of existing archival data in institutional research. It was evident that most colleges routinely collect a great deal of information on students which then resides in files located in various offices on the campus. The problem was to collect and integrate the scattered information into a form that was suitable for computer data analysis.

For a pilot study, data on two classes (1981 and 1982) were used. For each student in these classes, all available archival data were gathered from the offices of the Registrar, Admissions, Financial Aid, and Student Development. This included information from official transcripts, application forms, financial aid forms, test scores, and student activities reports. The data were combined into a large-scale data file.

Although not every student had a complete set of data, most had a number of items available. What was revealing was the extent of data available on forms that were never intended for institutional research. For example, although admissions forms were designed to aid in admission decisions, these forms also provided a wealth of background data on the student's family, high school academics, and extracurricular activities. Likewise, test data gathered during new student orientation were primarily for the benefit of advising and other activities conducted by student development staff. Nevertheless, some of the test data proved useful in answering questions about student outcomes.

The primary object of this part of the study was to develop a profile of what the graduates were like in comparison to those entering students who did not persist to graduation. Once the data base was established on the College's academic computer, it was possible to begin analysis assisted by the powerful Statistical Package for the Social Sciences (SPSS). Initial analyses involved cross-tabulation and breakdown of variables according to the dependent variable of graduation versus nongraduation. Out of this initial analysis, some twenty-seven variables were identified that offered promise in discriminating between those who graduated and those who did not. By conducting discriminant

function analyses on these variables, it was possible to develop the following list of 10 variables that strongly related to persistence to graduation.

1. Religious orientation--high scorers on OPI RO scale.
2. High school rank--high rank.
3. Amount of high school credits taken in languages--more credits.
4. Socioeconomic class--high status.
5. Impulse expression--high scorers on OPI IE scale.
6. Amount of high school credits taken in science--more credits.
7. Activities involved in at The King's College--more activities.
8. SAT scores in math--high scorers.
9. Complexity--high scorers on OPI CO scale.
10. SAT scores in Verbal--high scorers.

Further work will involve using these variables to identify students who are high risks for nonpersistence.

One of the items that was included in the data base was the student's scores on the Omnibus Personality Inventory (OPI). For a number of years, the College routinely administered this inventory together with the Strong-Campbell Vocational Interest Inventory (SCVII) to all incoming students. The OPI is an established personality inventory that has, as one of its purposes, the measurement of changes in college student populations. At King's, its primary use was as a diagnostic tool to aid student advisers in their work with individual students. In order to use the OPI for outcomes purposes, it was necessary to administer it to students in their senior year. This was done for the Class of 1982. Of the fifteen scales on the OPI, only six had statistically significant changes over a four-year period. Table 3 presents the data on these six scales.

Generally, what emerges is a profile of students who are experiencing the following changes:

> Thinking introversion--greater liking for reflective thought and academic activities; interest in ideas from various areas; less dominated by immediate concerns
>
> Autonomy--increase in liberal, nonauthoritarian thinking; expression of more independence; more realistic; more politically liberal

Table 3

Changes in OPI Scores Between
Freshman (1978) and Senior Years (1982)
The King's College

OPI Scale	Freshman	Senior	Change	Significance
Thinking introversion	41.96	45.17	+3.21	.001
Autonomy	41.40	46.19	+4.79	.000
Impulse expression	42.80	45.00	+2.20	.042
Practical outlook	53.90	49.87	-4.06	.003
Response bias	47.58	51.39	+3.81	.014
Intellectual disposition	6.46	5.98	-0.48	.003

Note. The scores are percentiles, not raw scores.

Impulse expression--greater willingness to express impulses and seek gratification in conscious thought and action; increased imagination; more rebellious

Practical outlook--less value placed on material possessions and concrete accomplishments; less practical and interested in applied activities; less evaluation in terms of utility

Response bias--became more like test takers who desire to make a good or favorable impression

Intellectual disposition category--some movement to a greater interest in intellectual activity

In noting these changes, it is important to point out that, while there were statistically significant changes taking place in these areas, the absolute scores in many cases were at or below national averages.

For the past three years, the Retention Committee has conducted a survey of the satisfaction levels of current students with respect to 69 items dealing with all aspects of campus life. This year, the Outcomes Committee looked at the survey and discovered that it touched upon many of the concerns the Outcomes Committee had with the area of educational satisfaction. Thus the Outcomes Committee incorporated that portion of the survey into its consideration.

The overall results of the satisfaction survey had a positive influence on the College. In each of the three years the survey was administered, the same eight items were the most satisfying to students. The students are telling the College that these are the areas in which The King's College excells and the areas that they appreciate most. These eight items are location, Christian outreach opportunities, integration of faith and learning in the classroom, attitude of faculty toward students, out-of-class availability of instructors, instruction in major field, class size, and the College in general. These items are all "salable", and have been incorporated into the new promotional mailings to prospective students.

In each of the three years, the same eight were also the least satisfying. This tells the College the areas that need to be improved. The areas were parking facilities, study areas, food service, dining facilities, career planning services, dormitory facilities, personal counseling services, and enforcement of College regulations. The College is not so naive as to not recognize that these areas are very difficult areas to satisfy students. However, the students are expressing concerns, and these concerns should be addressed.

Table 4 presents the three-year summary of the satisfaction survey. It includes both mean scores and rankings.

The general implications that may be drawn from the work of the Outcomes Committee with archival data and the satisfaction survey are as follows:

1. Existing data on students may be useful in outcomes research.

2. By using data routinely gathered on incoming students, it may be possible to accelerate longitudinal studies of student outcomes.

3. There may be value for ongoing institutional research in assembling a unified data base on students. This would demand merging on a computer the disparate files from such offices as Admissions, Financial Aid, Registrar, and Student Development.

This year has seen an extensive expansion of the outcomes project. The King's College is beginning to derive concrete benefits from the project. The authors wish to share the design and some of the results of the project, in the hope that it will encourage and challenge others to institute similar programs.

Table 4

Retention Committee Survey of Student Attitudes:
Three-Year Comparison of Ranks and Means

	1984 Rank	1984 Mean	1983 Rank	1983 Mean	1982 Rank	1982 Mean
Academic						
1. Testing/grading system	27	3.365	18	3.382	19	3.294
2. Course content in your major field	10	3.615	11	3.521	11	3.434
3. Instruction in your major field	7	3.686	9	3.545	9	3.535
4. Number of core requirements	30	3.303	42	3.149	31	3.199
5. Content of core courses	29	3.344	28	3.300	21	3.269
6. Instruction in core courses	16	3.479	13	3.453	13	3.404
7. Out-of class availability of instructors	5	3.832	7	3.665	4	3.699
8. Attitude of faculty toward students	4	3.893	3	3.849	3	3.740
9. Variety of courses offered	24	3.374	36	3.213	35	3.172
10. Class size relative to type of course	6	3.794	6	3.705	7	3.645
11. Availability of your adviser	13	3.539	12	3.489	10	3.500
12. Value of information provided by adviser	36	3.280	23	3.313	22	3.255
13. Preparation you are receiving for your future occupation	42	3.193	34	3.236	27	3.219
14. Academic probation and suspension policies	51	3.078	52	2.952	40	3.103
Admissions						
15. Admissions application procedures	24	3.374	26	3.304	30	3.203
16. Academic quality of students accepted	54	2.987	43	3.121	43	3.056
17. Availability of financial aid information/ assistance prior to enrolling	41	3.205	21	3.348	37	3.138
18. Accuracy of college information received prior to enrolling	43	3.283	17	3.400	23	3.250
Rules and regulations						
19. Student voice in college policies	61	2.890	53	2.938	57	2.733
20. Rules governing student conduct (the Pledge)	52	3.075	47	3.044	49	2.938
21. Residence hall rules and regulations	55	2.976	55	2.891	53	2.866
22. Enforcement of college regulations	66	2.670	59	2.793	62	2.615
Facilities						
23. Classroom facilities	31	3.288	35	3.233	26	3.235
24. Labrortory facilities	19	3.469	15	3.427	16	3.333
25. Athletic facilities	59	2.911	62	2.690	54	2.853
26. Library facilities	48	3.139	25	3.310	64	2.602
27. Dormitory facilities	60	2.903	64	2.659	65	2.559
28. Dining facilities	63	2.777	68	2.556	66	2.517
29. Parking facilities	69	2.430	69	2.433	68	2.365
30. Study areas	68	2.497	65	2.645	69	2.296
31. Student Life Center	64	2.738	56	2.840	48	2.945
32. Campus bookstore	28	3.363	48	3.036	36	3.164
33. General condition of building and grounds	46	3.164	51	2.985	47	2.952
Preregistration/regitration						
34. General registration procedures	40	3.207	38	3.491	18	3.302
35. Availability of the courses you want at times you can take them	56	2.953	54	2.895	52	2.868
36. Academic calander of the college	15	3.481	14	3.435	15	3.362
37. Billing and fee payment procedures	39	3.212	45	3.091	45	2.990
Spiritual						
38. College service	23	3.384	16	3.412	20	3.292
39. Chapel service	45	3.165	30	3.277	17	3.329
40. Christian outreach opportunities	2	4.043	2	4.004	5	3.668

Table 4

Retention Committee Survey of Student Attitudes:
Three-Year Comparison of Ranks and Means
(continued)

	1984 Rank	1984 Mean	1983 Rank	1983 Mean	1982 Rank	1982 Mean
41. Student chaplains	35	3.282	39	3.189	34	3.173
42. Special speakers (spiritual emphasis)	11	3.595	5	3.734	2	3.816
43. Integration of faith and learning in classroom	3	3.926	4	3.771	6	3.651
44. General spiritual atmosphere	33	3.285	22	3.317	29	3.215
College service or program						
45. Personal counseling services	67	2.620	61	2.708	59	2.721
46. Career planning services	62	2.851	63	2.673	63	2.607
47. Job placement services	57	2.939	57	2.834	56	2.759
48. Recreational and intermural programs	53	3.057	46	3.082	46	2.982
49. Library services	43	3.189	37	3.195	55	2.831
50. Student health services	38	3.227	27	3.303	61	2.661
51. Student health insurance program	44	3.178	50	3.000	50	2.905
52. College-sponsored tutorial services	18	3.472	32	3.252	28	3.216
53. Financial aid services	31	3.288	29	3.292	42	3.073
54. Student employment services	20	3.455	33	3.251	38	3.127
55. Food services	65	2.694	67	2.596	67	2.432
56. Cultural programs	47	3.148	44	3.104	44	3.011
57. New student orientation program	37	3.268	49	3.010	39	3.107
58. Personal/security/safty of campus	49	3.139	66	2.631	60	2.714
General						
59. Concern for you as an individual	22	3.391	20	3.352	24	3.246
60. Attitude of college nonteaching staff toward students	26	3.369	31	3.255	32	3.191
61. Racial harmony at the college	14	3.488	19	3.381	14	3.384
62. Opportunities for student employment	12	3.587	24	3.311	25	3.239
63. Opportunities for personal involvement in campus activities	9	3.666	10	3.536	12	3.417
64. Student government	17	3.478	40	3.184	33	3.176
65. Purposes for which student activity fees are used	58	2.939	60	2.756	58	2.732
66. Student-sponsored social activities	50	3.079	58	2.819	51	2.891
67. Campus media (newspaper, Herald, etc.)	21	3.452	41	3.151	41	3.083
68. Location of this college	1	4.240	1	4.057	1	3.862
69. This college in general	8	3.681	8	3.660	8	3.555

FACULTY EDUCATIONAL RESEARCH AT THE COMMUNITY COLLEGE: A CASE STUDY

G. Jeremiah Ryan
Office of Institutional Advancement
Monroe Community College

Frank J. Paoni
Office of Educational Research
and Department of Social Science
Brookdale Community College

Introduction

Ask a community college president the question, "What research is done at your institution?" and most often he or she will respond by citing examples of operational information and data collection required for regional accreditation or by state and federal agencies. True educational research has had a very minor role with most community colleges. Faculty are teaching up to six courses per term, and they have little time to do research. Even if time were available to faculty, the task of research has been seldom included as part of the responsibilities of the full-time faculty member.

For important educational research, community colleges have relied on three primary sources: doctoral dissertations on community college oriented topics; research projects by university professors interested in community colleges; institutional research efforts at a few colleges, most notably Miami-Dade Community College.

The Center for Educational Research

The approach to research at Brookdale Community College was typical of most community colleges until the adoption of a revised Mission and Goal statement in 1982. Specifically, the revised statement called for testing the most promising innovations suggested by pedagogical research and encouraging and conducting research for the purposes of increasing student learning, improving organizational systems, and assessing community needs.

A Center for Educational Research was established at Brookdale to serve as a focus for special research projects. The Center encourages faculty and staff involved in graduate study to focus their research activities on topics relevant to and, if possible, located at Brookdale.

In addition, faculty are encouraged to become assigned to the Center in lieu of curriculum development projects. The Center makes available the current research library, research staff, computer center, and computer staff to assist in research. The Center's goals, developed in response to the College's Mission statement, are as follows:

To promote faculty and staff interest in research at Brookdale

To undertake long-term, systematic evaluation of differing teaching processes on student learning

To assist faculty in identifying teaching/learning strategies

To provide colloquia for faculty to focus on the implementation of the findings of the Center

To encourage a research orientation in appropriate classroom situations

To undertake, as needed, descriptive studies of two-year college students and programs

The Center is coordinated by a professional staff member who receives three credit hours of release time per term. The coordinator reports to the Research and Development Officer, a member of the President's staff.

The coordinator's responsibilities include the following:

To act as a liaison between the Research and Development Officer and Computer Center on special faculty research projects

To solicit special faculty research projects on teaching and counseling

To work with faculty on the design, implementation, and publication of results of each research project

The First Year

Upon the selection of the coordinator, objectives were set for the first year of operation of the Center for Educational Research. They were as follows:

To meet with each instruction learning center and explain the purpose of the Center

To sponsor two workshops relating to research; one in the fall would be on the topic Applied Research at the Community College; the winter workshop would focus on Designing a Community College Think Tank

To encourage the design and implementation of ten to twelve research projects.

To meet with the Faculty Development, Support Staff Development, and Administrative Staff Development Committees to solicit their support of Center activities

To sponsor a series of symposia at which research projects would be presented

To encourage faculty performing research to deliver papers at professional meetings

The Center was highly successful in accomplishing most of its first year objectives, as is detailed below:

The first two-hour workshop focused on how the new Center for Educational Research could facilitate the research efforts of faculty and staff. Specific questions addressed were: What is educational research? What role can the staff play in research? What research topics are most important to us? What research services are available to us?

The first symposium featured four faculty who discussed their recent research in four very disparate fields: gerontology, French history, marine biology, and New Jersey history. The faculty emphasized how their research led directly to improved instruction. The second symposium featured four different faculty who presented their research in: Ethnic Groups in Monmouth County; "Petya," original research of Russian composer Tchaikovsky; Math Attitudes and Success; and Women in the 1980s.

Two special research papers have been produced: "A Survey of Teaching Methods" studied the facts that influenced the subject of teaching strategies; "A Developmental Math Survey" examined the success rates in developmental mathematics among several demographic categories.

An Educational Research Symposium is scheduled for mid-1984. Papers on aspects of educational research related to teachings, curriculum, content, environment attitudes, etc. have been solicited. Papers will be accepted from faculty, administration, and nonacademic staff.

Staff involved in graduate work have been encouraged to utilize the Center for research assistance. When help is given, the staff member must share the resulting paper with the Center.

Ongoing studies were conducted on campus and data collecting norm building will continue as longitudinal research:

1. TV and reading habits of both developmental and nondevelopmental student populations will be surveyed.
2. A profile analysis of users of the physical fitness laboratory will be done.

The Future

The Center's first year ended with research among faculty on the increase. The following research projects are in various stages of development and implementation:

An analysis of recreation and fitness needs of Brookdale students and significant trends in field

The relationship of logical reasoning scores as a predictive measure in course completions

The relationship of library usage and college success

Survey of computer usage among public and private schools in Monmouth County

The most direct beneficiaries of the Center, it is hoped, will be Brookdale students, because the instructional quality of Brookdale teachers has been enriched through the research projects. The College faculty also benefit through the sharing of research projects with their colleagues.

In 1984-85, the results of appropriate research will be published in a semiannual journal entitled Brookdale Research that will be distributed on campus and to the community.

Also in 1984-85, the Center will have an advisory board chaired by the Vice-President for Educational Services. Other members will be the Dean of Student Development, Dean of Instructional Service, and two faculty from each institute. The Research and Development Officer and Director of the Computer Center would sit with the board as ex-officio members without votes. The advisory board will review recommended research projects and set priorities for the Center.

1. A meeting with each instructional learning center would take place to explain purpose of Center (FY 1985).

2. Two on-campus workshops relating to research would be held: one in the fall would be on the topic Applied Research at the Community College; the winter workshop would focus on Faculty Research Projects on Student Performance (annually).

3. The design and implementation of ten to twelve research projects related directly to student performance would take place (annually). Possible topics include:

   a. Relationship of instructors contact with students and retention

   b. The use of scan sheets (referral notices) and student success

   c. The relationship of library usage and college success

   d. The relationship of reading and TV habits on success of Brookdale students

4. Meetings with the Faculty Development and Support Staff Development Committees will be held to solicit their support of center activities (annually).

5. A series of on-campus symposia at which research projects would be presented will be held (by semester).

6. Faculty performing educational research will be encouraged to deliver papers at professional meetings (periodically).

7. Conduct a survey entitled Educational Effectiveness Inventory developed by Professor Barton R. Herrscher of the University of Houston (FY 1985).

8. In cooperation with the New Jersey Consortium on the Community College, conduct an annual conference tentatively titled Exemplary Educational Research Projects at Community Colleges (annually).

9 The development of one videotape per semester featuring Brookdale faculty who have been judged by their peers to be experts at various forms of instruction. The videotapes will be made available to other New Jersey community colleges (by semester).

A PROGRAM-BY-PROGRAM EVALUATION ALTERNATIVE FOR MIDDLE STATES ACCREDITATION: A CASE STUDY

Thomas B. Talbot
Office of Personnel and Research
Genesee Community College

Larene Hoelcle
Office of Human Resources and Planning
Genesee Community College

Rationale

According to the Middle States Association Commission on Higher Education (1983):

> Colleges and universities across the United States increasingly are searching for better ways to evaluate periodically their programs and support services both for self-improvement and to respond to various approval agencies, including regional accrediting bodies. Interest in the use of cyclical evaluation procedures has increased in the Middle States region in recent years. And even though the initial investment of time, money, and human resources may seem costly, institutions deciding in favor of such program/services review anticipate long range and lasting benefits. (p. 1)

Genesee Community College designed such a review process in 1980 in order to improve its program assessment procedures and its institutional planning processes as well as to meet the requirements of external agencies such as the Middle States Association of Colleges and Schools and the New York State Education Department. Genesee has completed the third year of its scheduled five year self-study cycle, and 24 self-study reports have now been completed and reviewed. The experience has been a valuable one for the self-study writers and for the College. This paper will describe the model that is developing at Genesee, compare it with traditional accreditation processes, consider its impact on institutional research and planning operations, and assess its strengths and weaknesses with respect to internal institutional goals and external agency requirements.

The Genesee Model

A Self-Study Committee was established at Genesee Community College in August 1980, and charged by the College's President to develop and

recommend proposals for conducting a study of the College that would satisfy the following considerations:

1. Compliment the standards and procedures suggested for institutional self-study by the Commission on Higher Education of the Middle States Association of Colleges and Schools.

2. Include widespread participation by members of the College faculty and staff.

3. Meet requirements for the periodic review of registered programs established by the State University of New York.

4. Prepare the College for its reaffirmation of accreditation by Middle States during the 1985-86 academic year.

5. Meet requirements for the Middle States Periodic Review due in April 1981.

6. Compliment the College's long-range planning process.

Underlying these six considerations is the College's commitment to ongoing evaluation and planning as necessary components of institutional renewal.

The 10-member Self-Study Committee, chaired by the Dean of the College and broadly representative of the College's faculty and staff, met regularly through the Fall of 1980 and made its recommendations to the President in January 1981. The recommendations included a set of Self-Study Procedures, and Outline for Program/Service Self-Study, and a Schedule for Self-Study according to which every registered program and service area in the College would complete self-study reports, followed by external assessment, by the end of the 1985-86 academic year.

Self-Study Procedures

The Committee's recommendations began with the proposal that every College academic program and support service undertake self-study on a scheduled basis between January 1, 1981 and April 30, 1986. One registered program (Human Services) and one support service area (Learning Resources Center) were designated as pilot programs to complete the process during Spring 1981. Nine self-studies, five registered programs, and four support service areas were projected to be completed in the 1981-82 academic year. In developing the schedule,

consideration was given to how long particular programs had been in operation and how recently they had been evaluated. The Human Services program had already made a commitment to self-evaluation during the 1980-81 academic year, so it, in effect, volunteered to try out the new system. The Learning Resources Center is one of the College's most comprehensive services, including the library, media center, the central duplicating and publications services. It was felt that if the Learning Resources Center could successfully complete self-study, then the College's other services could as well.

Second, the Committee proposed that each program and service be evaluated in terms of the Outline for Program/Service Self-Study, from which these components have been taken:

Introduction
Statement of goals and objectives
Program effectiveness
Impact on students
Student/user analysis
Program support
Library/Learning Resources Center
Community relations
Program cohesiveness
Conclusions
Five-year plan
Appendices

Each self-study is expected to address all of the major topics on the outline, tailoring specific questions to reflect individual program realities. Therefore, every self-study will include a descriptive Introduction, a Statement of Goals and Objectives, a discussion of Program Effectiveness, and so forth. The specific questions to be addressed under each heading differ from one program to another and are very different for academic programs and administration services.

Third, each self-study will have a Coordinator, designated by the Dean of the College or the President. The Coordinator's responsibilities will include:

a. To involve appropriate faculty, staff and students in the self-study process by forming a committee to assist with data collection and analysis and to offer advice on general content;

b. To develop a schedule for self-study, including appropriate deadlines; and

c. To write the self-study report in a timely manner.

Fourth, the Self-Study Steering Committee will monitor the self-study process in order to identify problems, seek solutions, provide support and maintain quality control. Each self-study committee includes a member of the Steering Committee in a liaison capacity to work with the study coordinator and report regularly to the Steering Committee.

Fifth, teaching faculty appointed to coordinate registered program self-studies are compensated in addition to their regular salary. In the case of professional staff assigned to write a self-study report, it is assumed that the project will fit into their regular professional responsibility and that other projects can be delegated or delayed to accomplish this task on schedule. No additional compensation is provided.

Sixth, the Director of Institutional Research will assist in research design and provide data processing and records access services as requested by self-study coordinators. As general information needs are identified to assist all self-studies, reports will be generated and distributed in advance to the coordinators. One goal identified by the Steering Committee is to refine the self-study process, suggesting improvements based on the experiences of the coordinators and providing more data and better models for analyzing and reporting.

Finally, a Chief Program Examiner and Individual Program Assessors are invited to the College to review the self-studies, assess program strengths and weaknesses, and provide written reports of their findings and recommendations. This phase of the evaluation program involves professional staff assistance from the Commission on Higher Education of the Middle States Association of Colleges and Schools. For the 1980-81 and 1981-82 academic years, Dr. Howard L. Simmons of the CHE/MSA identified and recommended qualified and experienced evaluators in each of the program and service areas being reviewed, leaving the final

selection and negotiation with the College. During the 1981-82 year, with nine self-studies being reviewed, it was decided to invite two evaluation team leaders (i.e., chief program examiners): one to coordinate the five registered academic programs and one to coordinate the four support service areas.

Though this procedure worked well, a more formal arrangement between the College and Middle States was worked out for subsequent years, and the Chief Program Examiner(s) and Program Assessors are now appointed officially by the Middle States Commission on Higher Education.

Thus the Commission agrees to appoint a Chief Program Examiner to serve as the general coordinator for the annual schedule of program and services reviews, and the same person is asked to serve until the complete cycle has been completed.

The evaluation team's visits are carried out much like regular Middle States visits, shortened by one day. Team members receive copies of self-studies and general information about the College before they arrive. A team orientation meeting is scheduled for Sunday afternoon, followed by dinner with the President of the College, the Self-Study Coordinators, the Self-Study Steering Committee, the Deans of the College, and members of the Board of Trustees. The dinner is intended to provide a pleasant and informal atmosphere for all participants to get acquainted. After dinner, the team meets to complete its plans and strategies for the campus visits the following day. Monday is devoted to discussions with campus personnel and review of backup and supporting information. Team meetings Monday evening are directed toward assessment of the programs under review and consensus among the team members concerning the contents of the report. Tuesday morning is scheduled for final conversations with faculty, staff, and students and individual program reviewers' report writing. An oral exit report to the campus community is scheduled for late Tuesday afternoon.

After the visit is concluded, the Chief Program Examiner prepares a written report that is presented to the College, corrected as regards factual data, and then duplicated for campuswide distribution. The College then prepares a response to the report, and both documents are

sent to Middle States as part of the College's record of continuing self-assessment.

One step remains. Each self-study is charged with the preparation of a long-range plan for its development over the coming five years. The objectives identified by the self-studies, the recommendations of the external evaluators, and the planning assumptions and priorities of the College are then put together in such fashion that clear objectives can be written and activities designed for each program for the coming years. These objectives become part of the College's long-range plan. Progress toward completion of these objectives will be monitored annually and modified as appropriate.

Again making use of the Middle States model, it is anticipated that each program will produce a mini-Periodic Review Report at the end of the five-year period after self-study. Procedures for this step are not yet developed, but they will include a general stock-taking of accomplishments over the five-year period and the designing of objectives for the coming five-year period.

Some Comparisons With Traditional Accreditation Processes

The cyclical program/services review model differs in several important aspects from the traditional institutional self-study model. First, it substitutes a series of annual self-studies with external evaluation visits for one institutionwide self-assessment and evaluation visit, usually completed every ten years. Attention is focused on individual programs and services rather than on overall institutional functioning. Plans are developed for each individual area rather than for the institution as a whole. In fact, the existence of an institutional long-range plan is presumed, and individual programs develop their plans within the larger context of the College's planning process.

Second, each individual self-study report is the work of faculty and staff committees in the area to be studied. The administration exercises no editorial or other control over the content of the studies. Indeed, self-study writers have an opportunity to be candid in their assessments and to make a case for changes in their programs that may or may not be approved by the College's administration. This is quite different from the perspective of the traditional institutional self-study document

which always includes, sometimes exclusively, the perspective of the central administration of the College.

Cyclical program/services self-studies typically involve more people than would ever be directly involved in the development of an institutional self-study report. Each self-study writer and his or her committee receives the attention of an outside expert reviewer, something not possible in the course of the traditional accreditation process.

In combination, these differences mean that the College is reviewed in great detail and the process provides much more information about the College and its programs and services than is usually available to accrediting agencies or, for that matter, to campus faculty and staff. All these differences have implications for institutional research and planning processes and offer opportunities as well as problems to colleges that consider adopting such a model.

Implication for Institutional Research and Planning

When the College began this cyclical review process in 1980, the Office of Institutional Research was new, and the College was at the beginning of a major computer conversion and technical upgrade. Part of the understanding with which the College undertook these self-studies was that the first cycle would create demands on institutional research that would lead to the design of a self-study data base. The Director would respond to requests for information and survey assistance from each self-study committee. By the end of the five-year cycle we would have designed a set of program-specific information that could be provided to every self-study in advance, and we would have the computer capability to generate needed reports easily. We would also have identified what kinds of survey research would be needed on a regular basis to support the self-studies. We did not begin with a set of criterion measures for everyone, preferring to allow each self-study the scope to assess its strengths and weaknesses in keeping with an outline approved in advance.

In short, Genesee chose to focus its institutional research efforts on the self-study and planning processes of the College. We accepted the burden of responding to many diverse demands at first in order to develop a set of self-study data. By implication, we also accepted the responsibility to be responsive to the plans developed in each self-study

report, many of which called for surveys of graduates and nongraduates who transfer or go to work and are successful or not in their chosen pursuits. The demand for more and better research has been significant. The College recognizes both the legitimacy of this demand and the need for the Director of Institutional Research to develop a research plan for self-study support rather sooner than later in order to organize and manage these research demands. Without professional institutional research and sophisticated computer support, a cyclical program and services self-study would be unmanageable and/or unproductive.

The impact on institutional planning is also direct and extensive. Individual program plans must be revised in light of Middle States recommendations and College priorities. These plans must be incorporated into the College plan and monitored regularly to see that progress is made toward their completion. The challenge of this centrally coordinated but decentralized process is to maintain the sense of progress toward individual objectives without drowning both the planning office and the College's deans and associate deans in a sea of reports. This is especially critical at a small college like Genesee that wants to improve its planning processes and maintain its focus on its Mission and Goals. Having a plan as a guide and a measure is an excellent thing; ongoing planning is critical.

A Preliminary Assessment

A formal assessment of this program and services review model will be completed in 1985-86, the last year of the present self-study cycle and the first year of "periodic review" in two areas. But several advantages and problems can be described, briefly, here. On the negative side of the ledger perhaps are the expense in time and money, both of which are greater than those normally associated with traditional accreditation review. Additional time commitments must be made by everybody from the President down in order to maintain interest and momentum in the process. The role and attitude of the President is very important. He or she must provide enthusiastic support to the system without controlling the content of the individual self-study reports. A very high level of self-confidence is required, as well as a willingness to see

criticism of programs and administration in print for distribution outside the campus community. Special efforts must be made to remind external reviewers that they may need to check their information with several people in order to develop a balanced view of a particular situation.

The emergence of an institutional perspective may have to wait for the receipt of the evaluation report and the development of a College response to it.

Planning for more than one year does not come naturally to people. The objectives people set for themselves in their long-range plans very seldom extend to four years. Ways need to be explored to help people think in terms of long-range objectives for their programs and services.

On the positive side of the ledger are already discernable pay-offs, some of them planned and some serendipitous. Improved program assessment, increased planning from the bottom up, increased institutional research and an expanded data base were all planned outcomes of the process whose measure will be taken during next year's formal assessment. Positive changes in the morale of faculty and staff who successfully complete substantial professional development projects, which self-study documents certainly are, and receive a hearing and serious attention to their plans by knowledgeable outsiders and their colleagues on campus, was not so clearly foreseen. People have a renewed sense of institutional mission and increased perspective on their own part in overall college plans. A great deal of learning has taken place as well as much sharing between the traditional liberal arts programs and the newer technical programs, and between the academic programs and the administrative areas. Sometimes problems are identified in the self-study process that can be easily remedied before they become great issues, to everyone's benefit. Most importantly, the benefits of planning and the possibilities of change are receiving wide discussion on campus in this era when change is necessary to meet changing student demands and maintain college enrollments in the coming decade of declining high school and college populations.

In summation, this process is expensive, time-consuming, and increases a college's vulnerability in the eyes of external agencies like the Middle States Association and state coordinating and governing

boards. But at Genesee, at least, its rewards in improved internal functioning and enhanced change processes, are well worth the costs.

Reference

Middle States Association, Commission on Higher Education. Interim guidelines for cyclical programs/services reviews conducted cooperatively with CHE/MSA, 1983. Philadelphia, Pa.:

PART-TIME STUDENT MARKET RESEARCH

Edward L. Delaney
Office of Institutional Research
Southern Connecticut State University

Many institutions of higher education have sought to offset the decline of traditional age full-time students by developing their part-time continuing education programs. Older, working adults have responded with growing interest by enrolling in such programs, thereby significantly shifting the mix of the student population.

On the other hand, as educational operating costs escalate and as the full-time student tuition income declines, institutions are pressed to seek additional revenues from this newer student market, which has yet to be fully developed. In recent years most colleges and universities have been steadily raising tuition for part-time students without much empirical research on the social and economic characteristics of these students or on the extent to which such tuition increases potentially impact the part-time student.

As the shift from full-time to part-time students continues and financial dependence on part-time tuition grows, institutions will likely have need to reassess their offerings to part-time students and their tuition pricing policies. Yaniloski and Wilson (1984) note that if any institution raises its part-time tuition either significantly above its current rates or significantly above the rates of its competition, it risks inducing a depression of its enrollment. Programs and courses in "low demand" areas are likely to be especially sensitive to price increases. On the other hand, if the institution hedges against this possibility by keeping its tuition within a range presumed to be acceptable to most students, it runs a different risk: the inability to provide quality programs and courses in selected curricula that are inherently expensive to operate.

A preliminary review of the literature has indicated that little is known of the effect of tuition increases on part-time student enrollment. As Weiler (1984) points out, nearly all of the available research consists of macroeconomic indicators applied to groups of institutions rather than a single institution. What would seem most useful to the tuition pricing

issue is an enrollment demand model that analyses the likely enrollment impact of alternative pricing policies.

Turk (1984) points out that establishing the right tuition price is a challenge. Should prices be reduced to stimulate demand or to take full advantage of a lower cost structure? Or should prices be reduced to take advantage of weaker competitors who cannot make a long-term economic commitment to the (part-time) student market. Or should prices be selectively increased to take advantage of strong demand? Through all to this, of course, the crucial question that remains is, How will the student consumer respond?

To respond to these issues, Turk (1984) urges colleges and universities to take a "strategic marketing" approach, which combines the concepts of strategic planning and traditional marketing. This requires (a) analysis of the environment, (b) needs assessment, (c) analysis of the competition, and (d) determination of strengths and weaknesses.

Purpose of the Study

The purpose of this study was to generate a current information profile of part-time undergraduate and graduate students as a basis for improving the strategic planning of continuing education courses, programs, and services of a comprehensive state university. The approach taken was a market research study that sought to assess the institution's part-time student market segments and its positioning among competing higher education providers in the region. More specifically, the research sought to answer the following research questions:

1. What is the demographic background of the institution's part-time undergraduate and graduate students?
2. What are the critical marketing factors influencing extension students decisions to enroll for courses at the institution?
3. What is the level of satisfaction with the institution's instruction and service for part-time students?
4. What are the perceived constraints and limits on part-time students ability to pay extension tuition?

Survey Sample and Analyses

Because of the present lack of demographic profile information on the institution's part-time undergraduate and graduate students, a brief survey questionnaire was developed to elicit information about Questions 1-4. The questionnaire was designed and pilot tested in a graduate and undergraduate evening class.

A one-time mailing was made to all Spring 1984 enrolled part-time students (N = 3,447) with a cover letter from the president and an enclosed stamped return envelope. Of the responses 1,268 (36.8%) returned, were in time to be included in the data analyses.

A comparison of enrolled students to survey respondents on selected demographic characteristics indicated that part-time graduate students tended to respond at a somewhat higher rate than did undergraduate continuing education students. Women and more mature (31-40 years old) undergraduates responded at a higher rate than did males and those under 30 years old. On the other hand, graduate students under 30 years of age responded at a slightly higher rate than did older graduate students. While these uneven response rates of the various gender and age groups of part-time students should be kept in mind in interpreting the findings, all subgroups responded in sufficient numbers to give confidence in the generalizability of the survey sample to the part-time student population at the institution. Thus the responses were judged to be sufficiently representative of the population to avoid the typical threats to the external validity and reliability of the sample.

The survey responses were coded, key-punched, and computer analyzed using the Statistical Analysis System (SAS). Cross tabulations and analyses of variance ($\underline{F}$ tests) were generated on each of the dependent measures of major interest by various undergraduate and graduate demographic subgroups to determine if significant differences existed among the various types of respondents on their perceptions of the University's courses, services, and tuition costs.

The Findings

Summarized below are the major findings of the survey that served to address the major research questions cited in the preceding section.

The findings for the undergraduate respondents are presented first, followed by those of the graduate student respondents.

Part-time Undergraduate Students

Part-time undergraduate respondents were found to have the following characteristics: female (65%), older than the traditional 18-22-year-old college age group, Caucasian (88%), married (nearly 50%), homeowners (38%), employed (80%) although over one-third (36%) have household incomes under $20,000 and less than one-third receive any tuition reimbursement from their employers.

Part-time undergraduate respondents tend to enroll in one or two classes for a degree or certificate (72.1%) after 5 P.M. (55%), with the greatest interest in business administration coursework (40%).

Part-time undergraduates tend to learn about the institution primarily from relatives, friends, and acquaintances (59.6%) and, to a lesser extent, from their high school teachers and counselors (13.5%).

Their decision to enroll at the institution was primarily influenced by the institution's geographic location and convenience (80%) and tuition cost (65.8%). The University's course offerings (42.6%), academic reputation (22.3%), and the student's career/employment needs (26.5%) were other factors cited as strong reasons for attending.

The University was the first choice among possible institutions for the majority of part-time undergraduate respondents (72.5%).

The majority (80.6%) of part-time undergraduate respondents rated the quality of course instruction at the institution "good" or "excellent," while 16.5% rated it "fair" and only 2.9% as "poor."

Two-thirds of the undergraduate respondents rated the quality of nonacademic services as "good" or "excellent," while 25% rated them as "fair" and 7.5% as "poor."

The majority (71.2%) of part-time undergraduate respondents perceived current part-time tuition and fees to be "reasonable," although many 26-30-year-olds with part-time employment tended to rate it as "high." Less than 10% rated it as "low."

The majority (79%) of part-time undergraduate respondents perceived that their future earnings will offset the cost of their

education "somewhat" or "very little," while only 21% perceived that it would offset their tuition costs "greatly."

While 37.6% of part-time undergraduate respondents indicated that cost was "not a factor" in their ability to attend the University, 20% indicated that they would be unable to attend if tuition were increased 5% above its present level, while another 10.6% would be unable to attend with a 10% increase in tuition.

Part-time Graduate Students

Part-time graduate students tend to have the following characteristics: female (61%), over age 30 (60%), Caucasian (95%), married (67%), homeowners (62%) with household incomes over $20,000 (75%) (nearly 50% over $30,000), employed (75% full-time), although only 25% receive some form of tuition reimbursement from their employers.

Part-time graduate students tend to enroll in one course (76%) for a degree or certificate (90%) after 5 P.M. (94%), mostly in teacher education courses (59%).

They tend to learn about the University's course offerings from relatives, friends and acquaintances (57%), and fellow teachers (15%), but graduate students rely on printed materials such as the catalog and course bulletins (25%) more than undergraduates do.

While location and convenience (75%) and low tuition costs (65%) are important factors in their decision to attend, graduate students also cited specific course offerings (63%) and student career/employment needs (49%) as equally important reasons for attending.

The University was the first choice for the vast majority (83%) of part-time graduate respondents, many of whom (56%) have previously attended public colleges and universities other than this institution.

The majority (81%) of graduate respondents rated the quality of instruction as "good" or "excellent," while 15% rated it "fair" and only 3% as "poor."

While 64% of the part-time graduate students rated the quality of nonacademic services as "good" or "excellent," 30% rated these services as "fair" and 7.3% as "poor."

The majority (71.2%) of graduate respondents perceived current part-time tuition and fees to be "reasonable," although many employed

26-30-year-olds rated it "high" or "very high." Less than 10% rated it as "low."

The majority (84.0%) of graduate respondents perceive that their future earnings will offset the cost of their education "very little" or only "somewhat."

While 34.3% of graduate respondents indicated that the cost of tuition and fees was "not a factor" in their ability to attend the University, 21% indicated that they would be unable to attend if tuition increased 4% above its present level, while another 15.6% said that they would be unable to attend with a 9% increase in tuition cost.

Conclusions and Implications

These findings suggest the following conclusions and implications:

1. Part-time students in general differ considerably from their full-time counterparts, not only in age, income, and living situations, but also in the personal and financial demands of balancing employment and continuing education. Faculty and staff need to be kept cognizant of these differences in their attempts to meet the educational needs of extension students.

2. There are important differences between undergraduates and graduate students in their reasons for pursuing part-time study. Undergraduates tend to select the institution for its convenient location and reasonable tuition and show the greatest interest in business course offerings. While location and low tuition costs are also important considerations for graduate students, specific course offerings (especially in education) which meet in-service career and employment needs are also strong influences on graduate student enrollment.

3. Both undergraduate and graduate part-time students tended to rate the quality of instruction quite high. However, there is some variation in the ratings across respondent age groups. A comprehensive program of student evaluation of instruction conducted each semester in each course would provide more reliable and specific information on which to assess the quality of specific course offerings and instructors.

4. Both undergraduates and graduate students are more varied in their ratings of the quality of nonacademic support services. Because older students (30-40 years of age) in particular tend to be more

critical of these services, additional services (such as extended evening office hours and child care) should be made to better serve these older employed students.

5. The majority of both undergraduate and graduate students perceive present tuition costs to be "reasonable," although younger, single, working students think tuition is higher than married, unemployed students. While undergraduates are somewhat more optimistic than graduate students in their perceptions of their future earnings offsetting their tuition costs, household income for both undergraduates and graduates is directly related to their ability to attend the University amid proposed increases in tuition costs. Even a modest increase in tuition would apparently prevent a significant number of younger, working students with household incomes under $20,000 per year from attending the institution. In short, the findings suggest that Extension Fund tuition costs increases should be kept to a minimum, especially for undergraduates, if the institution is to continue its accessibility to lower-income part-time students.

6. The additional open-ended comments suggested several areas of particular concern among part-time students and also included praise for some recent improvements.

In conclusion, the overall positive ratings of instruction and services from the majority of respondents who have chosen the University as their first choice suggests that the institution is making progress in strengthening the quality of its program offerings and services to part-time students. In addition, the many unsolicited positive comments about recent improvements, the excellence of faculty, and helpfulness of staff also indicate the the institution has the demonstrated commitment and resourcefulness to further strengthen its outreach and extension services to part-time students. Because the institution is a comprehensive, medium-size state university, the findings may be somewhat generalizable to part-time students attending similar state universities, particularly in the Northeast.

References

Turk, F. New initiatives for management: Increasing revenues and resources, Business Officer, May 1984, pp. 17-21.

Weiler, W. C. Using enrollment demand models in institutional pricing decisions. In L. H. Litten (Ed.), Issues in pricing undergraduate education: New direction for institutional research. San Francisco: Jossey-Bass, 1984, pp. 19-34.

Yanikoski, R. A. & Wilson, R. F. Differential pricing of undergraduate education. Unpublished manuscript, 1984.

INSTITUTIONALLY AWARDED STUDENT AID*

Nancy A. Willie
Office of Postsecondary Research, Information Systems
and Institutional Aid
New York State Education Department
Albany, New York

Alan P. Wagner
Center for Educational Research and Policy Studies
State University of New York at Albany

Introduction

With growing pressures on institutional budgets, shrinking federal and state student aid dollars, and declining enrollments in some institutional segments, the interest in strategic uses of student financial aid--particularly those dollars over which institutions have some "discretionary" control in making awards--has increased. This pool of "institutionally-awarded" student aid includes public dollars, which are dispersed at campuses under broad guidelines (such as federal campus-based student aid) and institutional dollars, which come from general revenues and restricted or unrestricted private gifts and endowment income. Yet publicity about "no-need" merit awards and the demise of "need-blind" admissions notwithstanding, the institutions' use of institutionally-awarded student financial aid in responding to these pressures has not been well documented.

The purpose of this paper is to describe trends in the volume and distribution of institutionally awarded student aid from 1978 to 1984. The information reported here comes from several recent institution-level and student-level data bases, which are described more fully in the Appendix. Although the descriptive data do not constitute a comprehensive look at how institutions package aid derived from institutional sources, they do reveal some general patterns against which practices at individual institutions might be compared.

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Findings

Tables 1-6 contain data that broadly describe trends and patterns in the distribution of institutionally awarded student aid. Although the tabled data come from sources that used different questions and sampling strategies, roughly comparable measures of aid and institutional and student characteristics can usually be constructed. Nonetheless, most of the available data bases fail to collect accurate data on all sourses of aid. In particular, most omit some nonfamily support provided outside of the financial aid office (e.g., local community scholarships; athletic, school, or departmental awards) and some portion of the Guaranteed Student Loan volume (the latter especially in the years prior to 1982 when applicants for GSLs were not required to file an application form with the financial aid office). The share of total financial aid processed outside of the financial aid office is unknown, although the proportion has probably fallen in recent years. In any event, our interest here is in how institutions allocate the dollars available to them--most of which do appear on the students' financial aid records and in institutional accounts.

The Volume and Distribution of Institutionally Awarded Aid

Over the past six years, the volume of aid available to all postsecondary students has increased by about 50% , from slightly more than $11 billion in 1977-78 to more than $16 billion in 1983-84. The growth in the volume of "restricted" aid (over which the institution has little discretion) and "discretionary" aid increased in about the same proportion, with the former accounting for about three-fourths of the total volume in both years and the latter contributing about one-fourth of available funds. However, according to the figures in Table 1, there has been an increase in the proportion of "discretionary" aid since the beginning of this decade. The current dollar volume of restricted federal aid to students has fallen since 1981-82, principally due to declines in Social Security and veterans' benefits and level expenditures in the Pell grant program. The source showing the largest estimated increase since 1981-82 is the pool of funds acquired and distributed by the institutions themselves--up $200 million since 1981-82, to $2.5 billion.

Table 1

The Volume of Student Sources of Support,
1977-78 to 1983-84

	1977-78		1981-82		1983-84	
	Amount (millions)	Percentage	Amount (millions)	Percentage	Amount (millions)	Percentage
Total	$10,078	100.0	$18,058	100.0	$16,095	100.0
Restricted[a]	8,030	72.5	13,898	77.0	11,745	73.0
Federal	7,353	66.4	12,977	71.8	10.687	66.4
State	667	6.1	921	5.1	1,058	6.6
Discretionary[b]	3,048	27.5	4,160	23.0	4,350	27.0
Federal	1,452	13.1	1,836	10.2	1,848	11.5
Institutional	1,596	14.4	2,324	12.9	2,502	15.5

Source. Adapted from D. Gillespie and N. Carlson (1984), Trends in student aid: 1963-1983. Washington, D.C.: The College Board, Table A-1.

Note. These distinctions are clouded in the available data; the figures reported here should be interpreted as a general indication of the amounts (and sources) of aid over which institutions exercise some control.

[a]"Restricted" refers to aid from programs or sources over which the institution has relatively little discretion in selecting the recipient and the amount of the award. For the federal program, "restricted" aid sources include Pell grants, GSL and PLUS, Social Security and veterans' benefits. Most state grant programs also provide for limited isntitutional discretion.

[b]"Discretionary" refers to aid from programs or sources over which the institution exercises broad discretion in selecting the recipient and the award amount. Among federal sources, "discretionary" aid programs include the campus-based programs and a variety of smaller grant and loan programs (health professions, nursing, BIA grants). Most institutional sources of aid permit the institution to select the recipient who meets donors' more general criteria.

The figures in Table 1 refer to all sources of student aid available to all students, although some aid provided through noninstitutional channels (such as employer tuition aid or private or community organization scholarships) may not be included. Table 2 presents estimates of the volume of undergraduate student aid administered by financial aid offices. The estimated volume has approximately doubled over the seven-year period.

Frequently, if institutions are to make strategic use of student financial aid, they must draw upon funds raised from the private sector or from the institutions' own general revenues. The pool of institutionally funded gift aid accounts for about one-sixth of the volume of undergraduate student aid administered by institutions. At independent institutions, about one-quarter of institutionally administered aid comes from this source; for public two-year colleges, the proportion is a much smaller 5%. It is striking that, by 1982-83, institutionally funded gift aid had reached about the same share of the volume of aid administered by institutions that it held in 1976-77. Over the intervening years, there has been a rather pronounced growth in the volume of aid from restricted federal programs.

The data in Table 3 indicate that the institutional grant funds were swamped by the massive growth in the Pell grant program at the turn of the decade. In every segment, institutionally awarded gift aid fell from 1978-79 to 1979-80. Most of the decline is the result of less rapid growth in institutionally funded gift aid. In the independent sector, the 33.3% share of institutional gift aid in 1979-80 represented a one-third drop from the previous year. Among New York State institutions in 1981-82, about 20% of all gift aid was institutionally awarded. This is somewhat lower than the comparable national figure, since New York's students receive relatively large amounts of "restricted" gift aid through the state grant program.

Characteristics of Institutional Aid Recipients

Do recipients of institutional aid, awarded largely at the discretion of the institution itself, differ from recipients of aid from other sources? Institutionally awarded aid is defined here to include aid from the federal campus-based programs; institutional gift, loan, and employment

Table 2

The Volume and Source of Undergraduate Student Aid Administered by Financial Aid Offices by Control and Level of Collegiate Institutions: 1976-77 and 1982-83

	Total aid	Institutionally funded gift aid[a]	
	Volume (millions of dollars)	Volume (millions of dollars)	Percentage of total
All collegiate institutions			
1976-77	5,116	858	16.7
1982-83	10,893	1,647	15.1
Public institutions			
1976-77	2,913	291	9.9
1982-83	6,087	491	8.1
Four-year			
1976-77	2,113	254	12.1
1982-83	5,065	436	8.6
Two-year			
1976-77	800	36	4.5
1982-83	1,022	55	5.4
Independent institutions			
1976-77	2,202	567	25.7
1982-83	4,806	1,156	24.0
Four-year			
1976-77	2,065	553	26.7
1982-83	4,338	1,107	25.5
Two-year			
1976-77	138	15	10.6
1982-83	468	49	10.5

Sources: I. Gomberg and F. Atelsek. The Institutional Share of Undergraduate Financial Assistance, 1976-77. Washington, D.C.: American Council on Education, 1979, Table 2; and College Scholarship Service. A survey of undergraduate need analysis policies, practices, and procedures. New York: The College Board, 1984, Table 2.

[a]"Institutionally funded gift aid" excludes federal and state campus-based gift aid and employee (and dependent) tuition benefits.

Table 3
The Volume and Source of Undergraduate Gift Aid Administered by Financial Aid Offices by Control of Institution: 1978-79 and 1979-80

	Total	Institutionally awarded		
	Volume (millions of dollars)	Total	Percentage SEOG	Percentage institution
All institutions				
1978-79	3,315	39.7	9.3	30.3
1979-80	4,316	31.7	8.5	23.1
Public institutions				
1978-79	1,436	24.9	10.5	14.4
1979-80	2,030	24.5	8.7	15.7
Independent institutions				
1978-79	1,621	55.7	7.8	47.9
1979-80	2,012	41.3	7.9	33.3
Proprietary institutions				
1978-79	258	21.8	12.4	9.3
1979-80	274	14.1	11.6	2.5

Source. Tabulations from SISFAP III Merged Analysis File, 25% sample (CERPS, SUNY at Albany). The sample estimates are re-weighted upto national totals using enrollment and recipient data contained in P. Smith et al. Washington, D.C.: AmericanCouncil on Education, 1980, Table B-1; M. Puma et al. Study of the impact of the middle income student assistance act (MISAA). Silver Spring, MD: Applied Management Sciences, 1981, Table 3.4; and S. Broyles. Fall enrollment in colleges and universities. Washington, D.C.: National Center for Education Statistics, 1983 (and earlier reports), Table 10.

Table 4

The Volume and Source of Undergraduate Gift Aid Administered by Financial Aid Offices by Control of Institution: New York State, 1981-82

	Total	Institutionally awarded		
	Volume (millions of dollars)	Total	Percentage SEOG	Percentage institution
Total	750	19.1	4.1	15.0
City university	144	3.0	2.9	.1
State university	160	6.0	4.5	1.5
Independent	345	36.9	5.3	31.6
Proprietary	101	1.8	1.1	.7

Source. Estimated from unpublished tabulations of 1981-82 NYHESC Survey provided by New York State Higher Education Services Corporation Research Division. Sample estimates re-weighted to reflect the full populations using enrollment and aid recipient data in A. Olinsky. An analysis of financial aid utilization by New York State students. Albany, NY: New York State Higher Education Services Corporation, 1983, Tables B and 1.

programs; and tuition remission. In Table 5, we present profiles of aid recipients with aid packages differing according to the receipt of institutional aid. As shown in Table 5, those receiving only institutional aid tend to come from higher-income families ($14,900 vs. $12,400), to present better high school academic credentials (87.9 grade average vs. 86.8), and to be drawn from nonminority populations (16.9% minority vs. 25.8% overall). However, a large proportion of relatively low income and minority students, qualifying for other (largely need-based) aid receive institutional aid as a part of their aid package. These patterns tend to hold across all segments and institutional types, with some exceptions. The data refer to the 1978-79 academic year, but we believe similar (if not more pronounced) patterns might be observed in more current data.

No-Need Awards

Reliable data on no-need awards are simply not available. The volume and packaging of no-need awards seldom enters routine data collecting activities of federal or state agencies or the national associations concerned with student financial aid administration and need analysis. Even when these data are sought (as they were in a recent CSS/NASSFAA collaboration), the interpretation of the aggregate figures is subject to dispute. Perhaps 20% of all postsecondary institutions "adjust" the standard need analysis calculations, and different standards are use by different institutions. As a result, an award made on the basis of "need" at one institution would be a no-need award elsewhere.

With these caveats in mind, we have culled institution-reported data from two surveys that provide some indication of the volume of no-need gift aid awards in higher education. Looking at the figures in Table 6, perhaps 15% of all nonfederal gift aid is used to make no-need awards. At public institutions, which have relatively little institutionally funded gift aid, almost one-fifth is allocated to no-need awards. Independent colleges allocate about 12% of their gift aid to no-need awards, or about $136 million in 1982-83. Among proprietary institutions, the comparable figure in 1982-83 is 16.7%. Even acknowledging some understatement of the true volume of no-need awards (according to some standard assessment of need), the figures seem surprisingly low in relation to the volume of nonfederal gift aid and to the total volume of aid administered

Table 5

Characteristics of Undergraduate Financial-Aid Recipients
Control and Level of Institution: 1978-79

	All recipients	Recipients receiving:		
		No Institutional Aid	Institutional and other Aid	Institutional aid only
All institutions				
Income average	12,400	11,000	12,600	14,900
Age average	21.1	21.5	21.2	20.3
HS Grades average	86.8	85.9	87.1	87.9
Minority pecentage	25.8	25.2	29.3	16.9
Recipients distribution	100.0	37.7	46.5	15.8
Public institutions				
Income average	11,600	9,400	12,800	14,100
Age average	21.5	21.7	21.8	20.5
HS Grades average	86.7	86.2	87.1	87.1
Minority percentage	27.6	27.8	30.6	18.7
Recipients distribution	100.0	42.0	42.5	15.5
Independent institutions				
Income average	14,800	11,000	13,300	16,500
Age average	20.4	21.1	20.2	19.9
HS Grades average	87.9	87.1	87.7	89.5
Minority oercentage	18.9	13.6	22.7	13.9
Recipients distribution	100.0	23.0	57.2	19.8

Table 5

Characteristics of Undergraduate Financial-Aid Recipients
Control and Level of Institution: 1978-79
(continued)

	All recipients	Recipients receiving:		
		No Institutional Aid	Institutional and other Aid	Institutional aid only
Proprietary institutions				
Income average	9,800	11,900	6,900	7,900
Age average	20.9	20.6	21.3	20.7
HS Grades average	82.8	82.6	83.0	83.0
Minority percentage	37.7	26.3	56.7	11.4
Recipients distribution	100.0	57.7	39.0	3.1
Public four-year institutions				
Income average	14,600	13,200	14,700	17,600
Age average	20.7	21.0	20.7	20.1
HS Grades average	87.9	87.4	88.4	87.1
Minority percentage	21.5	29.4	19.6	8.1
Recipients distribution	100.0	37.8	46.5	15.8
Independent four-year institutions				
Income average	14,700	16,900	13,200	16,500
Age average	20.4	21.1	20.3	20.0
HS Grades average	88.1	87.3	87.9	89.6
Minority percentage	19.5	14.0	23.6	14.1
Recipients distribution	100.0	23.0	56.8	20.2

Table 5

Characteristics of Undergraduate Financial-Aid Recipients
Control and Level of Institution: 1978-79
(continued)

	All recipients	Recipients receiving:		
		No Institutional Aid	Institutional and other Aid	Institutional aid only
Public two-year institutions				
Income average	6,800	4,700	8,900	8,300
Age average	23.0	22.6	24.3	21.2
HS Grades average	84.9	84.8	84.4	87.2
Minority percentage	37.2	25.9	52.6	36.4
Recipients distribution	100.0	48.6	36.4	14.9
Independent two-year institutions				
Income average	16,200	19,000	14,900	18,100
Age average	19.9	21.7	19.4	19.3
HS Grades average	84.7	83.1	85.1	85.4
Minority percentage	7.5	5.7	8.0	8.2
Recipients distribution	100.0	21.1	67.0	11.9

Source. SISFAP III Merged Analysis file, 25% sample (CERPS, SUNY at Albany) Instituionally awarded aid includes awards from the federal campus based student aid programs, institutional grants, loans, employment, and tuition remissions. "Income" reported only for dependent students.

Table 6
The Volume of and Uses of Institutionally Funded Gift Aid Administered by Financial Aid Offices by Control and Level of Collegiate Institutions: 1976-77 and 1982-83

	Total aid	Institutionally funded gift aid[a]	
	Volume (millions of dollars)	Volume (millions of dollars)	Percentage of total
All Collegiate Institutions			
1976-77	5,116	858	16.7
1982-83	10,893	1,647	15.1
Public Institutions			
1976-77	2,913	291	9.9
1982-83	6,087	491	8.1
Four-year			
1976-77	2,113	254	12.1
1982-83	5,065	436	8.6
Two-year			
1976-77	800	36	4.5
1982-83	1,022	55	5.4
Independent Institutions			
1976-77	2,202	567	25.7
1982-83	4,806	1,156	24.0
Four-year			
1976-77	2,065	553	26.7
1982-83	4,338	1,107	25.5
Two-year			
1976-77	138	15	10.6
1982-83	468	49	10.5

Sources: I. Gomberg and F. Atelsek. The Institutional Share of Undergraduate Financial Assistance, 1976-77. Washington, D.C.: American Council on Education, 1979, Table 2; and College Scholarship Service. A survey of undergraduate need analysis policies, practices, and procedures. New York: The College Board, 1984, Table 2.

[a]"Institutionally funded gift aid" excludes federal and state campus-based gift aid and employee (and dependent) tuition benefits.

by the institutions. At the least, these figures reveal no apparent widespread diversion of institutional resources to no-need award programs.

Appendix: Selected Detailed Student Aid Data Bases

Institution-Level

National Center for Education Statistics. "Financial Characteristics of Institutions of Higher Education." As part of periodic HEGIS surveys, the "financial characteristics" instrument elicits institutional estimates of the volume of student aid administered by the institution. The accounting scheme used in the document asks institutions to report the amounts "restricted" and "unrestricted," referring here to whether the funds were originally earmarked for student aid purposes.

American Council on Education. As part of its "Higher Education Panel" surveys, ACE asked a sample of institutions of higher education to report the amount and uses of "institutionally funded" student aid for the 1976-77 academic year. The survey provided unique estimates of the distribution of undergraduate institutional aid by program, including athletic grants-in-aid, employee tuition aid benefits, and merit awards.

College Scholarship Service and National Association of Student Financial Aid Administrators. In a one-time 1983 survey of financial aid administrators, CSS and NASFAA collected estimates of the volume of undergraduate student aid monitored and/or administered by the financial aid office, the volume of institutionally awarded-gift aid, and the volume of merit awards.

Student-Level

U. S. Office of Education, SISFAP III. In companion student, student record, and institutional surveys, the Office of Education collected comprehensive information on a random sample of nearly 12,000 postsecondary students in 1978-79 and 1979-80. The data base contains detailed student sources of support data, culled from institutional records.

Student Aid Record Data Base. As part of a collaborative effort spanning four years, four Washington-based higher education associations compiled student aid records for nearly 10,000 financial aid recipients in 1979-80, 1981-82, and 1983-84 (ongoing). The files include detailed student sources of support, family income and assets, and student academic information for each student in the data base. The American Council on Education is supervising the 1983-84 data collection effort.

New York State Higher Education Services Corporation. In a path-breaking 1982 effort, NYSHESC surveyed a random sample of 6,000 students and merged detailed student aid award information from state grant and loan program files and institutional records for each identified student.

EVALUATING ARTISTIC PERFORMANCE IN DANCE FACULTY PROMOTION AND TENURE DECISIONS

Barbara Kays, Jill F. Campbell, and Louis M. Spiro
Office of Analytic Studies
SUNY College at Brockport

Introduction

The purpose of this study is to ascertain whether institutions of higher education use an evaluation of faculty dance performance as part of a tenure or promotion review. If not, should there be one? If so, who should do it: outside artists, or peers on their faculty?

During the expansive years of the 1960s and early 1970s, colleges were growing rapidly, and institutions were concerned with recruiting and keeping competent faculty. In contrast to those years, present day enrollments are decreasing, and fine distinctions are being made between generally good faculty. To help make these fine distinctions, many college administrators are emphasizing substantive evidence for evaluations regarding promotion and tenure review (Centra, 1978). An ERIC search was performed with no results. Thus the survey development and analysis should be considered a preliminary description of this area.

Since dance is an art form, performed by the creator or created to be performed by others, it would seem logical to assume that performance would be an area in which substantive evidence could be presented for evaluation. We hope to prove this assumption true.

Definition of Key Term

For this study, performance will refer to a dancer's presentation of his/her work or role before an audience. The dancer can present it him/herself or create it for another artist or group to present before an audience.

Research Procedure

We chose to survey institutions of higher education who offered at least a bachelor's degree in dance. Once these institutions were identified, we chose only those who had a minimum of five full-time faculty members in dance. The survey was sent to department chairpersons with a cover

letter and a self-addressed stamped envelop for returning the survey and any materials. Forty-five schools met these criteria. The number of surveys sent and returned are shown in the following list.

Institution type	Sent N	Sent Percentage	Returned N	Returned Percentage
Public	31	69	24	77
Independent	14	31	11	79
Total	45	100	35	78

Of the 45 surveys sent out, 35 were returned (78%) and had similar response rates from both public and independent institutions.

The first section of the survey was designed to determine how many colleges had a system for evaluating performance. As shown in Table 1, there are only minor differences between public and independent institutions.

Table 1

Public and Independent Institutions with an Evaluation System for Performance

Status	Total N	Total %	Public N	Public %	Independent N	Independent %
Evaluation system used	12	34	8	33	4	36
Evaluation system under consideration	3	9	3	13	0	0
Evaluation system considered and rejected	0	0	0	0	0	0
No evaluation system	20	57	13	54	7	64
Total	35	100	24	100	11	100

The second half of the survey was answered by those who did not use an evaluation system for performance. Twenty institutions completed this portion. For those schools without existing evaluation systems, public respondents are more favorable to the establishment of evaluation systems than their independent counterparts. Public respondents are equally comfortable with the use of outside experts and faculty peers for evaluations. No independent respondents favored outside experts, and less than half desired faculty peers for this process. These results are indicated in Table 2.

Table 2

Public and Independent Institutions Without an Evaluation System for Performance

Status	Total		Public		Independent	
	N	%	N	%	N	%
Should use evaluation system						
Yes	5	25	4	31	1	14
No	9	45	5	38	4	57
No response	6	30	4	31	2	29
Total	20	100	13	100	7	100
Evaluation by outside artists						
Yes	8	40	8	61	0	0
No	5	25	1	8	4	57
No response	7	35	4	31	7	43
Total	20	100	13	100	7	100
Evaluation by peers						
Yes	12	60	9	69	3	43
No	2	10	1	8	1	14
No response	6	30	3	23	3	43
Total	20	100	13	100	7	100

One of the 35 surveys returned, the majority (N = 20) (57%) did not use an evaluation system for performance. Of the 20 that did not use an evaluation system, 9 did not think an evaluation system should be used. Of this same 20, if an evaluation system was to be implemented, 8 indicated that it should be performed by outside artists, and 12 indicated that it should be conducted by peers.

Of the 12 institutions that used an evaluation system, four sent copies of their guidelines for promotion/tenure review, and one sent copois of forms used for peer evaluation for annual review, promotion, and tenure.

From here on these five institutions shall be referred to as A, B, C, D, and E, where A is an independent University, and B-E are public univresities.

In the following review of the guidelines, references to dance have been higlighted.

School A--Independent university. (B.F.A. and M.F.A. in Ballet and Modern Dance; five full-time and two part-time faculty members; 6,000 students) School A has, at the present time, a vague evaluation

system but the revision (which they sent) has been presented for approval. They believe an evaluation system should be used and that the evaluation should be done by outside artists and their peers on the dance faculty.

These general criteria are used for faculty appointment, reappointment, promotion, tenure and merit increase:

Teaching
Scholarship and/or artistry
Advising
Service to the university, profession and community
Professional development

The Fine Arts Area uses the statements on criteria included in the Faculty/University Handbook, but they have indicated that additions and interpretations of the criteria would be useful in evaluating the Fine Arts faculty.

Teaching. Quality teaching is their primary concern, but since the area uses a variety of instructional modes, and more than one mode may be included in their teaching assignment, their teaching should be evaluated by weighing the major mode more heavily than the minor one.

Scholarship and/or artistry. This area should be in addition to assigned teaching responsibilities, regularized in productivity, and subjected to professional critical evaluation. Scholarship refers to publications, and artistry is interpreted as the creation of original works as well as the direction of, or performance in, artistic productions.

Faculty choosing to be reviewed in this area must present a high quality of performance (i.e., inclusion of works in permanent collections; acceptance of works in juried or invitational exhibitions; and success in competitions, festivals, recitals, and concerts). Evaluation must be done by professional review or peer evaluation within the discipline. Artistic work is evaluated on the basis of quality, forum in which presented, quantity, and frequency.

One of the indexes of quality is peer review by two external colleagues plus one appointed by the chairperson.

Some acceptable forums for appearance of artistic work are: participation in competitions, festivals, recitals, and concerts; execution of artistic productions; and guest appearances as performer and/or teacher.

School B--Public university. (B.A. in Dance Education, B.F.A. in Choreography/Performance, M.F.A.; six full-time and two part-time faculty members; 9,900 students) School B uses an evaluation system and believes one should be used and uses one in that evaluations should be done by outside artists and their peers on the dance faculty.

School B's evaluation system consists of a committe of his/her peers, maximum of six, minimum of four. The committee consists of representation from their department, members of the University faculty and individuals from the artistic community outside the University. These members should understand the artist's work within the University context and be critical as well as supportive. The artist (dance faculty member) prepares a file reflecting the nature and meaning of his/her work, which the committee reviews. A narrative statement serves as a frame of reference describing what is meaningful about the work. Other views may be presented, including students, faculty, and other members of the community and critical reviews. The committee meets periodically with the artist at his/her request. Meetings must be held frequently enough so that contact and discussion is meaningful. The committee exists to serve as an ongoing evaluation committee and guide the artist in his/her artistic pursuits. The dance faculty do not believe that their work fits the distinct and separate categories of teaching, creative and scholarly productivity, and service used in promotion and tenure determinations.

School C--Public university. (B.F.A. in Dance and Choreography; five full-time and five part-time dance faculty; 19,000 students) School C uses an evaluation system for performance, choreography and production work. Evaluations are performed by outside artists, artists from other departments, and peers on the dance faculty.

School C has also adopted its own guidelines for promotion/tenure which are in addition to, but consistent with, University policies and procedures.

School C has a standard review committee consisting of the entire full-time tenured faculty (chairperson excluded), a tenured faculty member from another department, and a dance major not enrolled in any of the candidate's courses at the time of review.
Categories for the evaluations are:

Appropriate preparation, background and experience
Demonstrated quality in teaching
Continued scholarship, professional growth and research
Service to university, school, department, profession, and community
Possession of relevant personal qualities

Appropriate preparation, background, and experience. The candidate for tenure/promotion in the Department of Dance and Choreography must hold a Master's degree in Dance or its equivalency. A candidate who does not possess a master's degree must have commensurate experience in professional dance (five years as a professional prior to appointment).

Teaching. Some factors considered are the effectiveness in developing the intellectual and creative abilities of students and demonstration of concern for students as developing artists. One accepted data source is student achievements associated with the candidate.

Scholarship, professional growth, and research. Some areas considered in this category are professional dance studies, professional performance, and choreography for public presentation. These performances could be evaluated by outside artists or by their peers within the department, school, or university.

School D--Public university. (B.A. in Performance, B.A. and M.F.A. in Performance and Choreography, and B.F.A. in Teaching; eight full-time and four part-time dance faculty members; 38,000 students) School D uses an evaluation system and believes one should be used. School D believes that evaluations, rather than being done by outside artists, should be done by dancer's peers on the dance faculty.

School D did not send any specific guidelines that they have adapted for the dance faculty; they use the University policies and procedures. A one-page outline is used for preparing personal records for promotion and included in the outline are areas for artistic achievement, performance, and concerts.

School D also included an evaluation form used for peer review. Categories are:

Teaching
Creative research
Scholarly research
Performance
Service
Personal characteristics

Creative research includes such categories as quality of work, quantity of work, location and significance of publication, public performance, and national recognition. A dance department review of faculty rating form was also sent by School D.

School E--Public university, Department of Ballet. (B.F.A in Ballet, B.F.A. in Ballet with Musical Theatre Emphasis, M.F.A. and M.A. in Ballet; five full-time and twelve part-time dance faculty members; 16,500 students) School E uses an evaluation system and believes one should be used. The evaluation should not be done by outside artists but by their peers on the dance faculty.

The Department of Ballet's main emphasis is the training of major students for careers as performers. Faculty members are selected for their artistry in the discipline. Research, publications, and other forms of academic productivity are of secondary importance.

General criteria that the Department of Ballet uses to consider appointments, retention, promotion, and tenure are:

Training and knowledge of subject matter
Teaching ability
Ability to work with colleagues
Service to the University

Service to the community
Length of service in grade

Although no particular priority or weight is given to these criteria, serious deficiencies in several areas would be an indication that the faculty member is hindered in making an ongoing contribution to the University.

Training and knowledge of subject matter. Theoretical studies, including a knowledge of the philosophical and historical bases of the field of dance, can be used to meet these criteria. However, having professional experience is a more compelling means of satisfying the training and knowledge requirements.

Teaching. Continuing involvement outside the classroom in personal activities such as performing, directing, choreographing, and other creative enterprises.

All recommendations are to be supported by carefully considered written material from the candidate and others. Recommendations for service in addition to teaching and to the community should be from people who are professionally qualified to evaluate their work.

Of the other seven schools that use an evaluation system but sent no material, performance is evaluated by:

Confidential "outside" letters
"Significance"
National or regional significance
Newspaper review
"Concerts outside the school expected"
Having maintained "professional" artistic activities

Of the institutions that do not use an evaluation system, more than one commented that performance was totally subjective.

Summary

Of the five institutions whose evaluation materials were reviewed, four are public and one is independent. Four of the institutions follow their University policies and procedures, but each has developed individual

criteria for their own departments and made performance evaluation an integral part of the criteria. All of the schools believe an evaluation system should be used, and two public institutions do not approve of outside evaluators.

While all of the institutions used the committee forum for decision making, one approach was distinctive. They did not believe their work fit into the standard categories and instituted an evaluation committee that included peer representation, as well as outside faculty and community artists. In addition to the review process, the committee was expected to meet frequently with the faculty member to serve an ongoing evaluation function and to guide the individual's artistic pursuits and development.

The four other schools emphasized teaching. One school considers student achievement as one way of evaluating this category. Two of the schools also emphasized "concern for students as developing artists" as a factor to be considered. All of the schools have a criteria of scholarship or research, and performance is a major factor in both areas.

Two of the schools emphasize professional employment as a criteria for initial appointment in their departments. One institution accepts five years of professional employment in place of a master's degree when considering tenure and/or promotion.

Two of the schools stress "personal qualities" as criteria. These "personal qualities" can be considered in personal relationships with students and colleagues on campus and in the community. While all four schools emphasize community service, one institution puts a major emphasis on it--to the extent of "doing whatever is reasonable to win public support for its (University, department) activities." Two of the institutions use their particular evaluation system in the total fine arts area.

Discussion

There are many different approaches and views to the evaluation of performance for tenure/promotion, and each institution should develop a process to fit their needs and their faculty's needs. The significant point is that a variety of institutions have developed mechanisms in which substantive evidence has been used in evaluating artistic performance.

The first principle is that dance faculty should be treated with the same degree of scrutiny and courtesy as faculty in any other discipline within the institution. Choreographic production and performance could be equitable with writing research papers, publishing in journals, and presenting at conferences. If, for example, it is common practice for an institution's promotion and tenure committee to actually read and evaluate the scholarly work of a faculty member or to ask outside scholars to do the same, then it would be appropriate for the work of choreographers to be seen and evaluated in a similar way. If, on the other hand, promotion and tenure decisions are based on the number of publications, evidence of acceptance by recognized scholarly journals and reviews or comments by other scholars in response to presentations by a faculty member, then the dance faculty member should be evaluated on similar evidence. The kinds of evidence that would be appropriate in the dance area are numbers of performances presented, number and length of choreographic works completed, invitations to perform, reviews by newspaper critics, and written comments by colleagues familiar with the work of the artist. None of these criteria involve actual evaluation of the artistic work of the faculty member by a tenure and promotion committee or by solicited outside evaluators.

One of the dangers inherent in direct evaluation of a faculty member's work in any discipline is that aesthetic or philosophical differences might exist or arise. This could be true whether the individual evaluator is an outside expert or a faculty peer. In the final analysis, the department assumes the responsibility for the tenure or promotion decisions.

Conclusion

The issue of evaluating faculty performance in dance is, by its nature, a subjective process. However, several institutions have developed formalized procedures in an attempt to include this vital component in promotion and tenure decisions. As a preliminary study, it suggests that there is applicability to all of the fine and performing-arts disciplines as well.

In the relatively new area of evaluating dance performance, it is surprising to see as much support for it as was demonstrated in the

survey results. As the idea matures, further research could identify the similarities that exist across these disciplines and how successful they have been in improving decision making in promotion and tenure cases.

References

Adshead, J., Briginshaw, V. E., Hodgens, P., & Huxley, M.R., A chart of skills and concepts for dance. Journal of Aesthetic Education, Fall, 1982, 16(3), 49-61.

Best, D. The objectivity of artistic appreciation. British Journal of Aesthetics, 1980, 20(2), 115-127.

Brennan, M. A. Relationship between creative ability in dance and selected creative attributes. Perceptual and Motor Skills, 1982, 55, 47-56.

Centra, J. A. Using student assessments to improve performance and vitality. New Directions for Institutional Research, 1978, 20, 31-49.

Dance Magazine College Guide. K. G. Clear (Ed.). Danad Publishing, New York: Danad Publishing Co., 1982-83.

Hildebrand, M. The character and skills of the effective professor. The Journal of Higher Education, January 1973, 44(1), 41-50.

Meyer, H. H., Kay, E. & French, J. R. P., Jr., Split roles in performance appraisal. Harvard Business Review, 1965, 43, 123-129.

Miller, R. I., The assessment of college performance. San Francisco: Jossey-Bass, 1979.

Smith, R. A., & Smith, C. M. The artworld and aesthetic skills: A context for research and development. Journal of Aesthetic Education, April 1977, 7(2), 124.

Wyrick, W. The development of a test of motor creativity. The Research Quarterly, 39(3), 756-765.

PART-TIME FACULTY EMPLOYMENT AND COMPENSATION MODELS:

Larry W. Metzger and Deborah Olsen
Office of Institutional Research
Ithaca College

Introduction

At the request of President James J. Whalen, the Office of Institutional Research at Ithaca College conducted a survey of institutional practices for the employment of part-time faculty. Initiated in the summer of 1983, survey data were collected from 40 postsecondary institutions within a 100-mile radius of the college.

A review of the literature indicated that, in contrast to full-time faculty, part-time faculty are almost entirely drawn from a local market. Part-time faculty themselves appear to be fairly restricted geographically, the majority being unable or unwilling to move from the area where they live. In particular, part-time faculty do not relocate for the purpose of taking a part-time teaching position. Based on their analysis of AAUP's nationwide surveyed data, Tuckman and Vogler summed up the part-time faculty market in this way, "we believe that the market for part-time faculty is probably local and characterized by comparatively many sellers of labor but relatively few buyers." (Tuckman and Vogler, 1978, p. 3)

In another article published from the same AAUP survey data, Tuckman and others assert that:

> . . . the variables that explain differences in salaries among full-timers are not the same as those that explain differences among part-timers. For full-timers, personal differences involving both educational level and proven skills have a direct effect on salaries; for part-timers they do not. What is perhaps even more important is that with few exceptions, institutional factors [emphasis added] are the major determinants of salary variation for part-timers. This is consistent with the view that the buyer of part-time labor rather than the seller is the primary determiner of the terms of the employment contract. (Tuckman et al, 1978, p. 93)

In this study we have accepted Tuckman's findings with regard to the local nature of the part-time faculty market and sought to identify more of the "institutional factors" which he suggests are the major determinants of salary variation of part-timers.

Objectives

This study was designed around the following objectives:

1. To ascertain the range of models and options employed for hiring and compensating part-time faculty.

2. To determine typical levels of payment.

3. To identify the range of benefits and other forms of compensation afforded part-time faculty.

4. To measure the levels of use of part-time faculty.

5. To identify the range of typical responsibilities and measure the relationship between them and the level of compensation.

6. To determine the extent to which private practice is likely to differ from published policy.

7. To identify the range of current part-time employment issues being addressed by these faculties and administrations.

8. To determine what planning options are being considered.

Design

In light of the local nature of the part-time market, a survey was designed which would assess present employment practices as well as anticipated revisions to those practices at institutions near enough to Ithaca College to compete (possibly) for the same supply of part-time labor. The limits of the local region were set at a radius of 100 miles. To ensure comparability, the study was limited to nonprofit post-secondary institutions in New York State. This region included 40 institutions evenly split by type of control: 20 independent and 20 public.

Table 1

Summary of Institutions Surveyed by Type and Control

Type or level	Private	Public
Doctoral level	3	1
4-year and 4+ years	15	7
2-year	2	12
Total	20	20

In general it was believed that the level of compensation would relate to the type or level of the institution. But, as our thoughts on the subject developed, two conflicting hypotheses emerged. The first hypothesis suggested that there might well be a single payment scale for part-time faculty. According to this line of reasoning, benefits would be inversely related to salary. Institutions would either pay well but offer few, if any, benefits and little security, or they would pay less and offer greater benefits and security. The second hypothesis assumed that the level of salary and benefits would be positively related. In this case, salary and benefits would, we felt, also be positively related to the level of commitment to the institution. Commitment as interpreted here could be operationalized as a combination of the typical FTE teaching load and the range of additional work responsibilities beyond teaching. Simply put, this hypothesis suggested that the more that part-time faculty are expected to perform like their full-time counterparts, the more likely they are to be paid like them. The level of compensation would thus reflect the degree of integration into the system, with benefits and salary being positively related.

Method

On June 25, 1983, a letter from President Whalen was mailed to the Chief Executive Officer (CEO) of each institution in the regional population. The letter explained the nature and intention of the survey and invited each of them to participate. A response card was enclosed on which to indicate their intention with respect to each part of the survey and the name and telephone number of the designated respondent(s). All 40 CEOs agreed to participate.

The following definition of part-time faculty is used in this study: Part-Time Faculty refers to those persons hired primarily for the purpose of providing undergraduate instruction during the course of the normal academic year, whose combined annual load equals less than full-time. The group should reflect a supplementary faculty hired to teach courses creditable toward the baccalaureate degree (including courses taught at two-year institutions that are creditable toward the baccalaureate). This definition excludes the following categories of employees:

1. Graduate and undergraduate students who assist or teach in the classroom, but for whom remuneration is in the form of an assistantship, stipend, tuition deferral or assistance, work-study monies, student employment, or any form of student financial assistance.

2. Technicians hired to teach technical and professional skills in technical certificate and licensure programs.

3. Administrative officers and staff whose primary responsibilities are outside the classroom, even though they may devote part of their time to classroom instruction.

4. Instructional faculty who, as members of military organizations, are paid on a different salary scale from civilian employees.

5. Instructional faculty (such as members of religious orders) whose services are valued by bookkeeping entries rather than by full cash transactions.

6. Instructional faculty who donate their services.

Limitations

Partial population data were received from six institutions. The four major doctoral-level institutions accounted for most of that number. Three of these limited their responses to faculty in their equivalent of a College of Arts and Sciences. The fourth, Cornell, reported on a group of part-time instructors which has regular faculty status at the institution. The other two institutions, Elmira College and Monroe Community College omitted data for small special-case faculty groups. These groups were so limited that, for all intents and purposes, data for these institutions are considered to be complete.

Two institutions in the survey population, Hamilton College (private) and State University College of Environmental Science and Forestry (public) reported having no part-time faculty.

Early investigation during the design of the survey instrument indicated that many institutions were without detailed data on their part-time faculty. As it was the intent of this study to gather information about prevailing practices in the regional part-time market, we intentionally used the term typical when requesting salary and load information. We recognized that this was not a statistical term, but we felt strongly that use of the term "typical" would encourage respondents to provide whatever data they had available. As a result responses may

refer to mode, mean, median, or simply "most likely." Readers need to be wary of overinterpreting the data.

Finally, it may be argued that the use and compensation of part-time faculty is a function of the programs of any institution. Continuing education programs are more likely to employ part-time faculty than residential liberal arts programs. Further, highly technical programs frequently require specialists from industry who teach on a part-time basis. Part-time specialists may indeed be an important factor enabling institutions to remain at the forefront of rapidly changing technological fields. This study, however, does not attempt to analyze the market by program mix or major disciplinary offerings. To some extent these variables may be reflected in the level, type, and control of the institution; they may also account for some of the variation between otherwise similar institutions, but exploration of these hypotheses must be left to another study.

Analysis

One possibility considered initially was that salary and benefits would be inversely related. To check this we ranked the institutions by level of salary and by level of benefits and compared the two scales. The two were not inversely related, disconfirming the "single payment scale" hypothesis.

When we controlled for institutional level (two-year, four-year, doctoral) and control (public, private), we found considerable support for the hypothesis that salary and benefits are positively related.

In beginning to look for logical categorizations of institutions, we did not arbitrarily select type of institution as a grouping variable. Tuckman's findings gave us some guidance, but we looked first at level of use, then at salary and benefit levels, and finally at employment patterns and associated responsibilities. The two-year institutions and the SUNY colleges quickly emerged as homegeneous groups. The four doctoral-level institutions comprised yet another logical group, primarily due to their unique status as suppliers rather than competitors in the market. Tuckman recognized the importance of their large graduate student populations as providing both an internal and an external supply of part-time instructors. In addition, five of the seven categories of

part-time faculty identified by Tuckman may be viewed as significant by-products of the doctoral-level university environment, including: retired or semi-retired faculty, graduate students (seeking more lucrative off campus employment), homeworkers (well-educated spouses seeking part-time employment out of the home), hopeful full-timers (new Ph.D.s looking for experience), and part-mooners (persons who combine several part-time jobs to equal full-time employment, e.g., artists).

This study supports Tuckman's finding that two-year institutions, as a group, form the largest buyer of part-time labor:

Table 2
Comparison of Part-time Faculty Use by Institutional Type

Type of Institution	Median Total headcount	Median Total FTE
Two-year	120	32.3
SUNY-UUP[a]	37	12.8
Private four-year and 4+ years	32	11.1

[a]The SUNY colleges operate according to a collective bargaining contract negotiated with the statewide union of United University Professors (UUP). Since the terms of the contract are centrally negotiated, they do not reflect the vagaries of the local part-time market. In general, SUNY-UUP salaries tend to be higher and more uniform than the salaries of other types of schools in the region.

All but one of the two-year institutions (Corning Community College) in our study hire more part-time faculty than full-time faculty. (The same may be true for Maria Regina, but data on the number of full-time faculty were not available.)

The median typical salary paid by two-year, four-year, and SUNY-UUP schools for the equivalent of a three-credit lecture course in Fall 1983 also varied considerably:

Table 3

Comparison of Typical Salary Levels of a Three-Credit Course

Type of Institution	Median	Mean	Minimum	Maximum
Two-year	$1,050	$1,022	$670	$1,200
SUNY-UUP	1,483	1,394	900	1,800
Private 4-year and 4+ years	1,350	1,581	882	3,333

Two-year institutions pay part-time faculty the smallest salaries and responses to questions on benefits showed that they also provide the fewest benefits. Tuckman found a similar difference between two and four-year institutions but in his analysis universities paid the least. This may be due to a difference in the definition of part-time faculty. The AAUP survey used a broader definition, particularly with regard to graduate students. Our survey excluded graduate students paid via any form of institutional financial aid. Further, our survey data indicate that part-time faculty at two-year colleges also typically carry a lighter teaching load than do part-time faculty at other institutions.

Given pay, benefits, and load, it was somewhat surprising to find, therefore, that part-timers at two-year colleges regularly take on nonteaching responsibilities such as department committees and curriculum development. Tuckman provides one possible explanation for this finding. He suggests that the part-time market may be somewhat differently defined for two-year schools than for four-year and doctoral-level institutions. Our finding that two-year schools are less likely to require or specify preference for the terminal degree as part of a part-time faculty's credentials lends support to Tuckman's suggestion.

The positive relationship between salary and benefits was less clear in the case of private institutions until we discovered that part-time faculty employment practices vary substantially by institutional location (i.e., whether a school is urban, suburban, or rural). According to descriptions of the institutions published in The College Handbook, 1982-83 (Matheson, Ed., 1982) half of the institutions within the survey population are located in rural areas. Of the remaining half, most are in

suburban settings with a few listed in urban locales. Our findings strongly suggest that supply and demand are not uniform for all institutions, and that proximity to major metropolitan areas appears to be a significant variable in determining the number of part-time faculty employed, the nature of the salary and benefits package offered, and the level of responsibilities to be assumed by part-time faculty.

In our questionnaire, we asked schools to report on whether they maintained more than one group of part-time faculty, and, if so, to report salary, benefits, and other relevant data for each group. From participants' responses, several salient findings emerged. First, as Table 4 illustrates, there are fairly dramatic differences in the number of part-time faculty employed by private institutions in rural vs. suburban and urban locations. The 14 private institutions for which we had complete data are rank ordered from most likely to least likely to employ the services of part-time faculty. The top half of the table ranks the institutions by full-time to part-time headcount ratios while the bottom half of the table gives comparable full-time to part-time FTE ratios. Suburban institutions occupy the top six positions in both rankings.

The second feature that appeared to distinguish rural vs. suburban/urban schools was a greater tendency on the part of rural schools to maintain more than one group of part-time faculty. This tendency is somewhat surprising given that fewer part-timers are hired by rural schools. By and large, part-time group membership at these rural institutions is determined by whether a faculty member: works more or less than 50% of a full-time load; receives a contract for a semester or a year; is paid a salary based on a per course or prorated scale; is provided with fringe benefits; and is expected to take on nonteaching responsibilities. The group employed more than 50% FTE at these institutions seems to be best characterized as a permanent resident population consisting predominantly of spouses and local business people with which these institutions establish long-term relationships. Their numbers are relatively small (e.g., Colgate had five, Hobart-William Smith reported two, Houghton had sixteen, and Keuka eight). The responsibilities of this group closely parallel those of the full-time faculty, as do their benefits and salary scale. It would appear that

Table 4

Private Institutions Rank Ordered by Full-time to Part-time Headcount and FTE Ratios

Number of Full-time Faculty Employed for Each Part-time Faculty			Number of Full-time Faculty Employed for Each FTE of the Part-time Faculty		
Location	Institution	Ratio FT/PT HDCT	Location	Institution	Ratio FT/PT FTE
Suburban	RIT	0.8	Surburan	RIT	2.2
Suburban	St. John Fisher	1.0	Surburan	Elmira	4.2
Suburban	Elmira	1.2	Surburan	Nazareth	4.6
Suburban	Nazareth	1.8	Surburan	St. John Fisher	4.8[a]
Suburban	LeMoyne	1.8	Surburan	Ithaca	6.1
Suburban	Ithaca	2.6	Surburan	LeMoyne	7.1[a]
Rural	Houghton	3.1	Rural	Houghton	8.6
Rural	Keuka	3.1	Rural	Hobart & W. Smith	11.6
Suburban	Utica College of Syr.	3.4	Surburan	Utica College of Syr.	11.7
Rural	Alfred	4.4	Rural	Alfred	12.5
Rural	Wells	5.2	Rural	Wells	13.0
Rural	Colgate	5.4	Rural	Hartwich	13.6
Rural	Hartwick	5.8	Rural	Colgate	15.3
Rural	Hobart & W. Smith	5.8	Rural	Keuka	24.5

[a]Estimated based on typical FTE per part-time individual.

private rural schools' decision to maintain two distinct groups of part-time faculty reflects a somewhat unique need at these schools to establish a more permanent pool of part-time faculty rather than reflecting the sheer numbers of part-timers hired.

Finally, a third difference was found between the typical salaries reported by the rural versus the suburban/urban colleges. Private suburban and urban colleges paid a mean typical salary of $1,315 in Fall 1983 for the equivalent of a three-credit lecture course. The median figure was $1,300. By contrast, rural private institutions paid a mean typical salary of $1,970 with a median of $1,900 for a comparable three-credit lecture. Even when the highest paid groups (i.e., those employed $>$ 50% FTE) are removed from the calculation for the rural group, the figures remain substantially higher, with a mean of $1,770 and a median of $1,710.

Altogether, our findings would seem to suggest that practices employed by suburban and urban schools reflect their proximity to population centers and their ready access to part-time faculty supplied by local business and industry. The more limited number of part-time faculty hired by rural institutions and their tendency to differentiate between part-time faculty groups suggests some difficulty in obtaining the services of part-time faculty.

Conclusions

The importance of these findings becomes apparent when one considers the particular mix of institutions within any defined market area. For example, Ithaca College, a suburban institution, can be considered almost ideally situated given the proximity of three major doctoral-level institutions within a 50-mile radius. Further, within that 50-mile radius, or primary market region, the chief competition appears to be from two-year institutions that pay less and expect more. At $1,500 for a three-credit course and with a generous benefit package available to those who qualify, it would appear that Ithaca's compensation package is well above average. Of course, the present study does not exhaust all the variables which must be considered in delineating a market position. additional variables might include: type and level of instruction; times of day during which courses are to be taught; the individual

qualifications sought; as well as discipline-specific variables such as technological specializations or business expertise.

Finally, in talking with two survey responses, we obtained two radically different administrative perspectives on the employment of part-time faculty. Both respondents represented institutions within the 50-mile radius of Ithaca College. One stated that the administrative policy of that institution was to pay well above average for the services of part-time faculty. That policy included limiting the use of part-time faculty, but paying one of the highest salaries in the region. This, it was asserted, enabled the institution to attract the very best part-time faculty available. By contrast, the respondent for the second institution stated that, given the availability of highly qualified personnel seeking part-time employment, it would be fiscal foolishness for any institution to pay more than the minimum required, or to limit in any way the use of such a valuable yet inexpensive resource.

Our intention has not been to imply which course of action may be administratively correct, but rather to supply at least some information about institutional factors that appear to discriminate terms and conditions of employment and to provide a context for making administrative decisions regarding the employment of part-time faculty.

References

Matheson, M. (Ed.) The college handbook, 1982-83, 20th ed. New York: College Entrance Examination Board, 1982.

Tuckman, H., Cladwell, J., & Vogler, W. Part-timers and the academic labor market of the eighties. Part-time faculty series. Washington, D.C.: AAUP, 1978, p. 93. Also published in the American Sociologist, November 1978.

Tuckman, H., & Vogler, W. The "part" in part-time wages as published in the Part-time faculty series. Washington, D.C.: AAUP, 1978, p. 3.

POLICY-MAKING THROUGH FACULTY COLLECTIVE BARGAINING: AN INFORMATION BASED APPROACH TO NEGOTIATING

William E. Campbell
Office of Institutional Research
Montgomery College

Frank J. Tusa
Office of Employee Relations
Montgomery College

Introduction

Negotiating an initial collective bargaining agreement with a faculty union that permits management to continue to operate a college effectively and efficiently is extremely important to the future success of an educational institution. This paper will discuss how one institution did this through the development of proposed policy directions or objectives that yielded specific negotiating strategies. The policy directions and objectives were developed based on information about the institution as well as similar institutions throughout Maryland and the nation that was provided through the institutional research function.

Background

Montgomery College (MC) entered the decade of the 1980s with a tradition of success and with many of the elements necessary for a prosperous future. Outwardly, the College appeared robust and healthy. Over the years, MC had developed a reputation as a leader in community college education, with excellent academic programs, an outstanding faculty, and solid public support. Student credit enrollments at the three-campus community college were projected to top 20,000 soon and, while no one expected the dramatic increases of earlier years, it was equally true that no one expected any serious enrollment decline in the near future. State aid, driven by enrollment, looked secure. The residents and government of Montgomery County, a prosperous, education-conscious suburb of Washington, D.C., were also expected to continue to provide the additional resources necessary to maintain a high-quality educational institution.

Beneath the surface, prospects for a successful decade were less bright. The 1970s were characterized by a steady deterioration in

faculty-administration relations. Several internal and external factors underlay the problem, but two broad policy issues proved catalytic. First, in response to the seeming inevitability of a 100% tenure rate, the College Board of Trustees virtually dismantled the traditional tenure system in 1974. Beginning that year, nearly all new full-time faculty were hired on "temporary" contracts, usually one year in length. Faculty hired on such contracts were generally rehired, but the benefits associated with the new contracts were not comparable to those enjoyed by their tenured colleagues. The advent of a nontenure faculty employment system also raised the thorny issues of job security and academic freedom.

The second key issue was more sweeping in scope and equally fundamental. Many faculty believed that the traditional role in the governance of the College had gradually but steadily eroded over the years. This sense of loss extended from control over academic matters to faculty personnel decisions and prompted official faculty censure of the College President in 1976. The imposition of a new organizational structure and new governance processes in 1977-78, over strong faculty objections, seemed to confirm the worst fears of many faculty members.

By the late 1970s, faculty efforts to change policy directions at the institution focused on the enactment by the state of Maryland of enabling legislation to permit collective bargaining at the College. Maryland did not have a statewide law permitting collective bargaining in its publicly supported two and four-year colleges, nor does it have one today. Efforts by labor groups to secure blanket legislation covering both State employees and those in State-related colleges failed repeatedly over the years. Separate City enabling legislation, however, had long permitted bargaining at the Community College of Baltimore. After a strong lobbying effort, union proponents among the MC faculty successfully pursuaded local delegates to the State legislature of the need for bargaining rights at the College, and the legislature enacted a law authorizing collective bargaining at MC in 1978.

Enactment of the law immediately sparked a contest between two rival faculty organizations--the local chapter of the American Association of University Professors and a local National Education Association affiliate the Montgomery College Faculty Association. Petitions for an

election were filed as soon as the law became effective in October 1978, but a series of legal requirements delayed an election until February 1980. The first contest resulted in defeat of a "no representation" alternative. The run-off a month later resulted in a surprising 158-158 tie. In April, the AAUP Chapter finally won the right to represent 355 full-time faculty at the College.

The College also had been organizing its resources to meet the new challenge. A new President assumed office in mid-1979 and soon established a management structure for the anticipated contract negotiations. One of the first steps was to fill the authorized but vacant position of Director of Employee Relations with direct staff responsibility for managing collective bargaining activities. An appointment was made two weeks after the first representation election. Soon after the AAUP was certified, the College named its negotiating team. It was a large team, with a labor attorney as the chief negotiator, academic deans from each campus, and representatives from the administrative services area. Significantly, the Director of Institutional Research was included. The College realized very early that it would be faced with sweeping contract demands in many policy areas. It was already clear, for example, that AAUP demands would include dramatic changes in faculty work load, leave, and salary policies, as well as tenure and governance practices. The selection of the Director of Institutional Research as a member of the team was a recognition of the College's need to collect and analyze significant amounts of internal and external data before and throughout the negotiations if it were to effectively develop and defend its negotiating positions. This was a calculated and essential factor in MC's negotiating strategy.

From the outset, the College recognized that its first collective bargaining contract would embody institutional policies within a legal framework and, most likely, these policies would be difficult to change. Accordingly, it needed to develop specific negotiating objectives that met the needs of the future. In developing these objectives, the College had to incorporate into its planning projected changes in student enrollment patterns and anticipated revenues, increasing State and local involvement in College affairs, historic work-load and salary practices, and a variety

of other internal and external factors that could affect operations in the eighties and beyond.

At MC, the responsibility for institutional policy-making rests with the Board of Trustees. To develop policy-related objectives for the Board to consider, the President utilized the team structure established for contract negotiations, coupled with consultation with senior College administrators. Basically, one or more specific objectives for each area that could be expected to be an issue in the forthcoming negotiations were developed. Throughout the process, the data necessary to understand and analyze the issues were developed by Institutional Research. After recommendations were finalized by the President, the specific proposals were presented the the Trustees for review and decision. The key data used to develop each major objective was also presented to the Board. After the Board approved the policy objectives, the efforts of the team shifted to developing the strategies and tactics necessary to achieve the objectives at the negotiating table.

Proposed Policies, Strategies, and Related Information

At this point, we intend to present some specific examples of policy objectives proposed to and accepted by the Board of Trustees and some of the strategies and tactics used to try to reach agreement with the union on a proposed policy direction. The first area of discussion will be work load for instructional faculty.

At the time of the negotiations, the College's policy indicated that as a rule of thumb instructional faculty were to teach 30 equivalent semesters hours (ESH) per academic year, hold three open office hours per week, and be assigned release time for special activities such as department chairmanships. In practice, however, the average work load was approximately 29 ESH. Many faculty taught exactly 30 ESH, but the range was from 24 ESH to 37 ESH. Thirty-five percent of the instructional faculty taught 28 or 29 ESH per academic year with 11% of the faculty teaching over 30 ESH. The majority of people who were teaching less than 30 ESH were in the sciences or the allied health field.

In order to provide background information for the development of the College's specific policy directions and to help develop its negotiating strategies, the Office of Institutional Research, at the request of the

Director of Employee Relations, gathered and analyzed extensive amounts of internal and external data. Through this analysis, we were seeking to determine the impact of a proposed policy direction and its related possible negotiating proposals on the College's current financial situation. To perform this analysis, the office collected work-load studies that had been done by other community colleges, the Academic Collective Bargaining Information Service, and the National Center for Collective Bargaining. The office also conducted a study of faculty work-load policies and practices at Maryland community colleges. In addition, we collected the contracts for other community colleges. These external data were analyzed to determine what was the general situation at community colleges regarding work-load in both the state of Maryland an in the nation. These data, plus the College's existing work-load policy, were used to provide background information for the College to propose two policy directions for discussions concerning work-load.

Columns 1 and 2 in Table 1 present the two policy proposals and the final agreed-upon policy direction. After the College made its decision, the Office of Institutional Research proceeded to determine the impact of the proposal on the College's financial situation. Prior to making the decision, we knew that both proposals would have a positive financial impact. However, we did not know the magnitude of the impact of the one finally agreed upon. The analysis indicated that the College would save approximately $70,000 per academic year. This small, but important savings was deemed appropriate for the institution as the Board of Trustees was not seeking to make radical changes in faculty work-load, but to fine-tune it so that the College was more efficient but still providing the desired high quality of education.

After completing the analysis of the external data and the College's proposed policy, the Office of Institutional Research turned its attention to analyzing the union's work-load proposal (Table 1, Column 4). This analysis indicated that the College would have to hire an additional 150 to 250 full-time faculty versus a current staffing of 324 instructional faculty. The range of additional hiring was dependent upon the amount of overload that would be taught by each full-time faculty member. The cost to the institution for the additional full-time faculty, a 24-contact hour work load, and a restrictive part-time faculty hiring policy would

have increased the College's cost for faculty salaries by 90 to 110%. Another union proposal to place class size restrictions on English composition and accounting courses would have increased College costs by another $110,000, while the payment of additional salaries for large classes would have increased costs by another $140,000. Thus, the adoption of the union's proposal would have had a very significant and detrimental impact on the College's financial viability for the future.

Based on these analyses, which in many cases were shared with the union negotiating team, management negotiators knew that their position on work load must be firm, but fair. The management negotiating team first proposed that work load be kept out of the contract, but subsequently it made work load proposals that closely approximated the desired proposed policy direction (Table 1, Column 3). After months of negotiating on this particular issue, including compromising on aspects of its objective, a faculty work-load clause was agreed to that enabled the College to meet its policy direction objective for faculty work load.

The second area of discussion will be economic issues. As in most other contract negotiations, salaries and related economic matters proved a major source of conflict at the negotiating table. After lengthy negotiations, tentative agreement was reached on all noneconomic matters. After several weeks of further negotiations, it became apparent that agreement was unlikely on the remaining issues and the parties entered the mediation process provided for in the collective bargaining enabling law.

College objectives with respect to economic issues were developed in much the same manner as other objectives. However, three major considerations went into the development of policy directions in this area. First, since support and administrative staff were not organized at the College, it was important that any settlement with faculty take into account an internal equity factor. The College recognized that negotiations might result in different compensation adjustments, but it remained convinced that dramatic differences were not in the interest of the institution as a whole. Second, the College established as a policy direction an intention to pay fair and competitive salaries in order to keep and retain competent faculty. This objective meant that it was imperative to collect and analyze a good deal of data on statewide and

national faculty salaries, as well as information about cost of living, local employer increases, State employee increases, and related factors. Finally, in a period of great economic uncertainty, it was essential that the College take into account projections of revenue and expenditures and the realities of the economic situation in 1982 and beyond.

Information was gathered on full-time faculty salaries at community colleges and four-year institutions in both Maryland and the nation. The national AAUP publishes a report each August that presents salaries for all responding institutions by rank, state, and type. The Maryland State Board for Community Colleges and the Maryland State Board for Higher Education publish reports annually that show average salaries by rank for their respective institutions. Thus considerable external salary data was readily available.

In comparing the Fall 1982 Montgomery College data to comparable AAUP data, we learned that the average salary for Montgomery College assistant professors was above the ninety-fifth percentile (highest rank) while it was just one percent below this level for professors and associate professors. However, instructors were 8% below the ninety-fifth percentile. The average salary for Montgomery College faculty was the highest among Maryland community colleges, and 24% above the national community college average. In fact, Montgomery College's average salary was only one percent below the national average for doctorate-granting instituions. Data for nearby community colleges and the Montgomery County public schools showed that MC salaries were the highest in the area. This information enabled the College to determine that its salaries were adequate and competitive for the area, state, and nation. However, the data showed that MC instructors were not as well paid, comparatively, as other MC faculty. Thus one of our objectives was to improve salaries for lower-paid faculty rather than for faculty in general.

Additional information was gathered on COL and on merit increases for local and state employees. Management wanted to reach a settlement that was not too far from what was happening elsewhere. In this regard, a survey of Maryland community colleges showed that MC salaries for part-time and summer instruction were consistent with salary practices elsewhere. Thus we did not want to alter our existing salary practices in these areas.

Finally, consumer price index (CPI) and higher-education price index (HEPI) data showed that while MC full-time faculty were paid well, inflation was taking a serious toll on purchasing power. However, a similar situation existed for the College's revenue. By fiscal 1982, state funding was growing little and the county wanted to contribute only 35% of the College's budget, not the 39% level it had reached. Thus our revenue and total financial picture were not as bright as previously noted. We knew we would have a difficult time keeping salaries comparatively high and remaining fiscally responsible.

Columns 1 and 3 in Table 2 present the positions of the two parties at impasse. To some extent, the positions of both sides were negotiating ones in recognition of the fact that mediation and possible fact finding would require some flexibility. On the part of the College, for example, salary increases of 7% had been granted already to nonunion staff, and it was recognized that it would be very difficult for the union to settle for anything less. Similarly, there was some flexibility with respect to the other key matters at issue, at least to the point that any settlement remained consistent with the three overriding considerations which formed our basic objectives.

Final agreement (Column 4 in Table 2) came after three extended mediation sessions. Both parties moved significantly from their positions at impasse. Most important, from the College's perspective, the settlement remained within the scope of the overall policy direction.

Conclusion

Montgomery College was able to negotiate a collective bargaining agreement that met the needs of the institution through the development of policy directions and objectives based on information developed by the Office of Institutional Research. With the information available to us, we were able to develop effective negotiating strategies, translate those strategies into specific objectives, and maintain our objectives despite the need for compromise throughout the process.

Table 1

Montgomery College Policy-Making Through Faculty Collective Bargaining:
An Information-Based Approach to Negotiating Instructional
Faculty Work Load

Proposed Managment Alternative Policies	Generally Agreed-Upon Policy Direction	Key Initial Management Proposals (Strategies/Tactics)	Initial Union Proposal	Final Agreement With Union
1. Each faculty member would teach a specific number of student credits per semester which would vary by discipline, but have an overall College target. 2. Each faculty member would teach 30 Equivalent Semester Hours (ESH) per academic year with more than three office hours per week and perform related duties.	Each faculty member would teach 30 ESH per academic year with more than three office hours per week and perform related duties.	1. Keep work load out of the contract. 2. Teach a minimum of 30 ESH per academic year; assing up to 36 ESH; pay overload salary over 33 ESH; hold six office hours per week; perform related duties; and standardize laboratory ESH values.	Teach 24 contact hours per academic year; guaranteed overload opportunity; receive pro rata for overload contact hours between 25 and 30 ESH; reductions in work load for various non teaching duties; limits on class size; extra pay for large classes; no weekend assignments; limits on evening assingments; limits on part-time faculty hiring; and increased work load credit for English composition and accounting courses.	Teach a minimum of 30 ESH per academic year; administrators may assign up to 32 ESH; faculty may work up to 36 ESH with the consent of both the faculty member and the administration; overload pay over 30 ESH at rates of pay similar to part-time faculty rates; 3 office hours per week; broad provision for alternate time assignments (example - chair persons); standardized ESH values and lab course components.

Table 2

Salary and Key Related Issues at Impasse

Union Position at Impasse	Management Considerations and Objectives	Management Proposal at Impasse	Final Agreement With Union
1. For FY81, an additional 2% lump sum payment	1. Internal equity	1. For FY81, no adjustment beyond salaries previously paid.	1. No adjustment to FY81 salaries.
2. For FY82, 9.5% plus $1,000, plus bonuses of $1,000-1,500.	2. Comparability with other faculty statewide and nationally-fair and competitive compensation.	2. For FY82, 7% plus $600 merit increase, plus $750 bonus for eligible faculty.	2. For FY82, 7.5% plus $850 merit increase, plus $850 bonus.
3. For FY83, 7.5% plus $1,000-1,500.	3. Projections of revenue and expenditures & general economic conditions-a fiscally responsible economic settlement.	3. For FY83, 3% plus $300.	3. FY83, 6.6% plus $700 merit increase, plus $850 bonus.
4. Large increases in overload and summer pay.		4. Small increases in summer and overload pay.	4. Small increases in overload and summer pay.
1. Tuition Waiver for dependents.		1. Tuition Waiver for employees only.	1. Tuition waiver for employees only.
2. Increased EAP payments.		2. Current EAP benefits.	2. Increased EAP benefits.
3. Fewer duty days for counselors and librarians.		3. Same duty days for counselors and librarians.	3. Fewer duty days for counselors & librarians.
4. Released time for AAUP business.		4. No released time for AAUP business.	4. No released time for AAUP business.
5. No cap on sick-leave payout at termination.		5. Cap sick-leave payout at termination.	5. Cap on sick-leave payout at termination.
6. Faculty Development Fund for retraining.		6. No position on Faculty development Fund.	6. Faculty Development Fund for retraining.

A REVIEW OF THE INFULENTIAL FACTORS AND SOURCES OF INFORMATION AFFECTING THE ENROLLMENT DECISIONS OF STUDENTS ACCEPTED TO NORTHERN ESSEX COMMUNITY COLLEGE

Richard L. Pastor
Financial Aid
Northern Essex Community College

"The student decision-making process with respect to college choice is a complex, slightly understood phenomenon. It seems, however, that prospective students do want specific information and that the information does make a difference in their decisions." (Mayhew, 1979, p. 176)

To administer an effective enrollment management plan the college must determine what factors, strategies, and perceptions are most important to the student consumer throughout the college choice process. An understanding of the college choice process requires an understanding of the multiple influences that affect students' decisions. Without the use of a systematic model of the influences on college choice, Chapman (1981, p. 488) states, "Colleges may overlook ways to increase the effectiveness of their recruiting, or conversely, overestimate the influences of the recruiting activities in which they do engage." Given the changing environment (changing federal support to student financial assistance, declining pool of high school graduates, and perhaps statewide entrance requirements to higher educational institutions), the management of enrollment will take on a critical importance in the near future.

Prior research indicates that the information colleges provide to prospective students is often incomplete, insufficiently detailed, not clearly presented, or presented at the wrong time. Failure to provide accurate and comprehensive information to students may result in an unwise choice of college or program of study and, consequently, low student morale, high attrition rates, and future recruiting problems (Lenning and Cooper, 1978).

As a result, several major reasons existed for conducting research on the college choice decision-making process. The most obvious was a desire to obtain information to improve the college's image and position in the market place. A second goal was to provide a framework for the

evaluation of existing marketing activities. With limited resources for implementing marketing strategies, it becomes necessary to identify those activities and media that are most efficient in terms of meeting institutional objectives related to enrollment. "Given the present concerns for budgeting within most institutions, the opportunity to identify the most cost-efficient programs would seem to be a prudent activity." (Lolli and Scannell, 1983, p. 137)

This study also provided the opportunity to confirm the institutions we held concerning why students enroll. This knowledge was necessary if we were to continue to provide the services needed and desired by our students. An institution's staff cannot provide adequate information to prospective students until the staff knows specifically who needs what information.

For the college to define and contact its various market segments, it must know how the prospective students in each segment were influenced. This information can then be used to determine the groups of prospective students to be contacted, the marketing strategies to be used, and the particular programs and characteristics of the college to be emphasized.

Purpose of the Study

The purpose of this study was to determine whether there were any differences in the influential factors and sources of information affecting enrollment decisions of enrolled students versus not-enrolled students, and if there were any differences in the influential factors and sources of information affecting the enrollment decisions of traditional age students versus nontraditional age students who were accepted for enrollment at Northern Essex Community College for the Fall 1983 semester.

Methodology

The population investigated by this study were the "new" students accepted to Northern Essex Community College for the Fall 1983 semester. Students admitted as unclassified, or who had to complete the English as a second language courses or the Discovery Cluster, were excluded because of the relatively small numbers of students in those

categories and because the recruitment efforts of the college are not specifically directed toward those students.

The research design consisted of two independent variables, enrollment status and age.

Figure 1. Cell configuration for two independent variables

	Age	
Enrollment status	Traditional	Nontraditional
Enrolled	315	165
Not enrolled	105	32

A total of 617 usable questionnaires were analyzed using multivariate analysis of variance. This represented an overall response rate of 66.1%.

Students who had prior college experience at Northern Essex Community College or elsewhere may have been influenced by their past experiences when deciding to attend Northern Essex for the Fall 1983 semester. In an effort to control for these effects, the analysis was repeated using first-time students only. There were 401 first-time students responding, representing 65.0% of all respondents. The 2 x 2 design for these students follows:

Sources

1. Official Informational Sources:
   a. Meeting with representatives of the College at night fair.
   b. Talks by Northern Essex representative at high school.
   c. Contact with the Academic Support Center.
   d. Contact with the Career Counseling/Placement Center.

2. Financial Aid Office.

3. High School Sources.
   a. High school counselor.
   b. High school teachers.

4. NECC Recruiting Publications.
   a. Northern Essex academic brochures.
   b. Northern Essex catalog.
   c. Other Northern Essex publications.

5. Friends.
   a. Students currently attending Northern Essex.
   b. Former Northern Essex student's advice.
   c. Advice of family members.

6. On-Campus Recruiting Sources.
   a. Faculty of Northern Essex.
   b. Interview with Northern Essex Admissions Office.
   c. Alumni of Northern Essex.

7. General Knowledge.
   a. About the College.
   b. General college guides and handbooks.

8. Print Media.
   a. Division of Continuing Education brochure.
   b. Newspaper articles/advertisements.

A multivariate analysis of variance was used to test the six null hypotheses. When overall significant differences were suggested by the multivariate analysis at the .05 level of significance, the results of the univariate F tests were examined to determine which dependent variables revealed a significant difference. This analysis was then repeated using first-time students only.

Findings

Test of Hypothesis

Null hypothesis 1 was formulated to test whether there are no differences between the enrolled and the not-enrolled students in the degree to which the eight clusters of factors are influential in the college choice decision-making process.

Figure 2. Cell configuration for first-time students.

	Age	
Enrollment status	Traditional First-time	Nontraditional First-time
Enrolled First-time	242	59
Not enrolled First-time	88	12

The dependent variables were determined using maximum likelihood factor analysis with oblique rotation. The eight factor and eight source clusters that were found and, analyzed are summarized below:

1. General Atmosphere of the College:

2. Physical Characteristics.
   a. Size of the college.
   b. Attractive campus.
   c. Close to home.

3. Personalized Attention.
   a. Amount of interest in students shown by faculty/staff.
   b. Possibility of extra help from instructors.
   c. Small classes/personalized classroom instruction.
   d. Quality of computer facilities.

4. Financial Accessibility.
   a. Overall cost of attendance (after financial aid).
   b. Low tuition and other expenses.
   c. Financial aid availability.
   d. Admissions standards.
   e. Inability to afford cost of first choice college.
   f. Close to home.

5. Academic Major Related.
   a. Employment opportunities after graduation.
   b. Had specific academic major desired.
   c. Academic competitiveness of intended major.

6. Course Accessibility.
   a. Scheduling of course.
   b. Variety of courses offered.
   c. Opportunity to experiment in a college setting.
   d. Quality of computer facilities.

7. Perceived Quality.
   a. Overall academic reputation.
   b. Quality of teaching.

8. Transfer Oriented.
   a. Inability to afford cost of first-choice college.
   b. Good preparation for transfer to another institution.

Findings: All respondents. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,585 = 1.264, $\underline{F}$ Prob $<$.259).

Findings: First-time students. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,374 = .570, $\underline{F}$, Prob $<$.802).

Test of Hypothesis 2

Null hypothesis 2 was formulated to test whether there are no differences between the enrolled and not-enrolled students in the degree to which the eight clusters of sources are influential in the college-choice decision process.

Findings: All respondents. The hypothesis was rejected at the .05 level of significance ($\underline{F}$ 8,583 = 3.503, $\underline{F}$ Prob $<$.001).

The univariate $\underline{F}$ tests indicate a significant difference with respect to three of the dependent variables, specifically, Source 2 (Financial Aid Office contract), Source 3 (high school sources), and Source 6 (on-campus recruitment sources). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statements can be made:

- The enrolled students were more favorably influenced by Source 2 (Financial Aid Office contact) than were the not-enrolled students.
- The enrolled students were more favorably influenced by Source 3 (high school sources) than were the not-enrolled students.
- The enrolled students were more favorably influenced by Source 6 (on-campus recruitment sources) than were the not-enrolled students.

Findings: First-time students. The hypothesis was rejected at the .05 level of significance ($\underline{F}$ 8,374 = 3.160, $\underline{F}$ Prob $<$.002).

The univariate $\underline{F}$ tests indicate a significant difference with respect to three of the dependent variables, specifically, Source 2 (Financial Aid Office contact), Source 5 (friends), and Source 6 (on-campus recruitment sources). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statements can be made:

- The first-time enrolled students were more favorably influenced by Source 2 (Financial Aid Office contact) than were the first-time not-enrolled students.
- The first-time enrolled students were more favorably influenced by Source 5 (friends) than were the first-time not-enrolled students.
- The first-time enrolled students were more favorably influenced by Source 6 (on-campus recruitment sources) than were the first-time not-enrolled students.

Table 1

Weighted Means and Ranks--Factor and Source Clusters[a]

[a]Based on responses to 1-5 rating scale where 1 = very negative influence and 5 = very positive influence.

Factor	Enrolled		Not Enrolled		Traditional		Non-Traditional	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
1	3.893	2	3.730	4	3.844	2	3.892	4
2	3.863	4	3.752	3	3.787	4	3.955	2
3	3.787	6	3.638	6	3.706	6	3.880	5
4	3.997	1	3.838	1	3.928	1	3.984	3
5	3.830	5	3.778	2	3.722	5	4.046	1
6	3.712	8	3.627	8	3.648	7	3.800	8
7	3.712	7	3.632	7	3.616	8	3.867	7
8	3.892	3	3.650	5	3.810	3	3.869	6
Source								
1	3.276	8	3.313	6	3.216	8	3.540	7
2	3.525	6	3.083	7	3.375	6	3.639	6
3	3.398	7	2.087	8	3.413	4	3.222	8
4	3.785	2	3.747	2	3.694	2	3.972	2
5	3.904	1	3.754	1	3.836	1	4.005	1
6	3.570	5	3.473	5	3.412	5	3.877	5
7	3.724	3	3.737	3	3.653	3	3.906	4
8	3.573	4	3.585	4	3.350	7	3.959	3

Factor	Enrolled Traditional		Enrolled Non-Traditional		Not Enrolled Traditional		Not Enrolled Non-Traditional	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
1	3.907	2	3.864	6	3.640	5	4.038	3
2	3.812	4	3.966	3	3.711	2	3.895	6
3	3.752	5	3.869	5	3.558	7	3.940	5
4	3.995	1	4.003	2	3.819	1	3.970	4
5	3.738	6	4.029	1	3.672	3	4.128	1
6	3.671	7	3.800	8	3.576	6	3.802	7
7	3.650	8	3.833	7	3.506	8	4.058	2
8	3.851	3	3.932	4	3.669	4	3.579	8
Source								
1	3.215	8	3.505	7	3.221	7	3.667	6
2	3.433	4	3.760	6	3.080	8	3.091	7
3	3.409	6	3.293	8	3.423	4	3.000	8
4	3.686	2	3.988	1	3.719	1	3.865	5
5	3.880	1	3.970	2	3.691	2	4.013	3
6	3.431	5	3.871	5	3.336	6	3.914	4
7	3.649	3	3.884	4	3.665	3	4.023	2
8	3.339	7	3.944	3	3.388	5	4.026	1

Table 1

Weighted Means and Ranks—Factor and Source Clusters[a]

[a]Based on responses to 1-5 rating scale where 1 = very negative influence and 5 = very positive influence. (continued)

Factor	Enrolled First time		Enrolled Prior		Enrolled First time		Not Enrolled Prior	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
1	3.830	3	4.007	2	3.632	6	4.036	1
2	3.842	2	3.919	5	3.713	4	3.871	5
3	3.737	4	3.889	6	3.935	1	3.762	6
4	3.977	1	4.079	1	3.792	2	3.970	3
5	3.691	5	3.963	4	3.742	3	3.878	4
6	3.685	7	3.823	7	3.598	7	3.713	7
7	3.687	6	3.754	8	3.514	8	4.000	2
8	3.836	8	4.005	3	3.643	5	3.674	8
Source								
1	3.282	8	3.260	8	3.301	7	3.389	7
2	3.508	4	3.569	6	3.192	8	2.800	8
3	3.423	6	3.280	7	3.366	5	3.563	6
4	3.737	2	3.874	3	3.798	1	3.585	5
5	4.003	1	3.907	1	3.662	3	4.020	1
6	3.468	5	3.762	5	3.315	6	3.900	3
7	3.626	3	3.903	2	3.694	2	3.868	4
8	3.422	7	3.804	4	3.429	4	3.923	2

Factor	First time		Prior		Traditional First time		Nontraditional First time	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
1	3.782	4	4.011	2	3.776	4	3.817	7
2	3.811	2	3.911	5	3.759	5	4.054	1
3	3.704	6	3.868	6	3.677	3	3.836	5
4	3.911	1	4.023	1	3.915	1	4.009	3
5	3.756	5	3.947	4	3.703	6	4.024	2
6	3.561	8	3.804	7	3.619	7	3.760	8
7	3.645	7	3.789	8	3.603	8	3.846	4
8	3.787	3	3.948	3	3.779	2	3.835	6
Source								
1	3.286	8	3.277	8	3.249	8	3.617	7
2	3.454	4	3.443	6	3.357	6	3.923	4
3	3.407	7	3.330	7	3.418	4	3.182	8
4	3.751	2	3.830	3	3.712	2	3.964	2
5	3.838	1	3.928	1	3.815	1	4.043	1
6	3.443	5	3.781	5	3.393	5	3.690	6
7	3.643	3	3.897	2	3.622	3	3.772	5
8	3.422	6	3.825	4	3.315	7	3.941	3

Note. Based on responses to 1-5 rating scale (1 = very negative influence; 5 = very positive influence).

Test of Hypothesis 3

Null hypothesis 3 was formulated to test whether there are no differences between the traditional and nontraditional students in the degree to which the eight clusters of factors are influential in the college choice decision process.

Findings: All respondents. The hypothesis was rejected at the .05 level of significance (F 8,585 = 5.311, F Prob < 1,89E -006).

The univariate F tests indicate a significant difference with respect to two of the dependent variables, specifically, Factor 6 (course accessibility) and Factor 8 (transfer orientation). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statements can be made:

- The nontraditional students were more favorably influenced by Factor 9 (course accessibility) than were traditional students.
- The nontraditional students were more favorably influenced by Factor 8 (transfer orientation) than were traditional students.

Findings: First-time students. The hypothesis was rejected at the .05 level of significance (F 8,374 = 3.643, F Prob <4.22E -004).

The univariate F tests indicate a significant difference with respect to one of the dependent variables, Factor 8 (transfer orientation). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statement can be made.

- the first-time nontraditional students were more favorably influenced by Factor 8 (transfer orientation) than were first-time traditional students.

Test of Hypothesis

Null hypothesis 4 was formulated to test whether there are no differences between the traditional and nontraditional students in the degree to which the eight clusters of sources are influential in the college choice decision process.

Findings: All respondents. The hypothesis was rejected at the .05 level of significance (F 8,853 = 35.696, F Prob <0.0).

The univariate F tests indicate a significant difference with respect to four of the dependent variables, specifically, Source 1 (official information sources), Source 3 (high school sources), Source 5 (friends), and Source 8 (print media). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statements can be made:

- The nontraditional students were more favorably influenced by Source 1 (official information sources) than were traditional students.
- The traditional students were more favorably influenced by Source 3 (high school sources) than were nontraditional students.
- The nontraditional students were more favorably influenced by Source 5 (friends) than were traditional students.
- The nontraditional students were more favorably influenced by Source 8 (print media) than were traditional students.

Findings: First-time students. The hypothesis was rejected at the .05 level of significance (F 8,374 = 18.714, F Prob $<$0.0).

The univariate F tests indicate a significant difference with respect to five of the dependent variables, specifically, Source 1 (official information sources), Source 3 (high school sources), Source 5 (friends), Source 7 (general knowledge), and Source 8 (print media). A review of the means in Table 1 with respect to the dependent variables indicates that the following directional statements can be made:

- The first-time nontraditional students were more favorably influenced by Source 1 (official information sources) than were first-time traditional students.
- The first-time traditional students were more favorably influenced by Source 3 (high school sources) than were first-time nontraditional students.
- The first-time nontraditional students were more favorably influenced by Source 5 (friends) than were first-time traditional students.
- The first-time nontraditional students were more favorably influenced by Source 7 (general knowledge) than were first-time traditional students.
- The first-time nontraditional students were more favorably influenced by Source 8 (print media) than were first-time traditional students.

Test of Hypothesis 5

Null hypothesis 5 was formulated to test whether or not there is interaction between enrollment status and age in the degree to which the eight clusters of factors are influential in the college choice decision-making process.

Findings: All respondents. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,585 = .744, $\underline{F}$ Prob .653).

Findings: First-time students. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,374 = 1.391, $\underline{F}$ Prob .199).

Test of Hypothesis

Null hypothesis 6 was formulated to test whether or not there is any interaction between enrollment status and age in the degree to which the eight clusters of sources are influential in the college-choice decision-making process.

Findings: All respondents. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,585 = 1.872, $\underline{F}$ Prob .062).

Findings: First-time students. The hypothesis was not rejected at the .05 level of significance ($\underline{F}$ 8,374 = .788, $\underline{F}$ Prob .617).

Conclusions

There are several conclusions of this study proceeding from the findings:

1. Major segmentation efforts do not have to be made with respect to the factors of influence. The major factors that influence enrolled and not enrolled students are the same, and the factors that influence traditional and nontraditional students are similar, except for concern about transfer and course accessibility.

2. Students significantly differentiate themselves as to the sources of information that provide a favorable influence. The only source cluster that was not used in significantly different ways by one or more of the major subgroups of the study was Source 4 (recruiting

publications), which was always the second highest rated cluster. As a result, all sources become important and need to be examined closely so that each can be used to its own particular advantage, as described below:

a. Favorable contact with the financial aid office will influence students to enroll.
b. Favorable advice from a high school source will influence students to enroll.
c. Favorable contact with on-campus recruitment sources will influence students to enroll.
d. Favorable advice from friends will influence first-time students to enroll.
e. Contact with official information sources will favorably influence nontraditional students.
f. Print media will favorably influence nontraditional students.
g. Nontraditional students will be more favorably influenced by general knowledge that the college exists as a community resource.

3. The first time students do not differ substantially from prior students with respect to the influential factors and sources affecting enrollment decisions. However, a review of the means in Table 1 indicates some subtle differences that can possibly be used in preparing a segmented marketing strategy.

References

Chapman, D. W. A model of college choice. Journal of Higher Education, 1981, 52(5), 490-505.

Lenning, O. T., & Cooper, E. M. Guidebook for colleges and universities: Presenting information to prospective students. Boulder, Colo.: The National Center for Higher Education Management Systems, 1978.

Lolli, A., & Scannell, J. Expanding the focus of admissions marketing utility. College and University, 1983, 59(1), 5-28.

Mayhew, L. B. Surviving the eighties. San Francisco, Calif.: Jossey-Bass, 1979.

THE IMPORTANCE OF FINANCIAL AID IN COLLEGE CHOICE

Bonnie B. Newton
Office of Enrollment Management Research
Boston College

Introduction and Perspectives

Financial aid, both the amount and package composition, is an important consideration for most college-bound students. Both where does it rank among other college choice factors such as academic programs, location, and size? And what considerations are most important to students who do not apply for financial aid? How does the college choice behavior of these applicant segment differ?

As the population of college-bound students decreases, it is increasingly important for colleges to understand the process of college choice. What considerations are important for applicants of varying needs and descriptions? It is to an institution's benefit to identify and evaluate student perceptions of its characteristics, positive and negative, then apply findings to policy determination and marketing enhancement.

Because different characteristics are emphasized by aid and nonaid applicants, different issues and applications are raised. In responding to the concern of cost, this institution and others could review financial aid awarding, the amount and distribution between scholarship, loan, and employment, and pricing of undergraduate education. If cost is not as important to nonaid applicants discussion about the effectiveness of no-need scholarships for enrolling high-quality students could take place.

I propose to compare and contrast the choice processes of two important segments among those accepted for admission to Boston College: aid and nonaid applicants. Looking at the college choice behavior of these two subgroups could help this institution (and others) evaluate pricing, financial aid, and no-need scholarship policy.

Literature Review

Many studies evaluate the college choice process and seek to estimate the gross effect of financial aid offers on the decision to enroll. Jackson

(1978) conducted a national study on the college choice process, examining the application/enrollment decision with respect to financial aid. He concludes the enrollment decision is affected by the quality of offered financial aid. The role of financial aid in fostering equity of college choice to public an private institutions is analyzed by Tierney (1980). He finds that the type and amount of offered financial aid can narrow the cost gap between public and private institutions and, therefore, help widen college applicants' range of choice.

Other studies looking at college choice behavior conclude that financial aid is not of major importance in either decision, where to apply or where to enroll. Spies (1978) focuses on the interaction of expected cost and college choice of high-ability students and concludes that financial aid has little effect on the college-choice decision of these students.

I suspect that the amount and quality of financial aid does have an effect on college choice. I also suspect that the choice process of aid applicants may differ in other important ways from applicants who do not apply for financial aid. None of the studies separate and analyze choice differences between aid and nonaid applicants. In order to isolate the financial aid factor, research should segment accepted applicants into aid and nonaid subgroups. Then the college choice behaviors of the two subgroups can be evaluated separately and compared.

Additional study of the complex issues relating to cost and college choice is needed. Litten (1984) outlines several topics that should be systematically researched. College-choice behavior of aid and nonaid groups could be added to the topic list.

Data Sources

Data are from the University's admissions and financial aid file of accepted applicants (1983) and responses from a 1983 Admissions Research Questionnaire (available on request) administered to all accepted applicants. Of the 4,760 questionnaires mailed to accepted applicants in July 1983, 3,325 were returned, for an overall response rate of 70%. (Matriculant response rate was 79%; nonmatriculant response rate, 62%.) All questionnaire responses are weighted to correctly

represent the actual proportion of marticulants and nonmatriculants in the accepted applicant pool.

Methods

Discriminant analysis is chosen because it is a multivariate technique that identifies unique factors that may best predict differences among aid and nonaid accepted applicants. While controlling for the combined (gross) predictive value of variables, this technique measures net effects to create a solution which best differentiates among subgroups.

To describe and contrast the college-choice process among aid and nonaid accepted applicants, four groups are defined as shown in Figure 1.

Figure 1. Accepted applicant subgroups.

		Boston College Financial-aid applicant	
		No	Yes
Enrolled at Boston College	No	Nonaid Nonmatriculant	Aid Nonmatriculant
	Yes	Nonaid Matriculant	Aid Matriculant

Three discriminant analyses using a stepwise method are executed to produce a solution for the combined four groups, and separate solutions for aid and nonaid applicant groups. Variables are entered into this stepwise analysis using Wilks' lambda as the criterion. It tests the additional discrimination introduced by the variable being considered after taking into account the discrimination achieved by the other variables already entered. Wilks' lambda takes into consideration both the differences between groups and the cohesiveness or homogeneity within groups. The solutions are compared to obtain an overall picture of the accepted applicant's college choice process. Knowing that this applicant pool is comprised of 57% aid applicants (and assuming that concern for financial aid and cost is associated with aid applicants), I

will segment aid and nonaid applicants and perform separate direct-method analyses. (In this direct method, all variables are specified and entered simultaneously into the analysis.) In Choosing the direct-method, I am able to include a set of discriminating variables of my choice which could best describe and contrast college choice behavior for aid and nonaid applicants. The set is chosen by comparison of the overall, aid, and nonaid stepwise solutions.

Findings

Three preliminary stepwise discriminant analyses produced different college-choice models. Four groups were included in the first. It produced two functions predicting the probability of marticulation or nonmatriculation at Boston College (Function One) and aid or nonaid application (Function Two). See Table 1.

The first function demonstrates the importance of expected cost after financial aid in the decision to attend Boston College or an alternate college. Parents' preference of college is also important in differentiating between matriculants and nonmatriculants.

The second function describes a dimension that discriminates between aid applicants and nonaid applicants. Not surprisingly, reputation of financial aid program and expected cost after financial aid are key variables in this model. Academic programs, perhaps showing aid applicants' heightened concern for career objectives, is a significant factor. For nonaid applicants, the expensiveness of Boston College is by far the most important factor. When rated positively, the respondent is not likely to apply for aid. Social activities and enrollment size are also significant factors for the nonaid applicants.

The other two preliminary solutions executed separately for aid and nonaid applicants, along with the four-group solution, were used for model comparison. Twenty key factors associated with aid and nonaid applicants' college choice process were selected. These were employed in two direct-method discriminant analyses for aid and non aid applicants. See Table 2.

For aid applicants, expected cost after financial aid is of highest importance in matriculation at Boston College or an alternate college. General reputation and academic programs of Boston college are of

Table 1
Discriminant Analysis of Four Accepted Applicant Subgroups[a]

Factors	D	Group means
Function one: Matriculants vs. nonmatriculants[a]		
BC expected cost after financial aid	.293	Aid matriculant - 1.09
BC parents' preference	.286	Nonaid matriculant - .97
BC general reputation	.266	
Alternate's parents' preference	-.237	
Alternate's faculty	-.311	
Alternate's expected cost after financial aid	-.326	Nonaid matriculant - - .86 Aid matriculant - -1.01
Function two: Aid vs. nonaid applicants[b]		
Alternate's reputation of financial aid program	.524	
Alternate's expected cost after financial aid	.353	
		Aid nonmatriculant - .37
BC academic programs	.297	Aid matriculant - .18
Alternate's enrollment size	-.170	
		Nonaid matriculant - - .25
Alternate's social activities	-.181	
		Nonaid nonmatriculant - - .48
BC expensiveness	-.524	

[a]Subgroups are: (1) nonmatriculant/nonaid, (2) nonmatriculant/aid, (3) matriculant/nonaid, and (4) matriculant/aid.
[b]The canonical correlation for Function One is .72.
[c]The canonical correlation for Function Two is .34.

Table 2

Two Discriminant Function Solutions:
A Comparison of Aid and Nonaid Applicants

College Characteristics in order of importance to nonaid applicants	Standardized discriminant function coefficients	
	Aid	Nonaid
Boston College Characteristics[a]		
Parents' preference	.183	.387
General reputation	.219	.222
Athletics (facilities & programs)	.096	.201
Academic programs	.186	.189
Size	.156	.185
Location	.160	.180
Expected cost after financial aid	.384	.152
Faculty	.174	.145
Emploment opportunities	.161	.116
Social activities	.178	.060
Alternate College Characteristics[b]		
Faculty	-.312	-.277
Location	-.179	-.273
Parents' preference	-.193	-.254
Expected cost after financial aid	-.401	-.204
Size	-.186	-.194
Social activities	-.176	-.143
Employment opportunities	-.233	-.137
General reputation	.002	-.136
Athletics (facilities & programs)	-.144	-.129
Academic programs	-.231	-.076

Note. For the nonaid applicants, the canonical correlation is .70, and the group centroids are 1.09 for matriculants and -.86 for nonmatriculants. For the aid applicants, the canonical correlation is .73, and the group centroids are 1.06 for matriculants and -1.05 for nonmatriculants.

[a]The higher these characteristics are rated, the more likely the applicant will matriculate at Boston College.

[b]The higher these characteristics are rated, the more likely the applicant will matriculate at the alternate college.

concern to Boston College matriculants. For aid nonmatriculants, faculty (found in previous research to be closely related to general reputation) and employment opportunities (closely related to academic programs) are important factors. To summarize, expected cost, general reputation/faculty, academic programs/employment opportunities are most important to aid applicants' college-choice decision.

In contrast, the model for nonaid applicants focuses on parents' preference, athletics, and location. Parents' preference for either Boston College or an alternate college is an important influence for nonaid applicants in deciding where to attend. Somewhat unexpected is the relative magnitude and, therefore, emphasis placed on Boston College athletics by matriculants. It may be that athletics is closely related to social activities, important for nonaid applicants in the four-group solution (see Table 1). For nonaid applicants, emphasis is placed on college location, perhaps because nonaid applicants inherently have a wider range of college choice since cost is not as important as for aid applicants. Other significant factors are academic programs, expected cost, and size.

Implications

The comparison of college-choice processes for aid and nonaid applicants illustrates the differences in importance attached to college characteristics. The methods used here may be applied within this institution and by other universities who do periodic accepted-applicant surveys.

The aid applicant model demonstrates the magnitude of concern for cost and quality of financial aid programs. These findings may stimulate review of institutional policy with regard to financial aid packaging. The relatively lower concern for cost, illustrated in the nonaid model, may raise questions about the effectiveness of no-need scholarships versus need-based scholarships in enrolling high-quality students. Conclusions from both models may be applied within institutions to enhance communication and marketing efforts. For example, emphasis on parents' preference, location, and size, social activities, and athletics by this study's nonaid group provides information for directing a review of the University's literature and communications programs.

References

Jackson, G. A. Financial aid and student enrollment. Journal of Higher Education, 1978, 49, 548-574.

Klecka, W. R. Discriminant analysis. Beverly Hills and London: Sage Publications, 1980.

Litten, L. H. Advancing the research agenda on undergraduate pricing. Issues in Pricing Higher Education, 1984, 91-98.

Spies, R. R. The effect of rising cost on college choice. New York: College Entrance Examination Board, 1978.

Tierney, M. L. The impact of financial aid on student demand for public/private higher education. Journal of Higher Education, 1980, 51, 527-545.

PRIVATE FUND-RAISING OVER TIME: HOW WELL HAVE PRIVATE INSTITUTIONS KEPT PACE?

John A. Dunn, Jr.
Office of Planning
Tufts University

Leah R. Hutten
Office of Analytic Studies
Tufts University

Methodology

The study originated with a desire to learn how Tufts University compares with competing institutions in its ability to raise funds from alumni and other nongovernmental sources. In the process we also sought to determine what changes had taken place over time in the ability of this group of schools to attract external private support and whether there were any consistent indicators of institutional success in fund-raising.

Thirty-four selective private colleges and universities were studied, chosen to include complex universities, coed colleges, and women's colleges and to vary by size, complexity, and history of fund-raising success (Table 1).

Information for the period 1971-72 through 1981-82 was extracted from a data tape supplied by the Council on Financial Aid to Education (CFAE). CFAE collects fund-raising data from most U.S. colleges and universities and publishes them in an annual report called Voluntary Support of Education. Their data include amounts given for operating use and for capital purposes, sources of funding, alumni contribution statistics, and certain institutional characteristics. CFAE records only cash received during the year, not pledges. Regressions were not calculated for institutions with less than six data points in this period. Data for 1982-83 were transcribed from their most recent booklet, but were not used in all analyses. No independent efforts were made to check the accuracy or consistency of these institutionally supplied data.

Two measures of fund-raising success were used: total support, and defined as total funds received for operating and capital purposes; and support leverage, the percentage this total support represented of the institution's educational and general budget. For these calculations,

no distinction is made between support for for operating and for capital purposes. It is assumed that institutions themselves establish the mix of types of support sought, though they cannot control the results. "Total support" is an absolute measure and tends to favor large institutions. "Support leverage" is a measure of the importance of private fund-raising relative to other sources of revenue and tends to favor smaller institutions. Support leverage is an important measure, but it is a crude one and should be used with caution; note that the numerator includes capital and operating funds, both the denominator includes only operating funds.

Table 1

Colleges and Universities Included in the Sample

Universities	Women's colleges	Coed colleges
Brandeis	Bryn Mawr	Amherst
Boston College	Mills	Bowdoin
Boston University	Mount Holyoke	Colby
Brown	Smith	Grinnell
Columbia	Wellesley	Hamilton
Cornell		Haverford
Dartmouth		Swarthmore
Duke		Trinity
Emory		Union
Georgetown		Wesleyan
Harvard		Williams
Johns Hopkins		
M.I.T.		
Princeton		
Stanford		
Tufts		
Washington University		
Yale		

In an unpublished study of a smaller but equally diverse group of institutions for 1977-78 and 1981-82, Dunn and Hutten identified four factors that were related to support and yet were uncorrelated with each other: enrollment, endowment per student, percent of alumni contributing to the annual fund, and average alumni gift size. Enrollment was the best overall correlate of support, positively in the case of total support, negatively in the case of support leverage. Total private support was also significantly correlated with number of alumni

and average gift size. Support leverage was significantly correlated with the percent of alumni contributing and average gift size. A later study (Dunn & Hutten, 1983) reported fund-raising achievement and improvement measures for 34 colleges and universities for the period from 1971-72 through 1981-82.

To attempt to validate the earlier results, we used multiple regression analyses to relate these four measures to results for the set of institutions for the 11-year period through 1981-82. We also explored changes over this period in the magnitude of the regression coefficients for the four factors.

All correlation, regression analyses, and data sorts were accomplished with the Statistical Package for the Social Sciences (SPSS, McGraw-Hill, 1975) on the DEC 10 computer at Tufts University. Graphics were made with Lotus 1-2-3 (Lotus Development Corp., 1983) on the Z100 microcomputer with a Hewlett-Packard plotter. Additional computer programs were developed by M. Sherif Lotfi, student research assistant, in the "C" language for data management procedures. Susan Kaufman and Scott Fishman, student research assistants, performed additional analyses.

Findings and Discussion

Institutional Performance

The initial finding is that most institutions on the list significantly increased their fund-raising in current dollars during this period. Of the group of 34 institutions, 14 showed average annual increases of $1,000,000 or more during the 11-year period. Stanford, Yale, Harvard, and M.I.T. recorded average annual increases in excess of $3,400,000 (Table 2).

A slightly different view is gained by calculating what these gains represent with respect to the 1971-72 levels at each institution. Harvard's average dollar increases amount to an improvement of 5.6% over the 1972 level, significant because Harvard was already at a high level, but a less impressive growth record than that achieved by others. Tufts, Wesleyan, Boston College, and Hamilton all recorded increases of

25% per year or more. These achievements are praiseworthy, but to some extent reflect a rapid buildup from a fairly low starting point (Table 2).

Inflation has been high during this period. Various deflators could be used to factor out this influence; we chose disposable personal income per capita (DPI) as a measure related to people's ability to donate. DPI increased an average of 7.5% per year.

Not unexpectedly, the story is less optimistic in constant dollars. Since 1972, total private support for this group of colleges and universities has done little more than hold its own. The average annual real increase for the group was 2.2% during the period, or less than $28,000 per year in 1972 dollars. Twenty-three institutions in the group managed to hold their private support steady in real terms, or to increase it, but most of the increases were minor (Tables 2 and 3, and Figure 1).

For the group as a whole, the contribution of private support to financing their institutions has decreased sharply in this period. In 1971-72, private support for operating and capital purposes represented 33.6% of the educational and general budgets for these schools; by 1981-82, that ratio had dropped to 22.6%. Nine schools managed to improve their fund-raising results fast enough over this period to have them show a steady or increasing percentage of institutional budgets. Only Wesleyan and Swarthmore recorded major increases (Table 4 and Figure 2). What appears to have been happening is that other revenue sources increased at a faster rate during the period than did private support. Tuition and fee revenues were driven up by rising enrollments and by tuition rates that often exceeded inflation. For some institutions, federal research support may also have grown at the rate of inflation, or faster.

Factors related to Fund-Raising Achievement

Enrollment and endowment per student were significant predictors of total support nearly every year for this group of institutions. For this group of institutions, the larger they are, the more money they tend to be able to raise. It may be speculated that enrollment is a proxy measure of the number of prospects (alumni, parents, etc.) a school may

Table 2

Average Annual Change in Total Private Support

Rank	Ranked by Dollar Change		Ranked by Percent Change		
	Institution	Annual private support charge	Institution	Percent Change[b]	Deflation percent charge[c]
1	Stanford	$4,324	Tufts	27.7	11.8
2	Yale	4,064	Wesleyan	27.4	11.5
3	Harvard	3,506	Boston College	26.7	11.3
4	M.I.T.	3,441	Hamilton	25.1	10.5
5	John Hopkins	2,896	Swarthmore	17.1	5.9
6	Cornell	2,820	Georgetown	17.0	5.9
7	Dartmouth	2,600	Johns Hopkins	14.6	4.4
8	Columbia	2,579	Dartmouth	14.1	4.1
9	Princeton	2,556	Mount Holyoke	13.8	4.0
10	Washington	2,354	M.I.T.	13.8	4.0
11	Duke	2,034	Washington University	12.4	3.1
12	Georgetown	1,202	Brown	12.3	3.1
13	Brown	1,143	Wellesley	12.2	3.0
14	Tufts	1,003	Princeton	12.0	2.9
15	Smith	793	Boston University	11.5	2.6
16	Wellesley	713	Duke	11.0	2.2
17	Boston University	682	Bryn Mawr	10.7	2.0
18	Wesleyan University	647	Union	10.6	2.0
19	Mount Holyoke	474	Yale	9.8	1.5
20	Bryn Mawr	457	Colby	8.9	0.9
21	Boston College	440	Stanford	8.8	0.9
22	Swarthmore	421	Cornell	8.7	0.8
23	Union	357	Columbia	7.6	0.1
24	Hamilton	356	Haverford	6.6	-0.6
25	Williams	312	Mills	6.2	-0.9

Table 2

Average Annual Change in Total Private Support
(continued)

Rank	Ranked by Dollar Change		Ranked by Percent Change		
	Institution	Annual private support charge[a]	Institution	Percent Change[b]	Deflation percent charge[c]
26	Grinnell	185	Grinnell	5.9	-1.1
27	Haverford	169	Trinity	5.7	-1.2
28	Colby	149	Harvard	5.6	-1.2
29	Trinity	130	Bowdoin	1.8	-3.9
30	Mills	122	Smith	1.4	-4.1
31	Bowdoin	68	Williams	1.4	-4.1
32	Emory	-315	Emory	-2.1	-6.7
33	Brandeis	-453	Brandeis	-3.1	-7.4
34	Amherst	--	Amherst	--	--
	Overall	1,280	Overall	11.0	2.2

[a] Slopes, time trend analysis, 11 years.
[b] Slopes divided by intercept, time trend analysis, 11 years.
[c] Average annual percentage change in total support adjusted for annual average inflation change (DPI) of 7.51% since 1972.

Table 3

Time Trends: Mean of 34 Colleges and Universities as a Group, 1972-1982 (in Constant 1972 Dollars)

	Slope	Intercept	*F* ratio	R^2
Total private support[a]	87,974.9	4,020,255.0	1.17	.10
Private support leverage[b]	-0.93	100.1	20.03*	.67

[a]No change in total private support over 11 years.

[b]Private support leverage has significantly decreased over 11 years.

**P* = Significant at the .01 level.

Table 4

Average Annual Change in Private Support Leverage: Institutions Ranked by Percent of Change, 1972-1982

Rank	Institution	Percent Change[a]
1	Wesleyan	1.6
2	Swarthmore	1.2
3	Princeton	0.6
4	Tufts	0.5
5	Mount Holyoke	0.4
6	Boston College	0.2
7	Union	0.1
8	Johns Hopkins	0.1
9	Hamilton	0.0
10	Brown	0.0
11	Bryn Mawr	-0.1
12	Boston University	-0.2
13	Duke	-0.2
14	Georgetown	-0.2
15	Cornell	-0.2
16	Columbia	-0.3
17	Yale	-0.4
18	Colby	-0.4
19	Dartmouth	-0.5
20	Stanford	-0.6
21	Washington University	-0.6
22	M.I.T.	-0.7
23	Wellesley	-0.8
24	Trinity	-1.1
25	Grinnell	-1.2
26	Smith	-1.8
27	Haverford	-2.0
28	Emory	-2.2
29	Williams	-2.7
30	Mills	-2.7
31	Bowdoin	-4.1
32	Brandeis	-8.8
33	Amherst	--
34	Harvard	--
	Overall	-1.1

[a]Slopes, time trend alanysis, 11 years.

FIGURE 1:

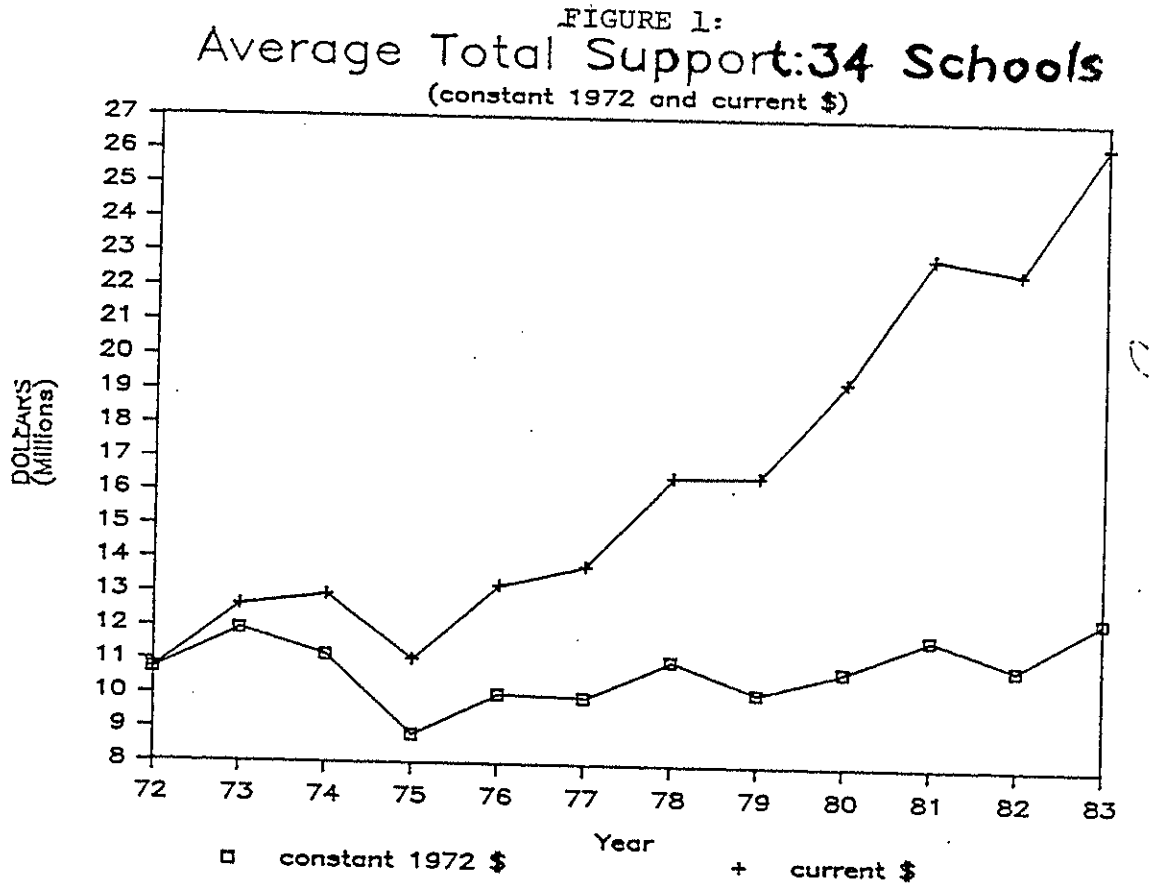
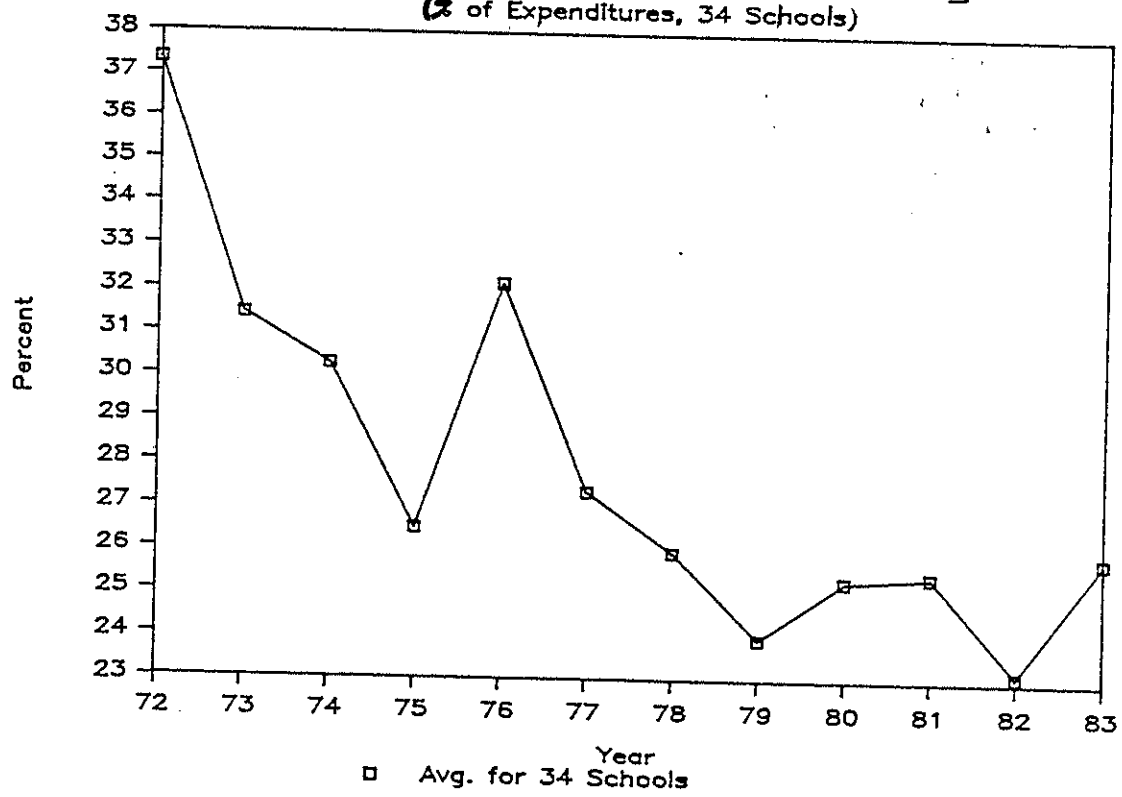


FIGURE 2:



appeal to for support, and that endowment per student is a proxy measure of the wealth of those prospects (Figures 3 and 4).

Enrollment was consistently the best predictor of support leverage, but in the negative sense that the smaller the institution was in this group, the more dependent it was on private fund-raising. The larger institutions derived proportionately more of their funds from research support and other sources. Average alumni gift size was also a significant predictor of support leverage in 1972, 1973, 1980, 1981, and 1982 (Figures 7 and 9).

The contribution of average alumni gift size in predicting total support has increased over time, and that increase was significant at the .01 level for the 1972-82 period, though not for the whole 12 years (Figure 5). The influence of endowment per student on total support has been consistent over this period; but the influences of enrollment and of percent of alumni giving (Figure 6) have varied. In fund-raising terms, the percent of alumni who give may matter, but it seems clear the the size of the gifts received has become an increasingly important factor.

With respect to support leverage, the influence of enrollment and of endowment per student have been consistent over time (Figures 7 and 8). The contribution of average alumni gift and of alumni support percentage have been variable (Figures 9 and 10).

The results are summarized in Table 5, which shows the trends over time for the regression coefficients for each predictor.

Further Research

The four correlates identified so far account for only about 50% of the variance in fund-raising success. Further research might seek quantifiable characteristics of the institutions, for example, their alumni, their fund-raising style, or their effort level, that might yield better predictors.

Research might be extended to other groups of institutions to see whether these factors are valid for them and what their recent history of fund-raising has been.

Table 5

Time Trend of Regression Coefficients, 1982-1983

	Slope	Intercept	F ratio	R^2
Enrollment	-38.4	4,054.7	0.81	.07
Endowment per student	11.4	-533.7	3.07	.24
Average alumni gift[a]	1,278.7	-68,226.7	.54	.05
Alumni participation (%)	-13,092.2	864,434.9	1.188	.16
Private Support Level				
Enrollment	.00008	-0.0080	2.52	.20
Endowment per student	-.00005	0.0039	0.05	.01
Average alumni gift	.00240	-.1028	0.70	.07
Alumni participation (%)	.00010	-.1175	0.00	.00

[a]Average alumni gift size has become a significantly more important predictor of total support over 11 years.

FIGURE 3:

Enrollment Impact on Total Support

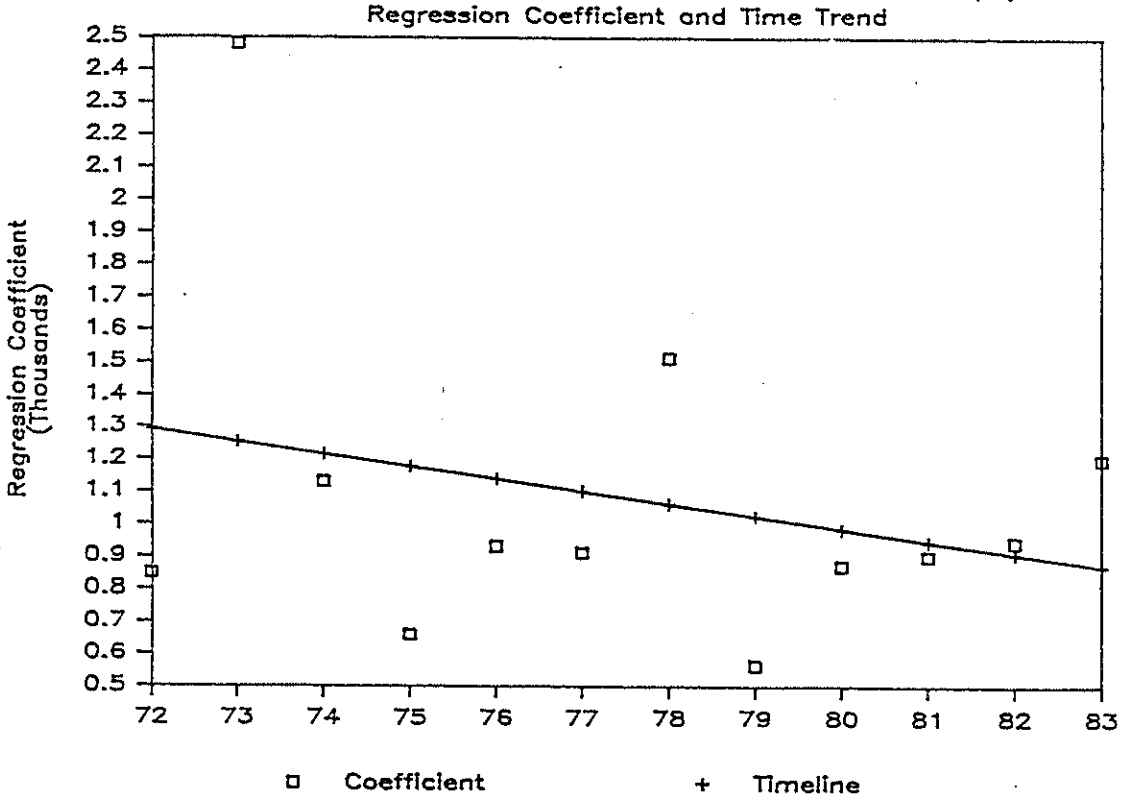
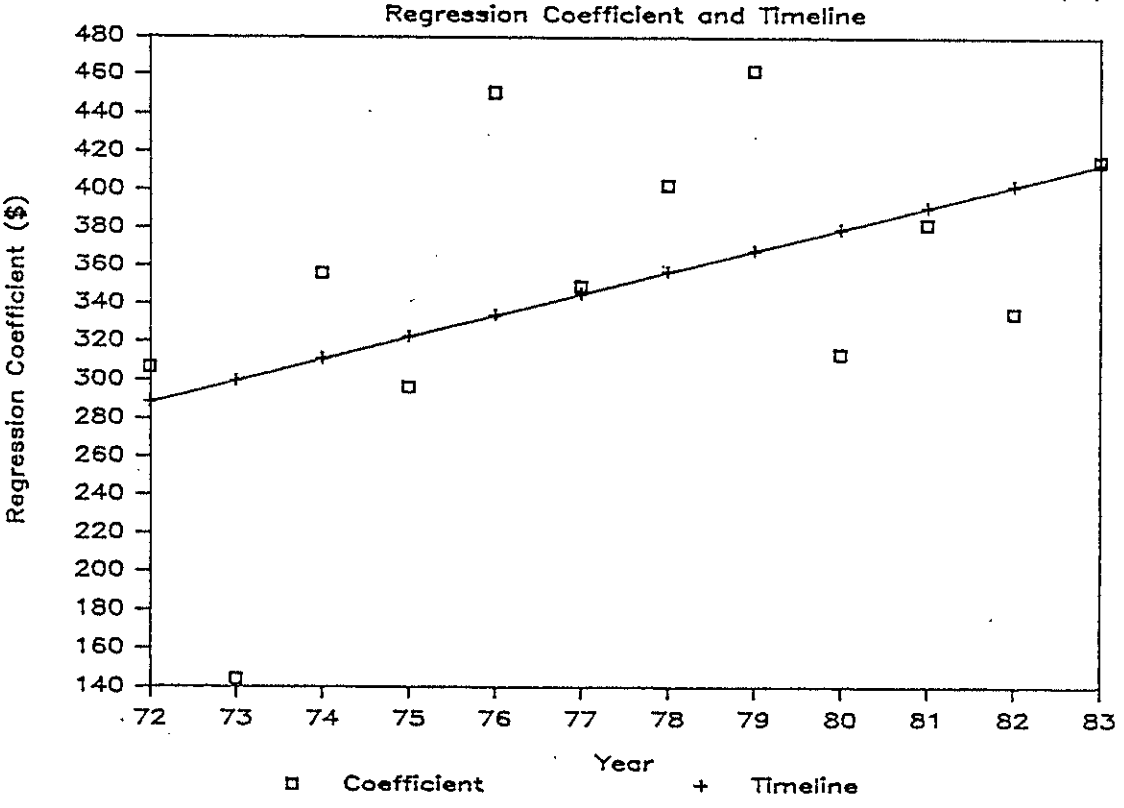


FIGURE 4:

Endowment/Stu Impact on Total Support



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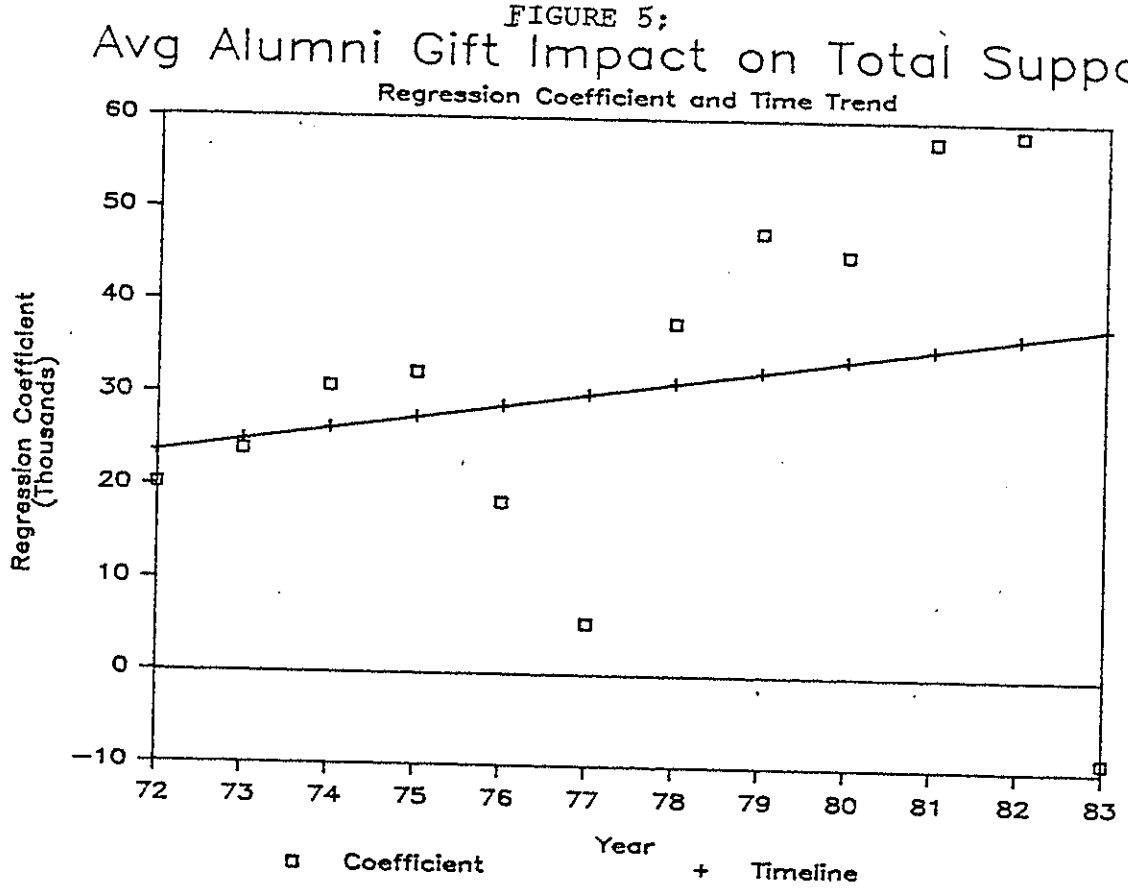


FIGURE 6:

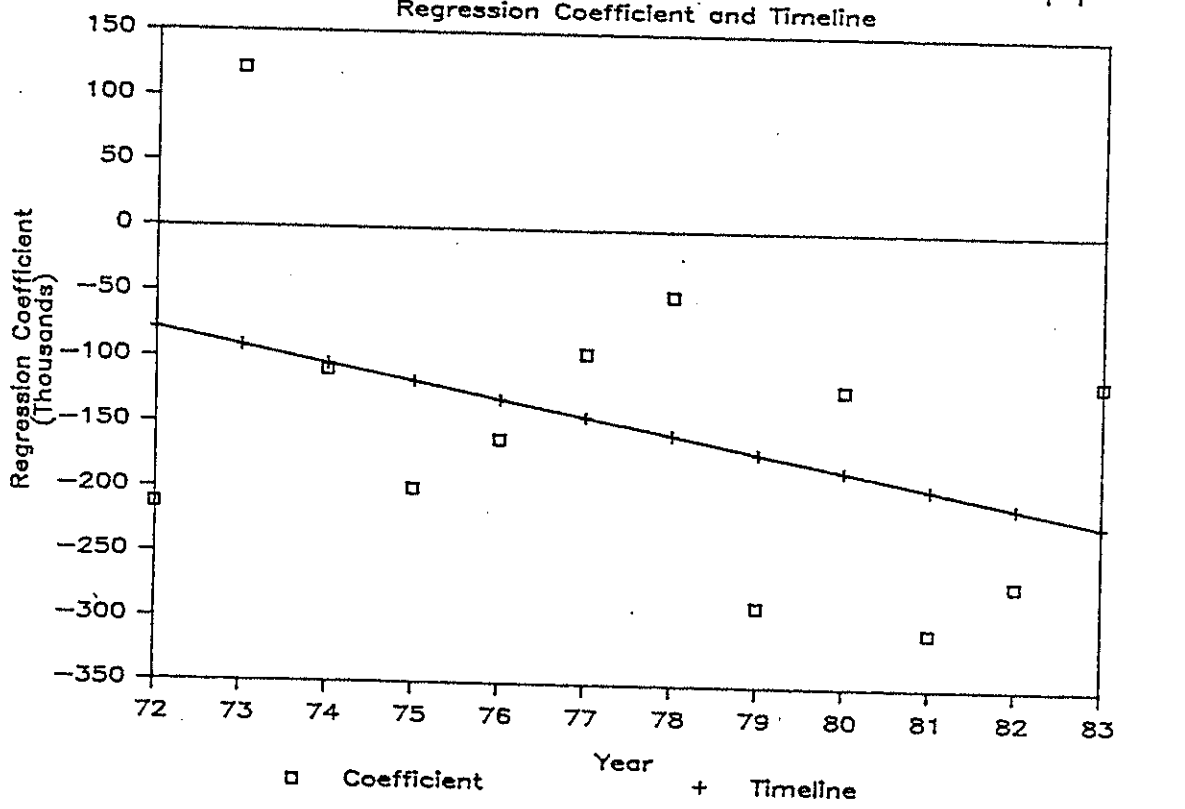


FIGURE 7:

Enrollment Impact on Support Leverage

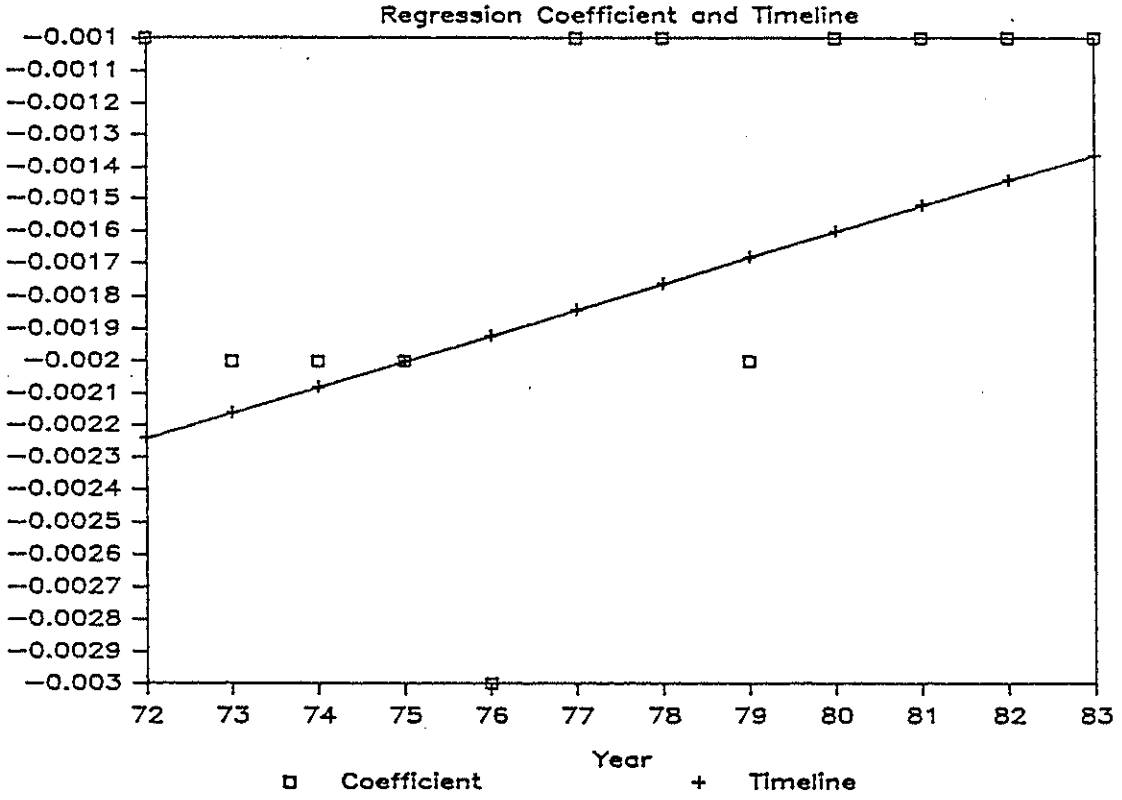


FIGURE 8:

Endowment per Stud Impact on Leverage

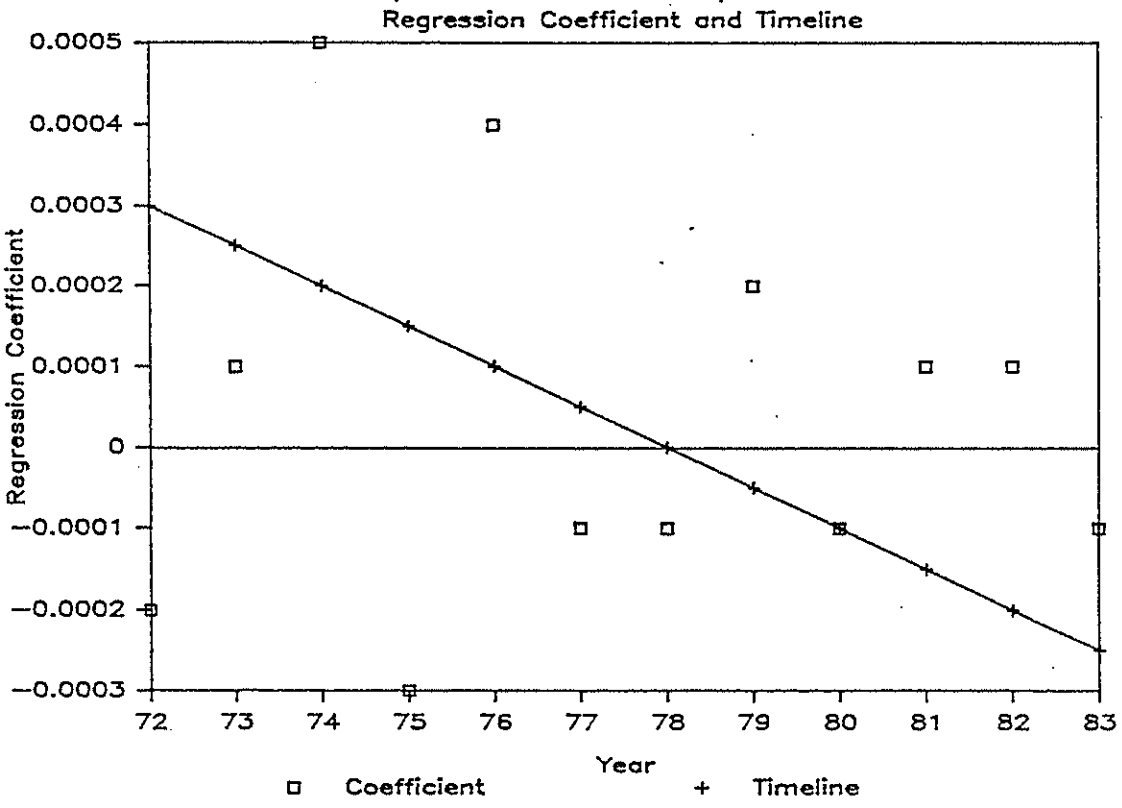


FIGURE 9:

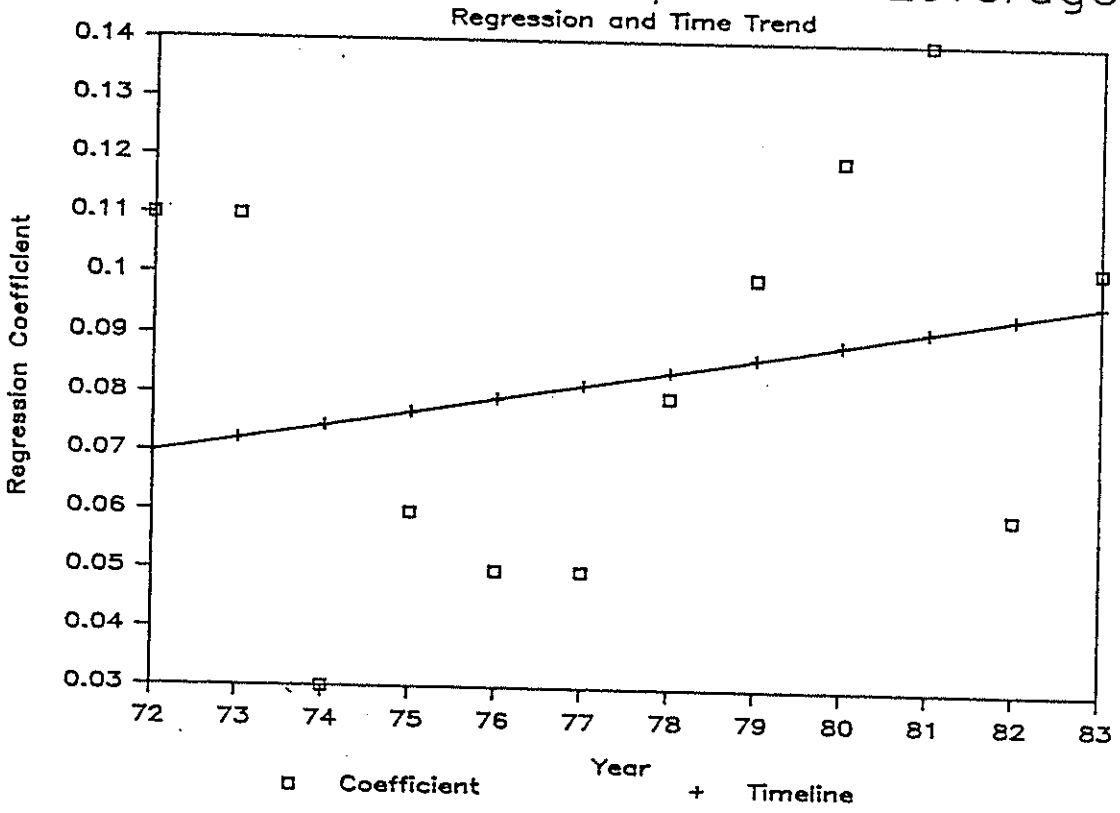
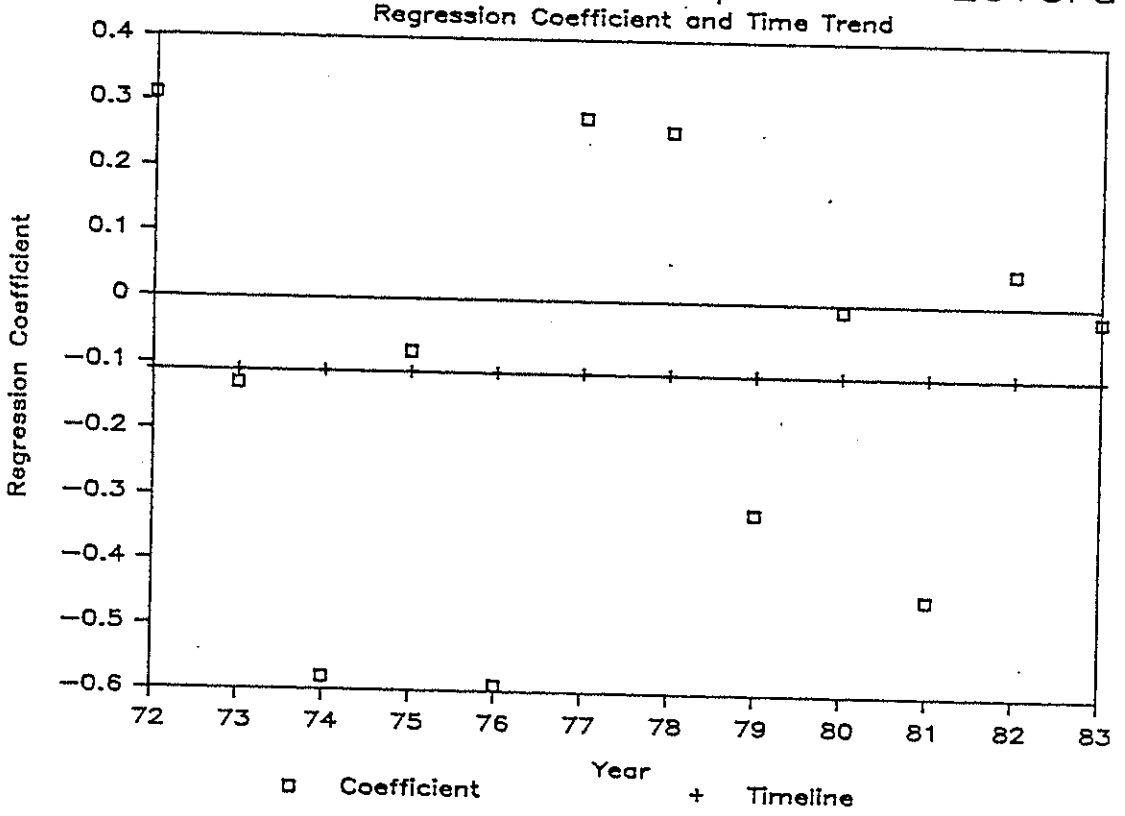


FIGURE 10:



References

Dunn, J. A. & Hutten, L. R. Fund-raising at Tufts: A comparison with competing colleges and universities, 1978 and 1981, Unpublished, 1983.

------. Private fund-raising: A comparative study with smaller and larger institutions, NEAIR Proceedings, 10, 1983.

DESIGNING A DECISION-SUPPORT SYSTEM FOR ENROLLMENT MANAGEMENT

Robert H. Glover
Office of Planning and Institutional Research
The University of Hartford

Colleges and universities are going to need a flexible and responsive Decision-Support System (DSS) for enrollment management to cope with the threats of declining enrollment and financial stress in the years ahead. This is especially true for institutions located in the Northeast, where the number of high school graduates is expected to decline by nearly 30% between 1983 and 1993 (WICHE, 1984).

In this paper I shall summarize a conceptual framework, design, and implementation plan for building a DSS for enrollment management at the University of Hartford. Briefly, the presentation proceeds from an overview of goals for enrollment management to a description of the data bases and methods of analysis as the system is currently envisaged.

Institutional Context

Strategic choices and effective enrollment management are going to be critical to the survival, growth, and improvement of the University of Hartford over the next two decades. Established through the merger of Hillyer College, the Hartford Art School, and the Hartt School of Music only 27 years ago, the University of Hartford has grown rapidly and become an extremely complex institution for its size, with about 4,000 full-time and 4,000 part-time students. As the University's enrollment has grown, its academic programs, staffing, physical plant, and annual operating budget have increased: also its student clienteles, academic programs; and administrative structures have become extremely diversified.

However, the University is vulnerable to threats of demographic decline and financial stress because it has only limited endowment and annual giving per student, and it has a concentrated dependence on enrollment income and government-sponsored student-aid programs.

Moreover, the external environment in which the University operates has become increasingly turbulent over time, and it is likely to remain that way for at least another decade.

To increase institutional effectiveness in a rapidly changing environment within the constraints of scarce resources, the leadership of the University is going to have to take calculated risks and make strategic choices. Decisions certainly have to be well informed not only by intuition and judgment, but by relevant, accurate, and timely information.

Goals for Enrollment Management

1. Increase the accuracy of enrollment and income forecasts.

2. Seek ways to increase the University's market share of prospective applicants.

3. Ensure that institutional pricing and student aid policies are competitive with comparable institutions.

4. Within the limits of available resources, offer high-quality academic programs and campus experiences that are responsive to the needs and preferences of students.

5. Seek ways to increase admissions yield from the number of accepted applicants.

6. Maintain academic standards and an enrollment mix that is consistent with the University's Mission Statement.

7. Find ways to describe, predict, and improve student retention.

8. Balance instructional staffing salaries and income at realistic levels, considering both academic values and enrollment demand.

9. Follow up and report on the achievements and satisfactions of students and alumni.

Computer Search of the Literature

A computer search of the enrollment-management literature in ERIC and CIJE is performed annually at the University of Hartford. Literature searches have been productive in identifying: conceptual frameworks (e.g., Tinto, 1982; Rowse & Wing, 1982); literature reviews (e.g., Pantages & Creedon, 1978; Lenning, 1980; Ramist, 1981; Hilton, 1982); exemplary enrollment-management research studies (e.g., Litten, 1983; Lay, 1982; Pascarella, 1981; Terenzini & Pascarella, 1978; Lay & Maguire, 1978; Bean, 1981), and action-research strategies for student retention (e.g., Finkelstein, 1983; Beal, 1980; Lenning, 1980; Baldridge, 1981; Kemerer, Baldridge, & Green, 1982).

Environmental Assessment

The Office of Planning and Institutional Research prepares executive summaries and factual data on enrollment trends for the President's Budget Advisory Team. The Budget Advisory Team recommends budget policies and strategic choices to address enrollment-management and resource-allocation needs.

Projections of the number of high school graduates from the University's primary and secondary market states (i.e., Connecticut, New York, New Jersey, Massachusetts, and Pennsylvania) were obtained from High School Graduates: Projections for the Fifty States 1982-2000 (WICHE, 1984). A composite table and graph were presented to show the annual percentage change in the number of high school graduates between 1983-1993, indexed to the base year, 1983.

From Admissions Testing Program (ATP) Summary Reports and the Enrollment Planning Service of the College Board, data are gathered describing the prospective applicant population in each region and those who send their SAT scores to the University. Reports provide norms for the New England and Middle States regions and for each state and geographic segment from which the University receives SAT scores. Information we gather yields comparison data for SAT scores, and class rank, family contribution, and financial need, the University's market share of SAT takers, SAT overlap with other institutions, and the curriculum preferences of prospective applicants.

The Enrollment Planning Service reports the number of prospective students sending SAT scores primarily to local, in-state, regional, or national institutions, in the University's primary and secondary markets in the two regions. There is also a projection of the number of prospective applicants and the market share the University would have to obtain to maintain the same volume of prospective applicants over the next three years.

Analysis of Institutional Competition

The University has to balance institutional pricing and student aid at competitive and realistic levels considering the relative value of alternative academic and extracurricular offerings as perceived by students and parents. Which institutions to select as an appropriate frame of reference is an issue that is frequently raised in enrollment-management discussions at the University.

Data on enrollment size, admissions selectivity, institutional pricing, student aid, and curriculum offerings are readily available from such sources as the College Board Handbook, the Chronicle Data Service, and the Beta Club Fact Book. To identify institutional competitors that are comparable to the University of Hartford, a cluster analysis was performed on data for 45 Northeastern institutions using undergraduate enrollment, number and percentage of applicants accepted, percent of applicants enrolled, average SAT verbal and math scores, and total student costs as variables.

The University of Hartford clustered together with medium-sized comprehensive universities having only moderate admissions selectivity. With the exception of a few public institutions having relatively high student costs, the remaining clusters were identified as: (a) Ivy League universities; (b) selective liberal arts and engineering institutions; (c) public (flagship) state universities and major private-comprehensive universities; and (d) private colleges with special missions (e.g., Rhode Island School of Design, Juilliard School).

Using data from College Board and Beta Club Fact Book cost surveys, the University monitors trends in tuition and fees, room and board, and total student costs on both a current and cumulative basis for each institutional competitor. An institutional pricing spread sheet

(Lotus) reports the annual percentage increase and cumulative percentage increase over a five-year period, indexed to comparable prices at the University of Hartford. Sorted listings of institutional competitors' student costs are prepared to show the University of Hartford's ranking on student costs relative to clusters of institutions and specific institutional competitors.

Accepted Applicant Surveys

The accepted applicant survey is another way to analyze the University's competitive position and image in student recruitment (e.g., Litten, 1983; Lolli & Scannell, 1983; Lay & Maguire, 1978). The University of Harftord questionnaires asked accepted students to indicate where they applied and were accepted for admission, whether they applied for and received financial aid, and how much financial assistance they received. Comparative data on University image was gathered asking students for their perceptions about differences which may have been factors in their college choice (e.g., distance from home, quality of student body, costs, financial aid, attractive campus). Other questions in the survey asked student about the quality of admissions publications and whether the students' impressions from contacts, visits, and other sources of information had a positive influence on their college choice.

The rate of return from a 1984 survey of accepted applicants at the University was disappointingly low (about 20%). The questionnaire obviously has to be reduced in length and complexity and administered in modules that will encourage a higher response rate. We must also consider the possibilities that accepted applicants are saturated with this type of marketing survey and the University may not get as high a rate of return as more prestigious colleges and universities.

Forecasts of Enrollment and Student Flow

This year, the University of Hartford is installing the Integrated Student Information System (ISIS) developed jointly with Systems and Computer Technology Corporation (SCT). Upon completion ISIS, is certainly going to improve the quality of the data base for enrollment management.

On the census date for each academic term, a roll-up is prepared for each college at the University, including summaries of student headcounts and student credit-hours for all categories of students by undergraduate/graduate, full-time/part-time, by academic level, by sex, by day/evening and for nonmatriculants.

To forecast the impact of enrollment shifts on income, the student and course categories used for reporting enrollment should parallel the structures used for institutional pricing and accounts-receivables as transactions enter Integrated Financial Information System (IFIS is also for SCT).

The University of Hartford's Financial Planning Model integrates historical trends and forecasts of student flow with student credit-hour production, institutional prices, and student aid to forecast all enrollment-driven income.

Because each college at the University recruits students from a different marketplace and because patterns of student flow vary widely, a financial planning model is also being developed at the college level. The student-flow model for each college consists of a five-year history and forecast of applications, acceptances, new students, returning students, full-time undergraduates, and degrees offered. Graphs are prepared for each college describing changes in the pattern of student flow in undergraduate and graduate head count and in student credit-hour production for full and part-time students at each degree level.

Academic Prediction

Traditional academic prediction studies are updated annually for each college to derive the optimum combination of SAT scores and high school class rank for predicting college-freshman gradepoint average.

With the exception of the College of Basic Studies, which has an open-door admissions policy, academic predictions for each college are sufficiently accurate (multiple R's of .52 to .68) to use in admissions selection, identifying students for honors or remedial programs and selecting financial-aid recipients. The predicted college-freshman gradepoint average is also a critical variable used in prediction of yield and student retention studies.

Taking the mean difference between predicted GPA and college GPA also provides a means of assessing admissions selectivity and academic performance for various student subgroups by high school, sex, resident, commuter, financial-aid recipient, and so forth.

Prediction of Admission Yield

To improve admissions yield, the University not only has to monitor each college's yield trends, it also has to analyze what types of students are more or less likely to enroll if accepted.

At the descriptive level, we can prepare cross tabulations for each college, including the number and percentage of accepted/enrolled and accepted/withdrawn students for such predictors as predicted GPA, geographic proximity of home, sex, financial-aid category, freshman/transfer, resident/commuter, and levels of scholarship aid awarded.

Increasingly sophisticated analytical methods are now being applied to the problem of admissions yield (e.g., Lay, 1982; McLain, 1984).

A prototype research design for prediction of yield, which we plan to implement this fall, uses the method of stepwise-logistic regression. The criterion is a dichotomized variable: whether the accepted student enrolls or withdraws if accepted. Predictor variables combine both continuous and discrete variables: predicted GPA, geographic proximity, sex, financial aid, resident/commuter, scholarship aid awarded, high school type, freshman/transfer.

Maximum likelihood estimates of the parameters are derived introducing each predictor in a stepwise analysis or combinations of predictors in a setwise analysis. The analysis method yields estimation results in the form of coefficients that can be used:

1. To interpret the relative contribution of predictors in forecasting yield.
2. To calculate the probability that an individual student will enroll if admitted.

For administrative and budgetary purposes, the aggregate forecast of the number of enrolled and withdrawn students can be obtained for any market segment in the accepted applicant population. The accuracy of predictions is assessed (Mclain, Vance, & Wood, 1984) by comparing

predicted with actual classifications of students on the enrolled/withdrawn dimension.

Student Characteristics Data

Through the ACE/UCLA Cooperative Institutional Research Program, (CIRP), the University administers the Student Information Form questionnaire and receives a descriptive profile of entering students in each college. Trends in student characteristics and comparisons with national student norms are interesting but not of much value for purposes of enrollment management unless the necessary identification data are provided to link questionnaire responses to student-retention and alumni follow-up data.

Student Affairs at the University administers Student Information Forms through its orientation program. Planning and Institutional Research prepares special directions to accompany the questionnaire asking each student to enter his or her Social Security number and group code for the college in which he/she matriculates. With the CIRP data tape, the University is going to be able to incorporate Student Information Form data into its follow-up studies for the class that started in Fall 1982.

Student Need Satisfaction Surveys

In Spring 1983, Planning and Institutional Research assisted a Student Affairs Task Force in the design and analysis of a student needs satisification survey. A stratified-random sample of 800 full-time undergraduate students was invited to share their perceptions about the academic and social climate at the University. Sixty-two percent of the students returned usable questionnaires.

The content of the questionnaire included items about intellectual life, academic climate, academic advising, career counseling and placement, faculty and staff support, social activities, athletics, living and study facilities, students' self-perceptions and observations about peers.

A priori classifications of items were compared with the results of a factor analysis to gain a better understanding of the structure of the instrument. Cluster analysis was used to assess general levels of student satisfaction or dissatisfaction. Finally, discriminant analysis was

used to identify issues on which different clusters of students agreed or disagreed in their levels of satisfaction.

Analyzed in this way, the results of the survey helped to clarify the diversity of student perceptions that exist among students who have different orientations toward the University.

Many significant differences were found in characteristics and perceptions of students among vocationally oriented, academically oriented, social-status-oriented students. We were encouraged by the levels of high satisfaction with the academic climate and counseling services. However, we also learned that we have to find ways to deal with apparent dissatisfaction with the social climate and negative attitudes of some students towards their peers.

In 1984, the Office of University College completed a survey of part-time students with Dr. Benjamin Sachmary of the Barney School as Project Director. A stratified random sample of 2,000 part-time students was invited to participate in the survey. The overall response rate was 43.4%, which was better than expected for a very lengthy questionnaire.

From the survey we learned that part-time students are about equally male and female, between the ages of 20 and 39; they tend to be married (53% rather than single, 40%); are likely to be employed full-time in the private sector; have lived in the Hartford area for more than five years. A majority have annual household incomes over $30,000.

Most part-time undergraduate students are transfers, usually from public institutions. About 70% of the part-time students have matriculated in a college-degree program at the University; another 17% were either applying or planning to apply for degree status.

Findings from the study identified the University's major competitors, assessed satisfaction/dissatisfaction with academic programs and support services, sampled perceptions about value/costs of educational programs and asked for preferences for course offerings, schedules, and sources of financial support.

Student Financial Aid

The University has to balance institutional pricing and student-aid policies at competitive levels, while at the same time assuring adequate

income to maintain and improve the quality of its educational offerings. Students and parents make college choices based on net costs after student-aid discounts. However, costs are balanced against the perceived value of academic programs and campus experiences at the institutions offering admission to the student.

With student-aid packaging software recently acquired from the College Board, the University will be able to model alternative assumptions and policies (e.g., institutional prices, family contribution, financial need, and number and amounts of student-aid packages) to assess their likely impact on student enrollments, financial-aid budgets, and enrollment income.

Using a four-year cumulative record of financial need and award data, descriptive statistics will be prepared using SPSS-X to analyze the proportion of total student costs covered by family contribution, federal and state funds, and University restricted and unrestricted aid funds. Using the record-selection features of SPSS-X, it is possible to produce such statistics for any given student subpopulation and to provide comparative data among colleges within the University.

A financial-aid model is one of the components of the University's financial planning model. The financial-aid model is integrated with enrollment forecasts and institutional pricing. Historical data are maintained for financial need variables and both external and internal sources of student-aid funds. Policies about the number of students to assist and budget policies for student aid are balanced in the model against policies about financial-aid budgets and the amount of student-aid discounting against tuition income.

Student Retention

Patterns of student retention are being studied using a cumulative record of credits and quality points for entering-student cohorts over four and six-year time periods. The methods we plan to use for retention studies are currently being tested in a prototype design using four years of data for students entering the College of Arts and Sciences in 1979.

The research design from student retention serves several purposes; that is, it:

1. Identifies characteristic patterns of student enrollment, persistence and academic achievement.

2. Describes the characteristics of students who follow each student-retention pattern.

3. Predicts student-retention patterns and survival rates.

4. Allows colleges to model hypotheses about student subgroups expected to have high or low survival rates.

In the design, separate analyses will be performed for each college, recognizing the wide variations among colleges in the patterns of student flow. Separate analyses will also be conducted for freshmen and transfers because freshmen are more likely to accumulate a larger number of credits than transfers.

Using the 1979 Arts and Sciences data, a cluster analysis was performed on the number of credits earned each semester and on the cumulative quality gradepoint average. Varying the number of clusters, we analyzed differences in the patterns of persistence, withdrawal, and dismissal and described the characteristics of students clustered in each retention pattern. Discriminant analysis was then used with student descriptive data and traditional academic measures to derive prediction equations for estimating the likelihood of students following a particular retention pattern.

The second method we are exploring to study student retention is survival analyses. Although the design and computation of survival analyses is complex, the outputs are descriptive and relatively easy to interpret. The criterion measure used in the survival analysis is cumulative credits earned (a surrogate for time of survival). The analysis produces a survival table that breaks down the number of students entering each interval, the cumulative percentage beginning the interval, and number of students dismissed, withdrawn, graduated, and continuing. Separate survival tables and graphical displays were prepared for freshmen and transfers. Two survival-analysis curves were overlayed to describe continuation, graduation, and withdrawal rates graphically. In the first survival analysis, withdrawn and

graduated students were both coded "dead" and graduate students were coded "lost" (i.e., censored from the analysis). Survival analysis, in addition to drawing the survival curves, has the advantage of offering a stepwise-logistic regression procedure for predicting survival patterns for student subgroups.

Notwithstanding the potential of the methods, neither the stepwise-discriminant analysis nor the stepwise-logistic regression analysis produced operationally useful results in predicting student retention from student demographic and academic variables that were available. Only first-semester college GPA and SAT verbal scores were included in the stepwise analyses as significant predictors. Thus far, we can only conclude that in the College of Arts and Sciences such variables as sex, SAT scores, high school class rank, predicted gradepoint average, financial-aid application, status as resident or commuter are not predicting student retention with sufficient accuracy for any practical use.

When we link student characteristics data from the ACE/UCLA CIRP survey with student retention data, we might get better prediction and gain a better understanding of factors influencing student retention.

Using the record-selection features of SPSS-X, we can also select and study the retention patterns of various student subgroups, using survival analysis to display the characteristic patterns of student retention in each college.

Instructional Income and Expense

Another goal of the enrollment-management system is to find ways to balance enrollment demand, course offerings, and staffing at reasonably economic levels in terms of direct instructional income and expense. Planning and Institutional Research has created a data base and prototype analysis program that rolls up instructional income and expense from the section level to the position, course, department, college, and University levels.

Salaries for full-time and adjunct faculty members are allocated to course sections proportionately on the basis of the number of course preparations. Student credit-hours for each category of students (i.e., undergraduate/graduate, full-time, part-time) are multiplied times the

cost per credit hour to calculate enrollment income for each course section. Statistics provided in the report include enrollment head counts, student credit-hours, faculty work loads, student credit-hour production, and the ratio of tuition income to be allocated instructional expense.

Judgments about educational values and curriculum priorities, of course, have to be balanced against the economic issues of faculty workloads and the ratio of instructional income to salary expense. To the extent that enrollment cannot be managed through student recruitment or student retention, the University inevitably will be forced to reallocate positions, salaries, and courses among departments in order to respond to fluctuations in enrollment demand.

Decision-Support Approach

How does the strategy of building a Decision-Support System for enrollment management differ from traditional approaches used in building a management information system or institutional-research program?

Much has been written about the concepts of Decision-Support Systems and the Information Center and about Fourth-Generation Software approaches to application development (e.g., Briggs, 1981; Goetz, 1982; Keen, 1981; Martin, 1982; Moore & Greenwood, 1984).

Decision-Support Systems use interactive computing as tools to help executives and managers to gain access to information needed to inform their own intuition and judgment, to make better and more timely decisions. On-line retrieval of information from the data base is through interactive computing which is user-friendly, flexible, and responsive to ad hoc requests for information. Information from multiple data sources, both external and internal, are integrated to prepare analytical reports and planning scenarios.

Requirements for a comprehensive, integrated Decision-Support System include:

1. User-friendly retrieval for extract and report generation from multiple files in the operational data base.
2. Model-building tools to ask "what if" questions.

3. Compatible dictionaries and file-transfer interfaces between report generation and statistical analysis packages.

4. Electronic filing, communication, and retrieval of executive summaries, spread sheets, and graphical displays.

5. Information-center support distributed through education, consulting and software to end-users.

To take advantage of the operational data bases built through SCT software, however, the University has to acquire a flexible and powerful PC-mainframe link. This will permit selection of records and data fields from multiple data files; extract data files can then be downloaded to the personal computer for integration and analysis.

Using D-Base III or Revelation (DBMS packages) with SPSS-PC, and with locally developed user-friendly interfaces, the University can prototype a wide variety of enrollment-management studies and reports with a minimum of assistance from application programmers. Planning and Institutional Research has access to SPSS-X and BMDP programs on the DEC/VAX 11/780 computer through a user-friendly communications protocol. Management information systems reports on the IBM mainframe can be generated in-batch using Easytrieve Plus. However, this option is limited for DSS purposes, because there is no statistical analysis package on the mainframe.

Enrollment and financial planning models are prepared using Lotus 1-2-3, and integrated spread sheet and graphics package, and Symphony and Framework are currently being evaluated at the University as DSS tools. Survey data can be readily keyed using a directory-driven, screen management and analysis program from the Institute for Social Research (ABC). Multimate, a word-processing software package, is used extensively to prepare reports and to retrieve and distribute planning documents.

The plan for personal computing in Planning and Institutional Research includes two maximum configuration IBM PCs with 512-K storage capacity, a Bernoulli Box (containing two, 12-megabyte disks of portable storage), a laser-jet printer, and communications links with both the IBM mainframe and DEC/VAX minicomputer.

Initially, much of the application-development effort for building a DSS for enrollment-management will have to be prototyped with staff

members in Planning and Institutional Research providing the technical support. However, as the Admission's Office, Registrar, and Assistant Dean in each college gain access to the necessary hardware/software environment and decision-support tools, we believe much of the information processing for enrollment management can be distributed to those staff members who are in daily contact with the key strategic decision makers on campus.

References

Baldridge, J. V. The enrollment crisis: Factors, actors, & impacts: (AAHE-ERIC, Report No. 3) Washington, D.C. AAHA, 1982.

Beal, P. E., & Noel, L. What works in student retention. Iowa: American College Testing Program and Denver, Colo: National Center for Higher Education Management Systems, 1980.

Bean, J. P. The synthesis of a theoretical model of student attrition. Paper Presented at American Educational Research Association, Los Angeles, Calif., 1981.

Briggs, W. G. Decision support systems: An evaluation of DSS packages. Computerworld, March 1, 1982, pp. 31-35.

Finkelstein, M., & Farrar, I. The adaptation of four year colleges to current fiscal and enrollment pressures: An exploration of critical event cycles at seventeen campuses. Ashe Annual Meeting Paper, 1983.

Gillespie, D., & Carlson, N. Trends in Student Aid: 1963-1983. New York: College Entrance Examination Board, 1983.

Grabowski, S. Marketing in higher education. AAHE-ERIC Higher Education Research Report No. 5, 1981.

Griffith, W. T., Maguire, J. J., Lay, R., & Lonabocker, L. Managing student enrollment: The Boston College story. Sixth annual Meeting of the Northeast Association for Institutional Research, Cooperstown, N.Y., 1979.

Goetz, M. Engineering fourth-generation system software. Computerworld. June 7, 1982, pp. 1-14.

Hilton, T. L. Persistence in Higher Education: College Board Report No. 82-5. N.Y.: College Entrance Examination Board, and Princeton, N.J.: Educational Testing Service, 1982.

Keen, P. Decision support systems lessons for the 80s. Educom, Fall 1982, 17, 17-21.

Kemerer, F. R., Baldridge, V. J., & Green, K. C. Strategies for enrollment management. Washington, D.C.: American Association of State Colleges and Universities, 1982.

Lay, R. Assessing market potential in the inquiry pool, AIR Forum Paper. Denver, Colo., 1982.

Lay, R., & Maguire, J. J. Computer aided segmentation analysis: New software for college admissions marketing. Journal of College Admissions, Fall 1983, 101, 32-36.

References

Lay, R., Maguire, J. J., & Litten, L. Identifying distinctive groups in a college applicant pool. Research in Higher Education, 16(3), 1982.

Lay, R., Maguire, J. J., & Lonabocker. Admissions and retentions--student perceptions before and after matriculation. Seventh Annual Meeting of Northeast Association for Institutional Research. Amherst, Mass., 1980.

Lenning, O. T. et al. Student retention strategies (AAHE-ERIC Higher Education Research Report No. 8). Washington, D.C.: American Association for Higher Education, 1980.

Litten, L. H. Applying market research in college admissions. N.Y.: College Entrance Examination Board, 1983.

Lolli, A., & Scannell, J. Expanding the focus of admissions marketing utility. College and University, Fall 1983, 59(1), 5-28.

Martin, J. Application development without programmers. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1982.

McLain, D., Vance, B., & Wood, E. Understanding and predicting yield in the MBA admissions process. Research in Higher Education, 20(1), 1984.

Moore, L. M., & Greenwood, A. G. Decision support systems for academic administration (AIR Professional File No. 18). Summer 1984.

Pantages, J., & Creedon, F. Studies of college attrition, 1950-1975. Review of Educational Research, Winter 1978.

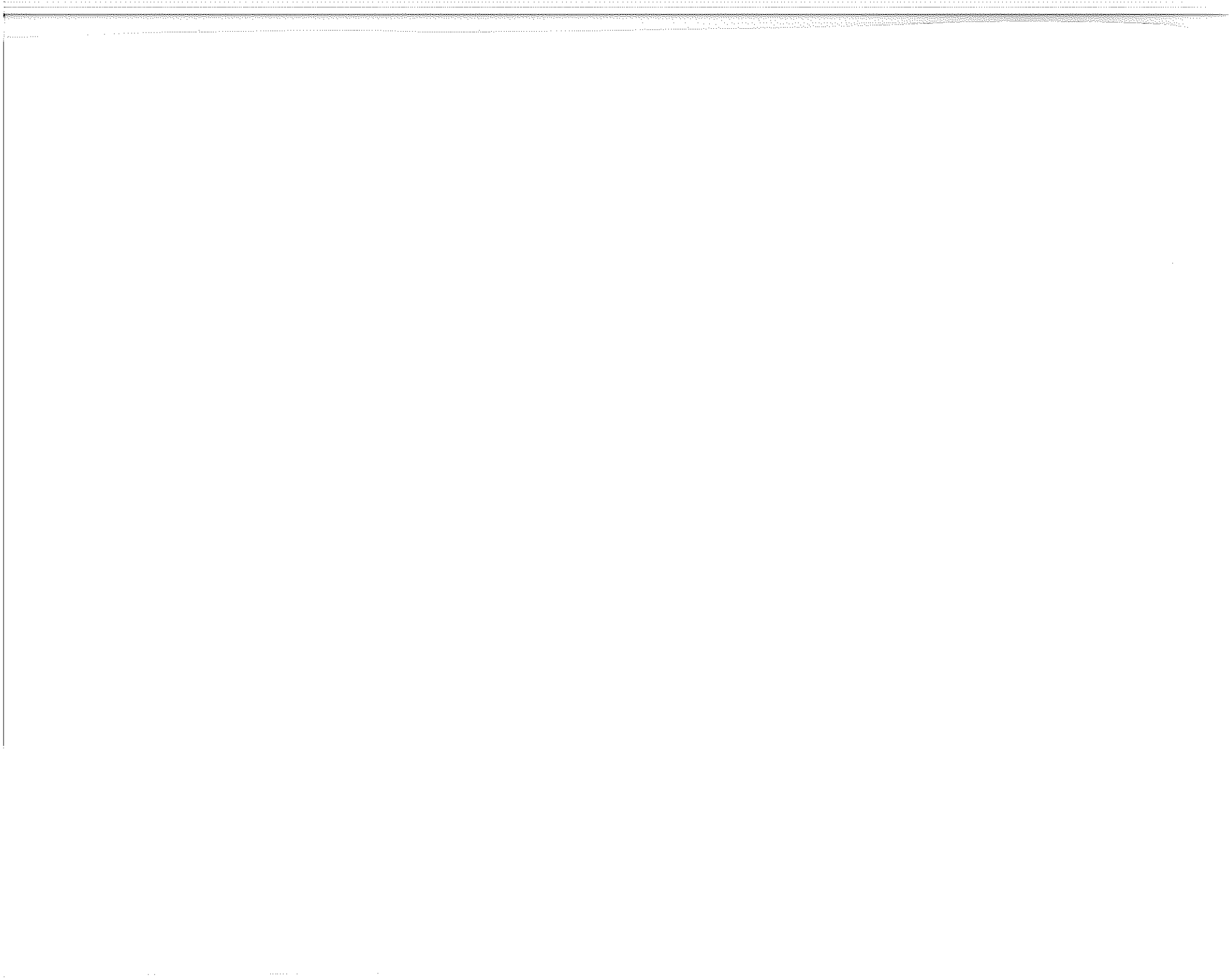
Pascarella, E. T. Studying student attrition, (New Directions for Institutional Research No. 36). San Francisco, Jossey-Bass, 1982.

Ramist, L. College student attrition and retention (College Board Report No. 81-1). N.Y.: College Entrance Examination Board, 1981.

Rowse, G. & Wing, P. Assessing competitive structures in higher education. Journal of Higher Education, Nov.-Dec. 1982.

Rugg, E. A. Design and analysis considerations for longitudinal retention and attrition studies. College and University, 58(2), 119-134. Winter 1983.

WICHE. High school graduates: Projections for the fifty states. Boulder, Colo.: Western Interstate Commission for Higher Education, 1984.



EVALUATING SPECIAL ACADEMIC PROGRAMS: THE CASE OF A RESIDENTIAL COLLEGE

Norman D. Aitken
Department of Economics
University of Massachusetts

Introduction

Special academic programs include those academic support services that are administered outside of academic departments and that are designed to have a positive impact on student academic adjustment and/or academic performance. Academic counseling centers, academic skill centers, internship programs, university honors programs, and residential colleges are some of the more common examples.

During the current period of austerity in higher education, special academic programs have come under increased scrutiny by both faculty and administrators. Consequently, institutional researchers may be given the responsibility of providing an objective evaluation of such programs. This article explores the methodological problems involved in evaluating special academic programs and then presents the empirical results of an evaluation of a residential college program at a large state university.

An effective evaluation of such programs requires:

1. A clearly stated theory of how the program impacts on student adjustment or performance.
2. Quantifiable measures of the predicted outcomes or effects of the program.
3. A method for controlling for the possibility that the characteristics of the students who chose to participate in the program may differ from those who chose not to participate.

Effective program evaluation requires the identification and measurement of the specific outcomes likely to be affected by the program. This in turn requires an a priori theory or model of the step-by-step process by which the program leads to the ultimate outcome. The researcher may want to develop the theoretical framework in consulation with the professional staff working for the program, since they can provide specific details about the program, and can also

suggest the mechanism by which the program can successfully impact on student behavior. Establishing the theoretical framework will also identify the specific effects that the researcher would like to measure. While time and budget constraints frequently prevent direct measurement of the theoretical variables, every effort should be made to come as close as possible. If the desired data is not available from established data bases, the researcher should consider the collection of original data through the use of a survey or other technique.

Finally, because student participation in most special programs is on a volunteer or self-selection basis, the researcher will need to design an evaluation study which controls for the possibility that the characteristics of the participants in the program differ significantly from those of nonparticipants. Failure to do so will mean that the researcher will not be able to discern whether the measured effects resulted from the program itself or simply from the distinguishing characteristics of the participants.

The remainder of this article describes an evaluation study of a residential college program at a large state university. The study follows the methodological principles just described.

The Orchard Hill Residential College Program

The Orchard Hill (OH) Residential College was established in 1964 within the Orchard Hill Residential Area, which is one of several residential areas for undergraduate students at the University of Massachusetts, Amherst. While several different types of academic programs have been offered by the Residential College over the years, the current program focuses on the freshman year and is designed to improve the adjustment to the University of entering first-year students by providing an opportunity for them to share a common academic experience with other students residing in the same dormitory complex. Under the program, the Residential College offers a set of standard introductory courses within the OH dormitories. Entering freshmen who choose to participate in the program take at least two of their first semester courses within the residential college and all participants are then given a housing assignment within the same dormitory complex.

Theoretical Model of the Program

Previous research results from both the University of Massachusetts (Aitken, 1982) and other institutions (O'Shea, 1969; Pascarella et al., 1978; Spady, 1970 and 1971) have indicated that: (a) both academic performance and successful social integration into a peer group within the student dormitory are important factors in the adjustment and ultimate retention of entering first-year students and (b) academic performance and social integration are negatively related to each other. In other words, the more successful a student's academic performance, the less likely they are to be successfully integrated into a social group of peers and vice versa. If this is the case, then it follows that the trade-off between academic performance and social integration could be reduced by encouraging students to develop their social relationships around a common academic experience. In short, this constitutes the theoretical basis of the OH Program. By providing an opportunity for students to share a common academic experience with other students residing in the same dormitory complex, the program encourages the integration of the student's academic and living experiences, which, in turn, should improve student adjustment.

Program Evaluation

Methodology

The stated objective of the program was to reduce the trade-off between academic performance and social integration for entering first-year students. Consequently, the program would be deemed effective if it could be shown that students participating in the program either:

1. Achieved higher academic performance without a reduction in social integration.
2. Students became more socially satisfied without a reduction in academic performance.
3. Some combination of 1 and 2.

To test for any of these three outcomes, it would be necessary to compare the participants in th Orchard Hill Program with a control group (or groups) and to ensure that any differences in the measured outcomes could not have been caused by a difference in the characteristics of the

students choosing to participate in the OH Program. It was necessary, therefore, to obtain data that measured academic performance, student characteristics, and the social integration of both participants in the program and an appropriate control group or groups. These methodological issues were resolved as follows:

1. Data on student social integration and other aspects of their adjustment process were collected through a survey of first-year students. The survey was administered to a campuswide representative population of first-year dormitory residents at the end of the fall semester, 1980. The study population included:
   a. Students participating in the OH Program.
   b. Nonparticipants who were also residing in the OH Residential Area.
   c. Nonparticipating students residing in other residential areas across campus (a campuswide sample).

2. SAT scores, high school rank, grade point average, and data on student withdrawals were obtained from University records. Data on GPA and student withdrawal were collected each year for the academic years 1980-81, 1981-82, and 1982-83, which enabled one to follow the students' academic performance and retention into the beginning of their senior year. The Groups b and c were used as control groups. The participants were first compared to the campuswide sample because it was representative of the entire freshman class. On the other hand, the campuswide sample included students in all types of dormitories, including both coed and single-sex dorms. With the exception of few students, all OH participants were housed in coed dorms. Consequently, Orchard Hill residents who chose not to participate in the OH Academic Program were selected as the second control group. All students within this control were living within coed dormitories and, in fact, were living in dormitories with the same basic physical and social environment as the students who were in the OH Program.

Empirical Results

Student characteristics. A comparison of the characteristics of the participants relative to those of the control groups revealed one important and statistically significant difference. The participant group had a higher percentage of women (54%) than either the other OH residents (37%) or the campuswide residents (47%). There was no significant difference between the participant and control groups on any of the other measured characteristics, which included age, SAT scores, high school rank, college or major, parent with college degree, participation in the honors program, and being from out-of-state. Because of the difference in sex composition between the participant and control group, any difference in measured outcomes between the groups will have to be carefully evaluated to be sure that they were not caused by the difference in sex composition before any conclusions can be drawn. This can be accomplished by subdividing the participant and control groups by sex to see if the difference in measured outcomes continues to exist when the sex of the student is held constant.

Academic performance. Student grade point averages for the participant and the control groups are presented in Table 1 for each of the freshman, sophomore, and junior years as well as the cumulative GPAs for the three-year period. The results show that the program participants had a significantly higher grade point average than either control group for both the freshman and sophomore years (1980-81, 1981-82). The differential is dissipated in the junior year, however, but not because of a deterioration in the performance of the participants, but rather an absolute improvement in the performance of both control groups.

Any given set of data can be consistent with more than one explanation and in the present case at least two possibilities could be considered:

1. The program was successful in developing the interpersonal dynamics described above which encourage students to become more academically focused early in their college career.

Table 1

Academic Performance

Group	GPA for 1980-81	GPA for 1981-82	GPA for 1982-83	Cumulative GPA (3 yrs)
Orchard Hill Program participants	2.69	2.84	2.85	2.71
Other Orchard Hill residents	2.46*	2.63*	2.84	2.51*
Campuswide dorm residents	2.44**	2.59**	2.83	2.47**

Note. GPA for each of the specific academic years is based only on courses thken in that year. Cumulative GPA covers the three-year period 1980-83. The latter includes students who withdrew from the University prior to their junior year as long as they had received graded credits prior to withdrawal.

N for respective periods is:

Orchard Hill Program participants (126, 103, 87, 126)
Other Orchard Hill residents (373, 306, 256, 373)
Campuswide dorm residents (1,824, 1,457, 1,263, 1,824)

*Difference from Orchard Hill Program participants is significant at the .01 level.

**Difference from Orchard Hill Program participants is significant at the .001 level.

2. The difference in academic performance was caused by fundamental differences in the characteristics of the participant and control groups. Because of the higher proportion of female students in the participant group, an extensive regression analysis of the data was conducted. The results (not reported because of space limitations) ruled out the possibility that the results could have been caused by the differences in sex composition.

Social adjustment. Evidence supporting the effect of the program on academic performance is not sufficient to document the overall effectiveness of the program unless it can be shown that the improvement in academic performance did not occur at the expense of social integration and that the improved academic performance was in some way caused by the social dynamics within the dormitory. Survey results for a number of measures of social adjustment and student satisfaction were compared for the participant and control groups. The vast majority of the measures showed no significant difference between the groups. Because of space limitations, only those measures that have important implications for the program evaluation are reported in Table 2. The first three items in the table indicate that while the participants were just as likely to make friends with other students in the dorm, they were significantly more likely to establish friendships around an academic experience. Participants report a significantly higher tendency to have made friends with students who were in both their dormitory and classes, and to have studied with other students living within their dormitory.

The results confirm that social interaction within the dormitory was significantly more academically focused for participants than nonparticipants. This, in turn, suggests that the social dynamics within the dormitory was responsible for the better academic performance of the participants. Consequently, these findings greatly increase our confidence that the program itself was effective in improving student academic performance.

Table 2

Measures of Social Integration

Extent to which student reported	Mean extent level		
	OH Program (N=119)	Other OH residents (N=317)	Campuswide dorm residents (N=1436)
Making friends with other students in dorm	3.55	3.55	3.53
Making friends with students who were in both dorm and classes	2.81	2.38*	2.49*
Being able to study with other students living in dorm	2.23	1.91**	2.05****
Having influence over things that happen to them at University	3.33	3.28	3.24
Having fun at the same time completing their work	3.59	3.60	3.41
Having felt lonely	2.16	2.11	2.19
Having felt isolated from most of the people at the University	2.03	1.82***	1.86***

Note. Survey questions from the First Year Student Survey conducted at the end of the student's first semester at the Unviersity (Fall 1980); Significant differences between control groups and Orchard Hill program participants designated by Superior asterisks.

Scale: 1 = to a very little extent; 2 = to a little extend; 3 = to some extent; 4 = to a great extent; 5 = to a very great extent.

*P .001.
**P .01.
***P .05.
****P .1.

Despite the stronger academic orientation of the participant group, the participants, relative to the nonparticipants were just as likely to (1) make friends with other students in the dorm, (2) believe they had influence over things that happened to them, and (3) have fun while completing their work. Furthermore, there was no difference between the groups in the extent to which they felt lonely. All of these findings support the conclusion that the greater academic performance of the participants did not come at the expense of social intergration. In other words, the results suggest that the OH Program was effective in reducing the trade-off between academic performance and social integration. (It should also be noted that a breakdown of the data in Table 3 by sex revealed the same basic similarities and differences between groups as found in the aggregate results.) The only result that runs counter to this conclusion is the last measure in the table which indicates that participants felt a greater degree of isolation from most of the people at the University. Further analysis of this finding, however, suggested that students were expressing a sense of physical isolation as opposed to social isolation. (The OH residential area is located on the periphery of the campus and because the participants had at least two classes in the area, they spent less time in the center of campus.)

Retention. A comparison of the retention rates for the participant and control groups showed no significant difference between the groups. Consequently, while the OH Program was effective in raising student academic performance it did not have a perceptible effect on student retention.

Conclusion

The study results showed that participation in the Orchard Hill Residential College Program was significantly associated with higher academic performance and a greater tendency to establish peer relationships around academic experiences. In addition, no evidence could be found that the improved academic performance was associated with a lower level of social integration into peer groups. Despite the

fact that no significant relationship was found between the program and student retention rates, the overall set of results indicates that the program was effective in achieving its stated objective: an improvement in the adjustment of first-year students to the University by reducing the trade-off between academic performance and social integration.

References

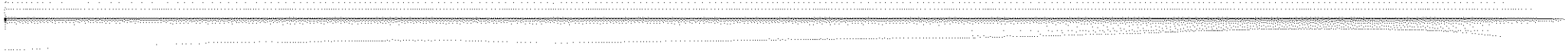
Aitken, N. College student performance, satisfaction and retention: Specification and estimation of a structural model. Journal of Higher Education, Jan./Feb. 1982, 53, 32-50.

O'Shea, A. Peer relationships and male academic achievement: A review and suggested clarification. Personnel and Guidance Journal, 1969, 47, 417-423.

Pascarella, E., Terenzini, P., & Hibel, J. Student-faculty interactional settings and their relationships to predicted academic performance. Journal of Higher Education, July/August 1978, 49, 450-463.

Spady, W. Dropouts from higher education: An interdisciplinary review and synthesis. Interchange, 1970, 1, 64-85.

------ Dropouts from higher education: Toward an empirical model. Interchange 1971, 2, 38-62.



INSTITUTIONAL RESEARCH PROBLEMS FROM NEW NCAA ACADEMIC STANDARDS FOR STUDENT-ATHLETES

Pamela J. Roelfs
Office of Institutional Research
University of Connecticut

Institutions with students participating in intercollegiate athletics are accustomed to maintaining data on student-athletes for the National Collegiate Athletic Association (NCAA). However, new NCAA requirements for initial and continuing eligibility in intercollegiate sports may signal the beginning of an institutional research role for NCAA that may conflict with a college or university's own research objectives and practices. NCAA Division I institutions will get a new academic standard, perhaps higher than their admission requirements, for freshman-athletes desiring intercollegiate eligibility. Division I and II institutions will have a new satisfactory academic progress rule for students continuing in intercollegiate sports. And all NCAA member institutions face the possibility of NCAA-imposed requirements for publication of student retention and graduation data on entering freshmen classes as well as student-athletes.

New Eligibility Rules

Currently, entering freshmen in Division I institutions must have earned a 2.0 grade point average (on a scale of 4.0) in high school to be eligible to participate in intercollegiate athletics the freshman year. The new standard, scheduled to become effective in August 1986, will require at least a 2.0 GPA in an NCAA-defined core of 11 high school academic courses "including at least three years in English, two years in mathematics, two years in social science and two years in natural or physical science (including at least one laboratory class, if offered by the high school). . . " (NCAA manual, 1984, Bylaw 5-1-(j), p. 87) and a score of at least 700 on the combined SAT or 15 on the ACT.

To obtain or maintain eligibility after the freshman year, Division I and II student-athletes now must satisfactorily complete a minimum number of credit hours (24 semester hours or the quarter-hour equivalent) each year in any courses offered by the institution. The

new satisfactory progress rule, effective in August of 1985, will require the credit hours to be "acceptable toward a baccalaureate degree in a designated program of studies" and require the student-athlete to maintain "a grade point average that places the student-athlete in good academic standing as established by the institution for all students who are at an equivalent stage of progress toward a degree" (NCAA manual, 1984, Bylaw 5-1-(j)-(6), p. 89).

The new freshman rule has been the center of much controversy and public debate. It has been widely criticized for discriminating against blacks (e.g., Farrell, 1983b; Greene, 1984; Vance, 1983a; Williams, 1983) and praised for attempting to come to grips with the problem of college exploitation of black student-athletes (e.g., Farrell, 1983a; Perkins, 1983). Some have wondered about the role NCAA plays in establishing academic standards for colleges (Carter-Williams, 1983; Uehling, 1983; Zingg, 1983) and a core curriculum for high schools (Jenkins et al., 1984). Some have questioned whether the academic integrity of the institution is threatened when a particular academic standard is applied to students who wish to participate in sports but not to students interested in other kinds of extracurricular activities (e.g., Roaden, 1983). Others have debated whether freshman eligibility should be banned completely (Mihalich, 1984; Vance, 1983b), whether the new rule discriminates against the average student-athlete (Phelps, 1983), whether the standard should be higher (Farrell, 1983a; Hauenstein & Kubany, 1983), and whether a national cut-off score on an admissions test is appropriate when there is great variation in median scores for different institutions (e.g., Vance & Biemiller, 1983, p. 29).

Although these concerns have been debated in philosophical terms, some have implications for research and quantitative analysis. For example, there is no experimental data to support either of the two key assumptions in the debate about freshman eligibility:

> That playing intercollegiate sports as a freshman interferes with academic progress.
>
> That not playing intercollegiate sports as a freshman improves academic progress.

The new academic progress standard for student-athletes to date has not received the public debate and criticism given the freshman rule. However, institutional researchers face problems monitoring and reporting academic progress in the ways NCAA is considering requiring of its member institutions.

Analysis and Reporting Requirements Being Considered by NCAA

An NCAA special committee on athletic problems and concerns in higher education last year recommended that member institutions be required to publish admissions, retention, and graduation data on student-athletes and comparative data on all students. Their final report included the following statements about institutional research:

> The issue of graduation rates for student-athletes is a complex, often-studied one. What has arisen from these reviews is the concept of a published audit of a college's graduation rate for student-athletes by the institution's appropriate academic officer, especially comparing the graduation rates for student-athletes to the rates for the school's general student body. . . .
>
> Consideration should be given to requiring institutions to publicize their graduation rates after a common, national method for determining such rates has been adopted. . . .
>
> The Committee also recommends that institutions be required . . . to develop information on the graduation rates of their student-athletes and to explain how the rates were determined. This information should be kept on file in the appropriate offices for review by the NCAA and other agencies. . . .
>
> The Committee recommends that the NCAA develop a comprehensive audit and certification program . . . [that] would require the institution to share data with its opponents, its conference, and the NCAA in regard to the academic records of its student-athletes, including academic standing upon admission, satisfactory progress, and graduation rates--all, of course, within the confines of the Buckley amendment (Final report of the select committee, 1983, p.9)

Institutions in the past have maintained and reported data on individual student-athletes. But the preceding recommendations, should they ever be accepted by the NCAA member institutions,

signify NCAA dictation of the retention criteria used in studying student progress and NCAA imposition of national standards for research on academic progress.

Some Institutional Research Problems

Data collection and reporting problems arising out of the new NCAA standards for initial and continuing eligibility already have been experienced by the 206 Division I institutions who participated in an NCAA-commissioned research study last fall. They were asked to provide data on entering characteristics and retention of their 1977 and 1982 freshman classes. They also were to provide copies of high school and college transcripts, other academic data, and personal and financial information on each student in the two freshman classes who received a full or partial freshman athletic grant-in-aid. Table 1 summarizes the academic data collection required to respond to the NCAA survey.

Some institutions had difficulty providing all the data requested by NCAA. For example, students who received "full or partial athletic scholarships" could not be identified. Application deadlines resulted in college receipt of high school transcripts lacking the final semester of high school coursework. Student files for 1977 freshmen had been discarded or could not be recreated for the retrospective analysis NCAA wanted. Giving outsiders the academic performance and personal data on individuals created ethical and legal concerns. It was a time-consuming and frustrating experience for the participating institutions.

The executive summary of the results (Study of freshman eligibility, 1984) was released in September, the full technical report (Bartell et al., 1984) is being distributed this month, and individual institutional summaries will be sent to the participating institutions. However, the specter of future NCAA requests for admissions and retention data is looming on their horizon. Publication of the executive summary has sparked new debate between critics and supporters of the freshman eligibility rule (Farrell, 1984a & 1984b) and has renewed the possibility of revisions in the standard and more NCAA-commissioned research.

Table 1

NCAA Study of Freshman Eligibility Standards:
Academic Performance Data Collection Requested of Division I Institutions
for Entering Freshmen in 1977 and 1982

	Admission Characteristics	Academic Progress Characteristics
Population of entering freshmen	25th & 75th percentiles of SAT--verbal SAT--mathematical ACT composite high school GPA Percent in top 10%, top 50% of high school class	Percent returning for 2nd year Percent completing bachelor's in 4 academic years or less (by 8/81) 5 academic years or less (by 8/82) 6 academic years or less (by 8/83)
Each freshman with full or partial athletic grant-in-aid	SAT (combined) and/or ACT (composite) High school class rank High school GPA as reported by high school as computed by college High school transcript, including both semesters of senior year, annotated to indicate the NCAA-defined core courses	For each academic year number credits attempted number credits earned cumulative GPA Month and year of graduation other departure (was it in good standing?) For entering freshmen 1982 college transcript of freshman year (1982-83)

Source. Compiled from Study of freshman eligibility standards: Instructions to institutional liaison. [1983]. Mission, KS: National Collegiate Athletic Association. A variety of personal and financial information on individual student-athletes also was requested.

In implementing the NCAA standards and reporting requirements, institutional researchers may be confronted with measuring student groups and variables not yet defined. For example, "satisfactory progress" has been a problem both for the NCAA and the institutions. One NCAA interpretation has been "declaration of a major by the start of the fifth semester or seventh quarter, " but different declared majors within an institution may require different minimum GPAs. Maintaining satisfactory progress in a declared major may require a GPA higher than that required to remain in the institution in good standing (see discussion in "Sidelines," 1984). In addition, monitoring a student's satisfactory progress toward a baccalaureate degree may be difficult in institutions where degree auditing prior to the graduating term is not automatic.

Defining "student-athlete" has been another problem. Although the recent NCAA research focused upon entering freshmen receiving full or partial athletic scholarships, the eligibility standards apply to all students in intercollegiate athletics. An NCAA study in 1981 focused on all entering freshman male student-athletes (NCAA survey, 1981). It is not clear how institutions should assess and measure females, foreign students, transfer students, and students who enter as freshmen but do not attempt eligibility until the sophomore or junior year. What populations should retention and graduation rates be based upon: scholarship athletes who enter the college as freshmen? scholarship athletes in revenue-producing sports? student-athletes declared eligible for an intercollegiate sport? students listed on each year's intercollegiate team rosters? students awarded one, two, or more letters in a sport? senior members of the varsity teams?

Making cut-offs in the population of student-athletes in the beginning of college experience may miss the success stories of the late academic bloomers and late sports entrants. Making cut-offs in the population at the end of the college experience may exclude the early failures. Making the definition too general, or specific, may result in misleading conclusions about the student-athletes at the institution. For example, results omitting students not designated as white or black (as in the 1984 NCAA study) may not be helpful to a college with a

predominantly Hispanic student-athlete population. Because graduation rates can vary considerably among different types of institutions (Beal & Noel, 1980, pp. 37-41), an institution may want information on national retention rates from its own type.

Examination of the results in the executive summary of the 1984 NCAA study (Study of freshman eligibility, 1984) illustrates the problems of interpreting data on subgroups of student-athletes. The types and sizes of student-athlete samples included in the results are shown in Table 2. According to the data in the table, the 206 participating institutions reported a total of 8,371 scholarship freshmen in 1977 and 9,664 in 1982. Sex, race, and sport could be identified for approximately 90% of the total number reported in 1977 and 1982. However, the combination of college performance data, high school transcript, and SAT/ACT score were available for only half of the 1977 student-athletes reported. That 50% sample formed the base for the analysis of the impact of the new freshman eligibility rule. No information was provided on how many and what type of institutions provided data for the 50% sample and whether the students in the 50% sample were representative of the total reported number.

In the absence of such evidence, results for subgroups of the 50% sample are suspect. According to the executive summary (p. 28), only 18% of the black male freshman-athletes in 1977 would have met the new standard for freshman eligibility. Calculation of the percentage was based on the 751 black males for whom data on college performance, high school coursework, and test scores were available, not the 1,398 reported by the participating institutions (p. 7). The finding is not meaningful without information on whether the 751 were representative of the population of black male scholarship athletes in 1977. A similar flaw in reporting subgroup results has been noticed in other recent studies of black student-athletes (Crockett, 1983). NCAA's full technical report (Bartell et al., 1984) may provide fuller explanation of the samples used in the analyses.

Table 2

Sample Types and Sizes Included in the Executive Summary of NCAA Study of Freshman Eligibility Standards

	1977 Freshmen with full or partial athletic grant-in-aid		1982 Freshmen with full or partial athletic grant-in-aid	
	Number	Percentage of total reported	Number	Percentage of total reported
Total reported by participating Division I institutions	8,371		9,664	
With information on sex, race, and sport category	7,521	89.8%	8,759	90.6%
Designated as white or black	7,025	83.9	8,296	85.8
With college performance data	6,804	81.3	--	
With high school transcript	4,645	55.5	7,363	76.2
With SAT or ACT score	4,161	49.7	6,889	71.3

Source. Compiled from pp. 6, 10, 14, 28, 29, and 32 in Study of freshman eligibility standards: Executive summary. Reston, Va.: Advanced Technology, 1984.

* * * * * *

Recent and possible forthcoming NCAA actions have stimulated this brief discussion of some of the problems in collecting and reporting the academic progress of student-athletes. Widespread debate about the NCAA actions may lead to public and internal pressures for college publication of retention and graduation rates for other subgroups of students, including ethnic groups, groups with marginal academic qualifications, and groups admitted under other unusual conditions. In the past, colleges have been reluctant to release data on subgroups small enough to enable identification of individuals and on subgroups with very low retention rates. In the future, they may need to develop ways to study academic progress that appropriately evaluate the progress of targeted subgroups without unfairly representing either the subgroup's gains or the institution's academic standards.

References

Bartell, T., Keesling, J. W., LeBlanc, L. A., & Tombaugh, R. Study of freshman eligibility standards: Technical report. Reston, VA.: Advanced Technology, 1984.

Beal, P. E., & Noel, L. (1980). What works in student retention. (ERIC Document Reproduction Service No. ED 197 635) Iowa City, Ia. & Boulder, Colo.: American College Testing Program & National Center for Higher Education Management Systems.

Carter-Williams, M. Black athletes and academic standards [Letter to the editor]. Chronicle of Higher Education, September 21, 1983, p. 33.

Crockett, D. S. Academic performance of athletes [Letter to the editor]. Chronicle of Higher Education, July 27, 1983, p. 24.

Farrell, C. S. A critic sees his protest against racism in sports vindicated after 20 years. Chronicle of HigherEducation, January 26, 1983a, pp. 17-19.

Farrell, C. S. Black colleges threaten court action to alter NCAA's new academic rules. Chronicle of Higher Education, April 20, 1983b, pp. 13, 15.

Farrell, C. S. Black-college chiefs say study backs their views, will spur rule changes. Chronicle of Higher Education, September 12, 1984a, pp. 31, 33.

Farrell, C. S. Proposition 48: Presidents who backed academic rules for athletes seem ready to compromise. Chronicle of Higher Education, October 10, 1984b, pp. 1, 31.

Final report of the select committee on the athletic problems and concerns in higher education. Reprinted in NCAA News, 1983, 20(38), 7-12.

Greene, L. S. The new NCAA rules of the game: Academic integrity or racism? Saint Louis University Law Journal, 1984, 28(1), 101-151.

Hauenstein, F. B., & Kubany, A. J. Academic standards for athletes [Letters to the editor]. Chronicle of Higher Education, March 9, 1983, pp. 28, 30.

Jenkins, G., Walker, J. H., White, J. R., & Woodson, M. C., Jr. NCAA Rule no. 48: A national study of the academic implications for U.S. secondary schools. Clemson, S.C.: Clemson University, College of Education, 1984. (ERIC Document Reproduction Service No. ED 240 692)

Mihalich, J. C. Let's not bar freshmen from playing sports. Chronicle of Higher Education, April 18, 1984, p. 72.

National Collegiate Athletic Association manual, 1983-84. Mission, Ks.: National Collegiate Athletic Association, 1984.

National Collegiate Athletic Association survey of graduation rates after five years for males first entering college infall 1975. Iowa City, Ia.: American College Testing Program, 1981.

Perkins, H. D. Higher academic standards for athletes do not discriminate against blacks. Chronicle of Higher Education, September 7, 1983, p. 88.

Phelps, M. O. Academic standards for athletes [Letter to the editor]. Chronicle of Higher Education, October 12, 1983, p. 33.

Roaden, A. L. Presidents should be involved in athletic policy, but they already have authority over the NCAA. Chronicle of Higher Education, December 14, 1983, p. 34.

Sidelines. Chronicle of Higher Education, June 27, 1984, p. 21.

Study of freshman eligibility standards: Executive summary. Reston, Va.: Advanced Technology, 1984.

Study of freshman eligibility standards: Instructions to institutional liaison. Mission, Ks.: National Collegiate Athletic Association, 1983.

Uehling, B. S. Athletics and academe: Creative divorce or reconciliation? Educational Record, 1983, 64(3), 13-15.

Vance, N. S. Academic rules would affect blacks far more than whites, study finds. Chronicle of Higher Education, February 16, 1983a, pp. 17, 18.

Vance, N. S. Proposals to bar freshmen from varsity sports gain support, but some call costs prohibitive. Chronicle of Higher Education, March 23, 1983b, pp. 15, 16.

Vance, N. S., & Biemiller, L. Academic standards for athletes still controversial. Chronicle of Higher Education, December 7, 1983, pp. 27, 29.

Williams, A., Jr. The impact of Rule 48 upon the black student athlete: A comment. Journal of Negro Education, 1983, 52(3), 362-373.

Zingg, P. J. No simple solution: Proposition 48 and the possibilities of reform. Educational Record, 1983, 64(3), 6-12.

FORECASTING ENROLLMENT: STIMULATION VIA THE MICROCOMPUTER

Stan Medinac
Office of Institutional Research
State University College at Buffalo

Richard A. Wiesen
Office of Academic Affairs
State University College at Buffalo

Introduction

Higher education exists in an enrollment-driven environment. Operating funds, whether obtained directly from students in the form of tuition or indirectly through state and federal appropriations are a function of the size of the student body. It is important, therefore, that strategic planning for all areas of the college (faculty, academic programs, institutional mission, support services, space requirements, auxiliary enterprises, etc.) be related to reliable enrollment forecasts.

Decision makers on college campuses have not ignored the wisdom of using enrollment projection models. The aim of these models has been to allow decision makers, when confronted with a number of alternative courses of action, the opportunity to select the most efficient. Until recently, however, these models either resided on mainframe computers and as a result required considerable cost and technical expertise to execute or were relatively simple and unsatisfying. This situation often discouraged administrators from making full use of the models.

With the introduction of microcomputers and good software packages college administrators now have access to relatively powerful systems for very little cost. Any administrator familiar with the new technology and willing to commit a modest amount of the time and effort can build a model or decision support system particular to his or her needs. These technological changes have led to major shifts in the use of computers. No longer is the administrator dependent upon the "computer center" to satisfy a need. Similarly no longer should costs and time constraints be overwhelming factors in the development of a decision support system.

This paper focuses on the development of an enrollment forecasting model. It will attempt to describe the impact of a microcomputer-based enrollment forecasting and modeling system on the decision-making

process of key campus administrators. In addition the paper will present a comprehensive description of the model from the perspective of the user and the builder; given the current state of the technology these two components need not be different individuals.

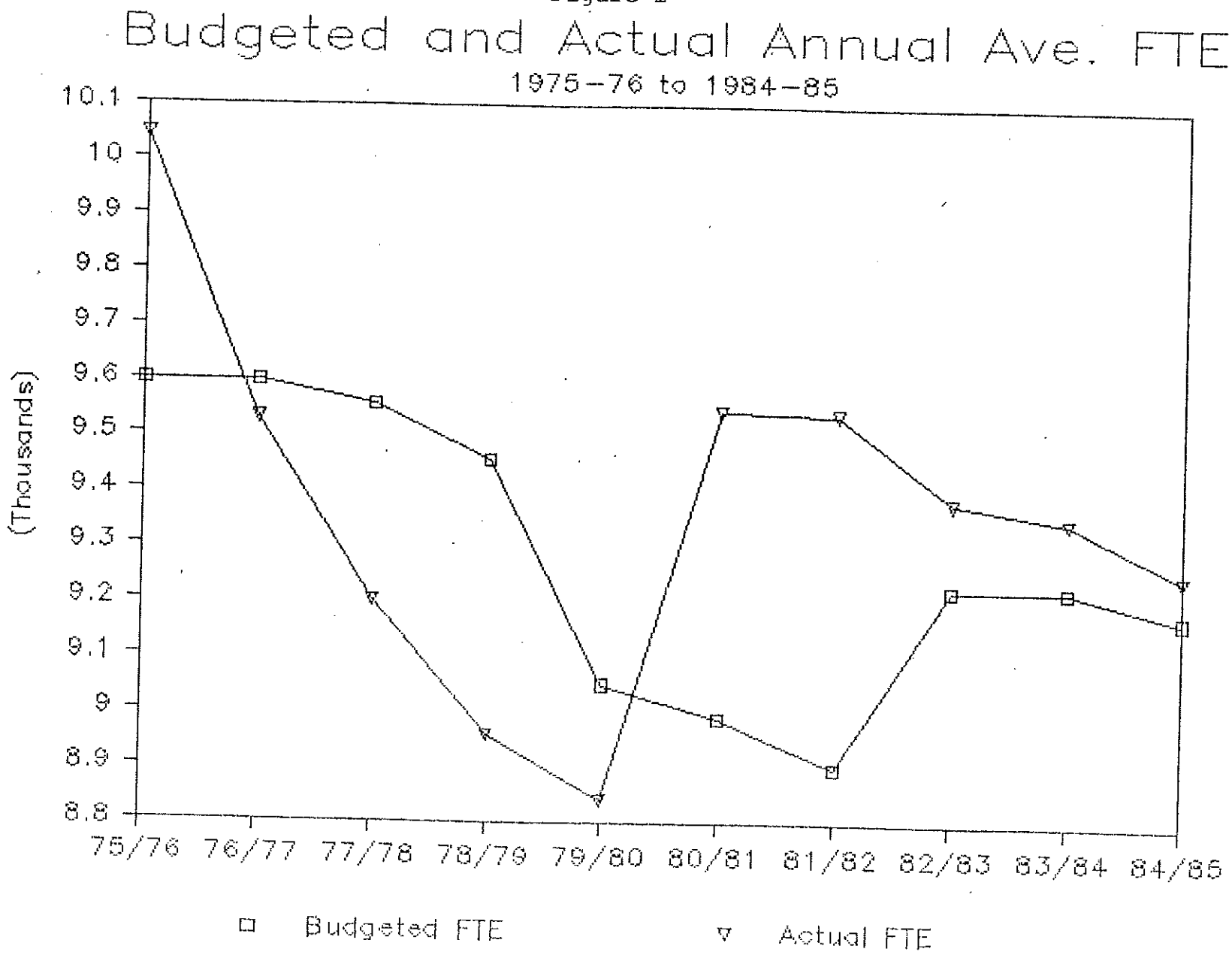
Purpose

Buffalo State College is the largest of the four-year arts and sciences colleges within the SUNY system. It has some 11,500 students enrolled in 120 undergraduate and graduate programs. During the early 1980s the college experienced a serious overenrollment problem. At its peek in 1981 budgeted enrollment stood at 8,900 FTE while actual enrollment was 9,541 FTE (see Figure 1). Efforts to obtain additional funding from the State to support the additional instructional and support costs were fruitless, and the college was faced with the task of reducing enrollments, bringing them closer to budgeted levels. On the surface this seemed to be a relatively simple procedure. However, in 1975 a similar planned reduction in enrollments unexpectedly led to a drop in enrollment below budgeted levels for the next four years. College administrators were determined that this phenomenon not repeat itself.

The college had studied its market and was aware of demographic data indicating a prolonged decline in its potential enrollments. However, this natural decline was not steep enough to alleviate the current problem. Additional measures needed to be implemented (i.e., capping admission into certain high demand programs), and it was essential that their magnitude and outcomes be carefully controlled. An overzealous enrollment decline would be extremely difficult to reverse during a time of shrinking applicant pools.

A formal Enrollment Committee was established to monitor all aspects of enrollment at the college, with its primary concern the establishment of targets for the recruiting of freshmen, transfer, and graduate students. This enrollment committee formed by the Vice President for Administration represented a broad cross section of the college community. The following individuals were committee members and met on a regular basis to monitor enrollment targets:

Figure 1


Budgeted and Actual Annual Ave. FTE
1975-76 to 1984-85
(Thousands)
10.1
10
9.9
9.8
9.7
9.6
9.5
9.4
9.3
9.2
9.1
9
8.9
8.8
75/76 76/77 77/78 78/79 79/80 80/81 81/82 82/83 83/84 84/85
Budgeted FTE
Actual FTE

Vice President for Administration; Chairperson
President
Vice President for Academic Affairs
Vice President for Student Affairs
Director of Admissions and Records
Director of the Budget
Dean of Graduate Studies
Director of SEEK/EOP
Faculty (appointed by the college Senate)
Coordinator of Institutional Research

It was also at this time that SUNY Central initiated the Multiphase Rolling Plan (MRP) in order to respond to the state government's demand for planning. Central office was interested in knowing the college's enrollment projections for the next five years; detailed enrollment plans were to be updated and reported every year. These projections included numbers of:

1. Freshmen, full-time and part-time.
2. Transfer students, full-time and part-time.
3. Continuing/returning students, full-time and part-time.
4. New graduate students, full-time and part-time.
5. Continuing/returning rates.
6. Annual average FTE.

Along with the figures a written analysis supporting the enrollment plan was required. This justification was to address issues relevant to enrollment (i.e. demographic data, academic program modifications, market share, and changes in the continuing/returning rate).

It was under these conditions that the enrollment model was created during the Fall 1981 semester, the time the college received its first shipment of microcomputers (Apple II). With relatively minor adjustments this model has been in use for four years as the basis for enrollment projections which are predicated on demographic data, trends in retention, and policy issues. In the model, each of the constraints can be altered to simulate a variety of enrollment scenarios.

Methodology

Stage 1: Articulation of Needs

The first step in the design of the enrollment model was determining the needs of the committee. It is critical that there be clearly stated goals and a realization that the model can assist in the decision-making process by supporting, rather than replacing, their collective judgment. The group understood that precise enrollment projections were improbable. However, there was a need for a general understanding of what enrollment might be over the next five years given quantitative changes in the variables (demographics and policy considerations). It was decided that the model should pinpoint future enrollment problems or opportunities and that these events be specifically identified as outcomes of the decisions made by the committee.

Once the goals had been established it was our concern that the committee itself become involved in the model-building process. Our feeling was that knowledge of the assumptions used in building the model would foster its use and instill confidence in its predictions by being understandable to its users. Unless these criteria were met, the model's usefulness to any decision-making process would be severely limited in scope.

Stage 2: Model Construction

To a very large extent the accuracy of a model rests upon the validity and availability of the data used in its construction. During the building process, we discovered several data elements that would have been useful but were not readily available. To a very large extent the structure of our model was dictated by data that was reliable and to which we had access. The actual model-building process began by extrapolating historical trends of relevant data into the future. Had we ended the process there, our model would have had limited utility since it would have failed to be sensitive to future policy changes, which are so common and so important to a college's enrollment.

Admittedly, it is very difficult to predict and accurately measure the effect of policy changes. However, it was felt that the members of the enrollment committee, with their background and experience, could provide reasonable estimates to the model. For instance, if the college,

as part of its official policy, sets into motion new programs designed to increase its transfer student population, then the Director of Admissions and the Vice President for Academic Affairs will be asked to quantify the effect of this policy on enrollment. In all instances the determination of the effects of a policy change requires consultation with top-level administrators. This procedure is a direct outcome of our belief that the users of the model should be aware of the assumptions that generate the forecast.

Crucial to the extrapolative portion of the model were the following data:

1. Freshmen Pool. Based on historical data this is the number of freshmen we would expect to enroll. This was a function of demographics, determined by projected high school graduation rates by county for those areas from which the college recruits its freshmen class.

2. Transfer Pool. Based on historical data, this is the number of transfers we would expect to enroll, determined by projected community college enrollments for those institutions from which the college draws transfer students.

3. Freshmen, Part-time. Based on historical trends.

4. Transfer, Part-time. Based on historical trends.

5. Continuing/Returning Ratio. Based on historical trends, this ration can, however, be adjusted to reflect a policy change.

6. Continuing/Returning Students, Full-time. A function of the continuing/returning rate.

7. Continuing/Returning Students, Part-time. Based on historical trends.

8. Undergraduate FTE. A function of total undergraduate head count and a conversion factor.

Elements of the model that are responsive to policy considerations and thus arrived at through consultation with committee members are:

Freshmen Policy Factor. Applied to the freshmen pool, can either increase or decrease the pool.

Transfer Policy Factor. Applied to the transfer pool, again can either increase or decrease the pool.

Continuing/Returning Ratio. See No. 5.

Graduate Student FTE. Arrived at through consultation with Dean of Graduate Studies.

Stage 3: Using the Model

In 1981, our first attempt at enrollment projection was based solely on demographic data. We asked the Enrollment Committee members to study these projections and determine whether or not they were acceptable. The response was a resounding no since the projected outcome was not within acceptable boundaries; policy issues needed to be included. The projection was rerun and again submitted for discussion. This is the pattern that we had hoped the Committee would follow; if an enrollment projection was not acceptable, actions (policy changes) needed to be undertaken to bring about desirable results. In essence, the college was forewarned of any potential negative enrollment developments and was given ample time to respond. The process has continued with good success each of the last four year. In each case the model accepts modification using current data.

Table 1 is an example of the modeling process. The first four columns represent full-time freshmen enrollments. In this example, the policy factor is 1.000; therefore, the number of freshmen we expect to enroll (column 3) is equal to the freshmen pool. Columns 5-8 deal with transfer student enrollment. Again the policy factor is 1.000, and again the number of transfer students (column 7) we expect to enroll equals the transfer pool. Column 9 is the sum of new full-time students (sum of columns 3 and 7). Columns 10 and 11 are expected enrollments of part-time freshmen and transfer students. Columns 12-14 deal with continuing/returning students (columns 13 and 14 are a function of column 12). Total full-time and part-time enrollment are represented in columns 15 and 16 while total undergraduate enrollment is shown in column 17. FTE figures are displayed in columns 18-20.

In Table 2, an option is investigated. The policy factor for the freshmen pool was reduced to .975 during the first three years. Table 3 limits enrollment during the first 3 years by reducing the policy factor for both freshmen and transfer students, but increases enrollment during the remaining years by increasing the policy factor. A decrease

Table 1

Projection No. 1

Year	Freshmen pool	Policy factor	Freshmen full-time	Denied/ added	Transfer pool	Policy factor	Transfer full-time
1	1,504	1.000	1,504	0	956	1.000	956
2	1,444	1.000	1,444	0	942	1.000	942
3	1,354	1.000	1,354	0	929	1.000	929
4	1,304	1.000	1,304	0	919	1.000	919
5	1,314	1.000	1,314	0	919	1.000	919

Year	Denied/ added	Total new student	Freshmen part-time	Transfer part-time	C-R ratio	Continuing students full-time	Continuing students part-time
1	0	2,460	176	410	0.715	5.893	1,179
2	0	2,386	169	431	0.715	5,972	1,194
3	0	2,283	158	479	0.715	5,976	1,195
4	0	2,223	153	475	0.715	5,905	1,181
5	0	2,233	154	475	0.715	5,812	1,162

Year	Total		Undergraduate headcount	Undergraduate AAFTE	Graduates AAFTE	Total AAFTE
	Full-time	Part-time				
1	8,353	1,765	10,118	8,935	558	9,493
2	8,358	1,794	10,153	8,952	558	9,510
3	8,259	1,833	10,092	8,869	558	9.427
4	8,128	1,809	9,937	8,731	558	9,289
5	8,045	1,791	9,836	8,642	558	9,200

Table 2

Projection No. 2

Year	Freshmen pool	Policy factor	Freshmen full-time	Denied/ added	Transfer pool	Policy factor	Transfer full-time
1	1,504	0.975	1,466	38	956	1.000	956
2	1,444	0.975	1,408	36	942	1.000	942
3	1,354	0.975	1,320	34	929	1.000	929
4	1,304	1.000	1,304	0	919	1.000	919
5	1,314	1.000	1,314	0	919	1.000	919

Year	Denied/ added	Total new student	Freshmen part-time	Transfer part-time	C-R ratio	Continuing students full-time	Continuing students part-time
1	0	2,422	172	410	0.715	5,893	1,179
2	0	2,350	165	431	0.715	5,946	1,189
3	0	2,249	154	479	0.715	5,931	1,186
4	0	2,223	153	475	0.715	5,849	1,170
5	0	2,233	154	475	0.715	5,771	1,154

Year	Total		Undergraduate headcount	Undergraduate AAFTE	Graduates AAFTE	Total AAFTE
	Full-time	Part-time				
1	8,315	1,760	10,076	8,896	558	9,454
2	8,295	1,785	10,080	8,886	558	9,444
3	8,180	1,820	10,000	8,787	558	9,345
4	8,072	1,797	9,869	8,671	558	9,229
5	8,004	1,783	9,787	8,599	558	9,157

Table 3

Projection No. 3

Year	Freshmen pool	Policy factor	Freshmen full-time	Denied/ added	Transfer pool	Policy factor	Transfer full-time
1	1,504	0.975	1,466	38	956	0.950	908
2	1,444	0.975	1,408	36	942	0.950	895
3	1,354	0.975	1,320	34	929	0.950	883
4	1,304	1.000	1,434	-130	919	1.000	1,011
5	1,314	1.000	1,314	0	919	1.000	919

Year	Denied/ added	Total new student	Freshmen part-time	Transfer part-time	C-R ratio	Continuing students full-time	Continuing students part-time
1	48	2,375	172	390	0.715	5,893	1,179
2	47	2,303	165	431	0.715	5,911	1,182
3	46	2,203	154	479	0.715	5,873	1,175
4	-92	2,445	168	475	0.715	5,774	1,155
5	0	2,233	154	475	0.715	5,887	1,175

Year	Total			Undergraduate	Graduates	Total
	Full-time	Part-time	Undergraduate headcount	AAFTE	AAFTE	AAFTE
1	8,268	1,740	10,007	8,841	558	9,399
2	8,214	1,778	9,992	8,803	558	9,361
3	8,076	1,808	9,884	8,679	558	9,237
4	8,220	1,798	10,017	8,816	558	9,374
5	8,110	1,804	9,914	8,711	558	9,269

in the policy factor is usually the result of denying admission to the college. An increase could be the result of new programs, increased admission activity, or any activity that may positively effect enrollments. Figure 2 is a graphic representation of all three enrollment projections.

Currently our model operates with the following microcomputers and software packages:

Apple II	Visicalc
Digiac	Calcstar
IBM XT	Lotus 1-2-3

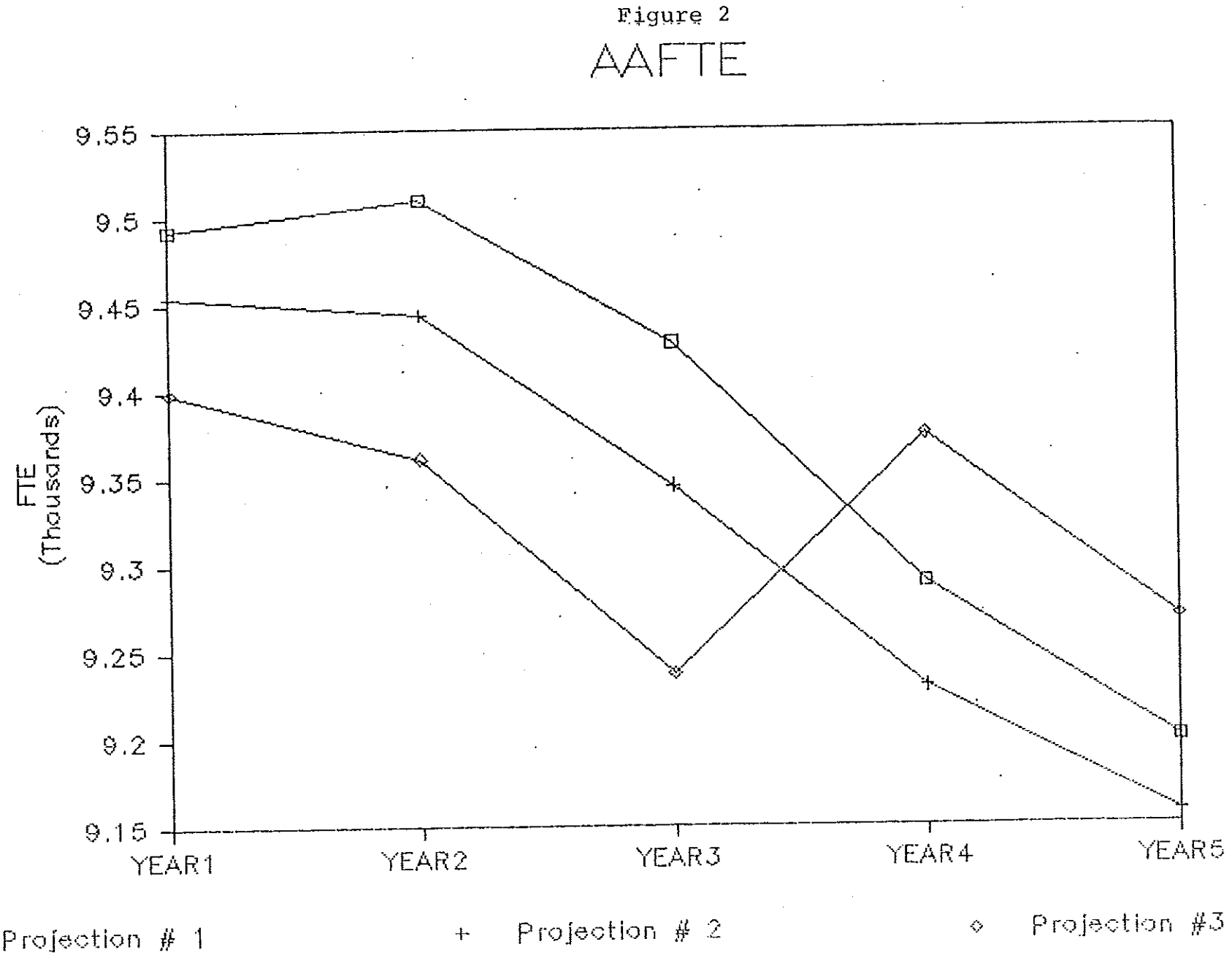
The charts and graphics shown here use the IBM XT version of the model.

Conclusion

The use of the enrollment projection model has been extremely beneficial to the college in its enrollment planning process. College administrators can now be informed much earlier for any potential enrollment problems; therefore, they can modify policies to alleviate these problems before they become critical. The model has also allowed the college to fine-tune its enrollments; enrollments can be managed within acceptable ranges of budgeted funds. But perhaps the most important aspect of the model is the process itself, because it has given administrators new insight into the dynamics of the enrollment function.

A more technical explanation of the model can be obtained by contacting either of the authors. The model itself is readily adaptable to private institutions for the purpose of revenue projections.

Figure 2


AAFTE
9.55
9.5
9.45
9.4
9.35
9.3
9.25
9.2
9.15
FTE
(Thousands)
YEAR1
YEAR2
YEAR3
YEAR4
YEAR5
Projection # 1
Projection # 2
Projection #3

MEASURING ATTITUDES TOWARD "IN-HOUSE" GIVING BY FACULTY, STAFF, AND ADMINISTRATORS

Michael J. Dooris, Carol L. Everett, and G. Gregory Lozier
Office of Planning and Analysis
The Pennsylvania State University

Introduction

The role of an effective institutional researcher should be to clarify issues and evaluate alternative courses of action facing a decision maker. At times this task is aided by the ability to provide information, but the primary focus should always be upon the decision to be made. This paper examines the process by which an institutional research office, involved in the unfamiliar area of university development and without benefit of a relevant data base, can make a significant contribution by helping to clarify the issues facing a decision maker.

Placing this process in the context of development is appropriate because, given the environment in which higher education operates today, many institutions are responding to fiscal pressures by intensifying fund-raising efforts. These efforts may require that institutional researchers increasingly assume new roles in the exploration and evaluation of alternative development strategies.

Statement of the Problem

In 1985, The Pennsylvania State University will initiate a five-year capital campaign designed to raise significantly the level of private support for the University. Penn State's development office believes that the degree of employee commitment, as perceived by prospective donors in the rate of in-house giving, can be a factor in the success of the campaign.

The rate of in-house giving, however, is currently low. Only 3% of Penn State's employees give annually through payroll deduction. (Because of data base limitation, the additional percentage giving through other vehicles such as alumni phonathons is unknown.) The development office therefore wants to increase the level of in-house giving preparatory to the 1985 capital campaign.

In May 1984, development officers approached the Office of Planning and Analysis with the suggestion that a mail or telephone survey be conducted to find ways to improve the level of employee support.

Rather than responding directly to this request, the discussion was directed toward defining the issues facing the development office. The relevant issue was eventually stated to be how Penn State's fund-raising strategies can be changed to increase in-house support.

An attempt to address this issue with a broad-based survey would have been costly and time-consuming. Also, mail or telephone surveys are inherently limited in their ability to identify issues beyond the scope of the questions. In addition, the Office of Planning and Analysis felt that the attention and chance of negative publicity could be potentially damaging to in-house development efforts. For these reasons, it was decided that a better alternative to identify the opportunities and constraints for in-house development strategies would be through a methodology known as focus groups.

Methodology

The Office of Planning and Analysis decided to conduct a series of one-hour focus groups (moderator-led discussions) to interview six to-eight each of Penn State's faculty members, staff, and administrators in order to examine employee attitudes toward contributing to the University's fund-raising efforts. Though focus groups are widely used in market research, the literature contains few references to their use in institutional or educational research. One exception is a study by Bers (1984) in which the researchers found that the focus group method, while not providing the quantitative results of a broad-based survey, would encourage interactive, spontaneous discussions that could provide valuable qualitative insights.

Participants were selected randomly from information provided by the Office of University Development which classified employees as previous givers and non givers. The research design specified that one-half of the members of a focus group be givers and one-half, nongivers.

Approximately 30 individuals in each group (executives and administrators, faculty, and exempt staff) were mailed letters describing the research project and informing them of a possible telephone call to confirm their participation in a focus group. The letter emphasized that individual responses and identities of the focus group participants would

remain confidential, and that only aggregate data from the three group sessions would be included in this report. The final number of participants for the three sessions totaled 19.

Information on in-house giving had been obtained by Penn State's development office from development officers at Syracuse University, the University of Georgia, the University of Missouri, and the University of Michigan Medical Campus. Based upon the insights gained from these universities--where attempts to solicit funds from employees had been quite successful--a focus group discussion outline was devised by the moderators to guide them in leading the group sessions. The outline was designed to elicit information with respect to the payroll deduction form, recognition of employee gift-giving by the university, organization of the appeal, the motivation to give, maintaining the anonymity of the giver, and related issues.

Results

Solicitation Form and Letter

The Penn State payroll deduction form was passed out for the participants' reactions. There was unanimous agreement among all participants in every focus group that the form was not effective because it was boring and too complicated.

Most participants liked the idea of payroll deduction, although administrators said they often donate through other means. Although the form provides a space for gift designation, there was a consensus that the form should also list specific gift-giving options. It was felt that examples of how previous donations had been used would be helpful. There was mixed reaction to having suggested contributions listed ($25, $50, $100) or a percent of salary specified.

A cover letter from the Vice President for Development which accompanied the payroll deduction form was distributed to faculty. There was agreement that a letter signed by anyone other than the Vice President for Development, who is viewed purely as a solicitor, would be better received. It was agreed that the status or image of whoever is soliciting is very important. Employees should have good feelings about the person who is asking for their money. Also, an employee appeal

should be generated at a personal level so the giver can identify with the cause; just being an employee is not sufficient reason to give. In the final analysis, employees have to believe they are getting some benefit from their donation and that they are giving to something they cherish and value.

The University's recognition of gift-giving. There was agreement among participants that the development office should provide better feedback to the University's employees about the use of their money. Some suggested mailing donors a bumper sticker, pin, or even a personal note thanking them for their gift. Several commented, however, that they would rather know their money was being spent on something more worthwhile than trinkets of recognition. There was no consensus on this issue, except that feedback of some sort was considered important. There was a consensus among all groups, however, that the gift-giving employee's anonymity should be maintained.

Invisible benefits. While discussing the image of the University, several individuals mentioned the many advantages of working for Penn State that employees take for granted. Not only is there a liberal vacation and benefits package, but there are many cultural opportunities and recreational facilities available at low cost or, in many cases, at no cost. Employees do appreciate such benefits, but they need to be reminded of them from time to time. Someone referred to this as a need to "sell the University."

The "class society." There was some feeling that individuals perceive themselves to be part of a specific class or group, such as clerical, staff, faculty, or administration. This orientation excludes most employees from a sense of belonging to the larger University community. The occasional insensitive handling (even if unintentional) of employee concerns by the administration was felt to reinforce this sense of a class society within the University.

Working is enough. One of the strongest themes to emerge during the focus groups was that some employees feel that working at the University is enough of a contribution to Penn State. Not only do individuals sometimes feel underpaid, but they feel that if they were

working in private industry they would not be solicited for contributions to their employer. The idea that "working here is a donation" was not limited to faculty and staff; all but one of the seven executive/administrators believed that this idea is commonly held among employees.

Advance preparation. Several employees felt that there has been insufficient advance preparation for previous in-house giving campaigns. Giving needs to be "sold" to employees through some sort of media exposure or personal contact, such as letters, before employees are confronted with a form to sign. This advance preparation must include a justification for the appeal. Why is it important that employees give to Penn State? In the past, the lack of such preparation has made it very easy to ignore appeals for employee contributions.

Priorities for contributions. The challenge facing the development office was summed up concisely by one staff member who stated that he must decide how to allocate his limited resources among many competing charities. Couched in various terms, this issue of competition among charities came up in every focus group. In general, it appears that most employees feel a giving responsibility and would like to support legitimate charities, usually including Penn State. However, for many, Penn State is not very high among their priorities. A successful employee appeal will need to advance Penn State's position on this priority list.

Use of specific goals. A clear consensus emerged regarding the use of specific goals for giving. Every group was near unanimity in stating that an employee fund-raising effort must provide specific goals. Individuals are less likely to contribute, in the words of one staff member, to an "amorphous university" than to contribute to the Ag Arena, a convocation center, Commonwealth Campus improvements, computer equipment, WPSX-TV, or a memorial scholarship honoring a late colleague. These are all examples suggested by participants; the expected effectiveness of such specific appeals, based upon this research, cannot be overstated.

Timing and the effect of pay raises. There were no strong conclusions about the best time of year to make an appeal. Spring probably was the most mentioned time among the focus groups. There were differences of opinion about how pay raises (normally announced in June) affect employee giving. Within the executive/administrator and faculty groups, everyone felt that the size of a salary increase would be the strongest factor in an individual's decision to contribute. However, within the staff group, there was feeling that giving is more emotional than logical. On this basis, it was argued that some individuals are likely to give (or not give) because of their disposition and how they feel about Penn State in general and not because of the size of their most recent salary increase.

Relationship to the Capital Campaign. As stated in the introduction to this paper, one impetus for this research was the belief that the upcoming Capital Campaign could be positively influenced by increased rates of employee contributions. However, this belief was not stressed by the focus group moderators in order to avoid biasing the research. Nonetheless, the possibility of using such a relationship as a powerful motivator was suggested by the research participants. One executive/administrator felt that the development office could very effectively say, in essence, "If you give us one dollar, we will be able to raise several more dollars externally."

Coordinating various appeals. The need for Penn State to coordinate the fund-raising efforts of its various units clearly emerged during the focus group discussions. The researchers had not anticipated the extent of this problem and did not plan to ask any questions about the need to coordinate appeals. However, the participants in both the staff and the faculty groups brought up the fact that they receive a variety of appeals from all over the University and that they resent the multiplicity of requests for contributions. It was the consensus of both groups that the "United Way approach" could be used effectively.

Telephone solicitation. It is fairly common practice for some units of Penn State to raise funds through telephone solicitations. Two staff

members stated that they dislike such solicitations. One related an incident in which she agreed to make a contribution and was then told that the college had hoped for a larger amount. She then decided that she would not contribute to that college's next fund-raiser.

Alma Mater conflicts. Faculty members in particular feel a conflict between the appeals of Penn State and their various alma maters. Often faculty members have attended two or three schools, and their spouses may have as well. The executive/administrator and staff groups did not seem to feel that this conflict was much different from the conflict among all the various appeals (schools, charities, churches) they receive.

Cost-effectiveness. At least one participant in each group raised the issue of the cost-effectiveness of the fund-raising effort. For example, what percentage of each contribution goes to pay for support activities and for publishing the Annual Report of Private Support? Given the low payroll deduction participation rate, is the employee fund-raising effort even paying its own way? These appear to be valid questions. Given the 1982-83 payroll deduction total of $33,000, it is not difficult to imagine that development office salaries and printing and mailing costs may exceed the return on the in-house giving campaign.

Conclusions and Recommendations

The role of the institutional researcher traditionally has been defined as one of examining information and processing it in such a way as to highlight problem areas and to illuminate several alternative courses of action for decision makers (Bacchetti, 1977). In its study of employee giving, the Office of Planning and Analysis focused first on clarifying the nature of the decision to be made and the research methodology to be used, and then on providing the information required to help make the decision. In short, the institutional researcher must not only accurately identify the problem and determine the appropriate means of analysis, but must assess the decision maker and tailor his or her response to both a specific task and a specific user (Chase, 1984).

After conducting the focus group research, the Office of Planning and Analysis prepared a paper and met with officers from both the Development Office and the Office of Public Information to discuss the

research findings. It was noted that any findings from this research must be tempered with the perhaps obvious caveat that the number of focus group participants is small relative to the number of University employees. With this caveat in mind, based on the issues that emerged during the focus group discussions, the following recommendations were offered to the Office of University Development for future in-house solicitation efforts. The Development Office and the Office of Public Information plan to implement most of these suggestions in the next employee giving campaign. This list is in priority order:

1. Improve the solicitation form and cover letter. The form needs to be more inviting, easier to read, and colorful. It also must provide options for gift designation. The cover letter should be made more personal if possible, and it should definitely not come from a development officer.
2. Provide specific goals for fund-raising. This includes providing options on the form but, beyond that, goals should be an integral part of the planning an publicity of the appeal.
3. Promote the appeal through adequate advance preparation. Let employees know that an appeal is coming and why it is important.
4. Publicize the relationship between rates of employee support and the expected success of the Capital Campaign.
5. Coordinate the various appeals to employees. The multiplicity of solicitations from various units within Penn State should be eliminated or at least reduced.
6. Provide feedback to givers. A personal thank-you note might be appropriate.
7. In general, the University must be better "sold" to its employees. This means handling employee concerns sensitively and also reminding employees of the benefits available at Penn State. A related consideration is the possibility of opening University facilities to human service groups on a break-even basis.
8. The development office should examine the cost-effectiveness of their own in-house solicitation efforts.

Regarding some other factors that the researchers initially thought might be relevant to employee giving, no strong conclusions were reached. For example, the focus groups came to no consensus on the effects of the size of salary increases. Similarly, no agreement emerged on the best time of year to make an appeal. Finally, there was no apparent stratification of attitudes among givers versus nongivers or administrators versus faculty versus staff. This does not, however, imply that no stratification would be found if a larger sample could be studied.

Comment on Methodology

Because this was the first research effort by the Office of Planning and Analysis using the focus group methodology, a brief closing comment on this experience is appropriate. The focus group method was selected in part to limit the expense and publicity associated with a more comprehensive survey (such as by mail or telephone), and it was successful in those regards. More importantly, the researchers saw a need for an interactive tool and elected to trade off the quantifiable results of a comprehensive survey for the qualitative insights possible in small group dialogue. Indeed, some completely unanticipated issues emerged as being quite relevant.

In summary, the methodology selected resulted in a depth and breadth of discussion that justified the method and which was quite useful for helping decision makers concerned with in-house giving by faculty, staff, and administrators. The impact of the recommendation from this research will be seen in the results of the 1984 employee giving campaign.

References

Bacchetti, R. F. In praise of good questions. In Carl R. Adams (Ed.), Appraising information needs of decision makers: New Directions for Institutional Research, 1977, 15, 11-18.

Bers, T. Focus groups in institutional research. Paper presented at Association for Institutional Research Forum, May 6-9, 1984, Fort Worth, Texas.

Chase, J. S. Analysis and presentation: Demise or salvation. Paper presented at Association for Institutional Research Forum, May 6-9, 1984, Fort Worth, Texas, pp. 21-23.

Loewenberg, F. M. Professional components in education for fundraising. New York: Council on Social Work Education, 1975.

AN ADVANCED ALUMNI/DEVELOPMENT INFORMATION SYSTEM

Robert Perrin
Office of University Affairs and Development
State University of New York at Albany

It is axiomatic that any organization engaged in fund-raising and institutional relations in a professional manner must have good records, not only for donor identification and performance, but also for financial accounting and research purposes.

Such record-keeping is of particular importance to college and university alumni programs. Colleges have an automatic addition to their alumni rolls each year, sometimes numbered in the thousands. A failure to secure appropriate information swiftly and accurately and to sow the seeds for maintaining contact quickly leads to a compounded problem over the years. What begins as a "captive audience" can rapidy become virtually unmanageable and result in lost opportunity.

Moreover, institutions need these names and records for more than just direct fund-raising. Student recruitment, for example, is extremely important to both public and private sector colleges, and activating alumni in this regard can be of immense value. Colleges also offer many on-campus programs of interest to alumni, such as continuing education, summer alumni colleges, regional seminars and career planning, as well as involving alumni in legislative relations, career advising for students, and in-class lecturing.

To fully tap this potential, colleges require not only names and addresses but much personal information as well.

Finally, more and more institutions, particularly in the public sector, are entering into or expanding nonalumni fund-raising. This usually is through campus-related foundations, although sometimes these activities are linked with alumni fund-raising for purposes of collection, investment, and disbursement of funds.

SUNY's Situation

These overall needs for a good information system are quite obvious and need no great elaboration. When we seek to respond to them through an institution such as the State University of New York, however, the situation becomes quite complicated.

SUNY is not one campus, nor even a handful. Nor is the system made up of generally like or comparable institutions. Rather, SUNY has 64 campuses, ranging from community colleges to full-scale research universities. In between are such anomalies as freestanding medical colleges, a maritime college, two-year technical schools, a college without walls, and even five units located on the campuses of two private universities.

Together, these 64 campuses graduate more than 55,000 students each year. In 1985, SUNY will reach an estimated total of one million living alumni, an event that will be the subject of a yearlong celebration. It also is an event that puts good record-keeping into the forefront.

In approaching alumni programming and fund-raising, most SUNY campuses operate under a number of obstacles. Some of the problem begins at the most basic level, with record systems that often fall far short of the job required. It has not been uncommon for the total alumni records of a campus to consist of a 3 by 5 card file, with the latest addresses those of the former students' parents. There is little effort to link alumni data with institutional research needs.

Additionally, while there are more than 50 campus-related foundations within the SUNY system, most have not had a record of aggressive fund-raising. Indeed, some have existed only to administer old bequests of student scholarship funds.

There has been another significant problem that has deterred forward movement, a problem that may be most peculiar to New York State and its interesting but complex history of public and private higher education.

That is entirely another story that I will not recite here, but what it comes down to is that SUNY campuses as a group have had very little experience with fund-raising. Until recently, they have had little

incentive, they have received little support and, finally, they have had difficulty in "educating" the state government with respect to the importance and role of philanthropy.

Unlike private institutions, which have full autonomy and unlike many public colleges and universities in other states where a strong tradition of fund-raising has been established, SUNY efforts have had little formal recognition from the state government.

It was not until 1977, in fact, that the state authorized our campuses to have alumni professionals on the state payroll, a solution that ended a great deal of "creative" job titling. But fund-raising or development were not even considered particularly desirable, unless, of course, such efforts could bring in funds to help offset state appropriations, a move that would have effectively destroyed any meaningful solicitation efforts.

The arrival of Dr. Clifton R. Wharton, Jr., in 1978 as SUNY's new Chancellor, however, began a remarkable change. Dr. Wharton soon established five major priorities for the SUNY system: research, public service, international programs, building the system's strength, and development.

When I joined SUNY Central Administration as Vice Chancellor just five years ago in 1979, I was the first person on the state payroll to have the word development in my title. My job was not only to help campuses strengthen their alumni programs and fund-raising activities, but also to try to "legitimize" development and give recognition to the long-term investment it can make in strengthening public higher education in New York.

I think we are on the right track. While far from the wondrous heights achieved by sister state universities in other states, SUNY campuses have more than doubled revenues received from the private sector over the past three years, from $9 million to about $18 million. And, a couple of years ago, we succeeded in convincing State government that development positions should be authorized on SUNY campuses, along with the right of the campuses to provide direct support to their foundations.

I recount these conditions and events as background for the discussion on the creation of the SUNY Alumni and Development Information System, or ADIS, as we call it.

It quickly became obvious that the lack of proper records was the biggest impediment to strong and effective alumni programming and development activities by SUNY campuses. Moreover, with another 55,000 or so graduates being added to the alumni rolls each year, the problem was rapidly becoming more acute.

Therefore, with permission of the Chancellor, we began the preliminary moves to establish a sophisticated, computerized record-keeping system for use within the SUNY system.

Because of the many unique aspects of the State University, our criteria for an effective system varied in considerable degree from what might be expected from a single-campus institution. Essentially, these were the factors that had to be considered:

1. The system must be adaptable for use by the individual campuses and not be a single SUNY-wide records program. Basic loyalties lie with a graduate's home campus and not with SUNY Central Administration. It would be politically and administratively impossible to operate such a program out of a single headquarters with a single set of records. However, the campuses, on request, may help the system meet its own information needs.

2. We wanted a state-of-the-art computer program, but it had to be usable on different types of computer hardware at various campuses. Someday, the hardware may become uniform throughout SUNY, but for the immediate future, various brands are in operation, and no single program can be used by all.

3. The system must be extensive and cover a wide range of record-keeping needs, but it must be flexible. It must permit campuses to use as much, or as little, of the data elements as they wish or are capable of accommodating.

4. Finally, there must be security, not only from unauthorized entry but also to ensure that each campus's records will not be misuses or mingled with those of another campus.

While we were not overly sanguine about finding an existing information program that met these criteria, it was believed advisable to investigate software programs in the use by other universities. Thus a team was sent to several states in 1980 to review such efforts. A conclusion was reached to purchase a program developed by Iowa State University to serve as the foundation for the SUNY ADIS program.

I should state here that what has finally emerged as ADIS bears little or no resemblance to the original Iowa State program. As it has been altered and improved by SUNY Computer Center and the Office of University Affairs and Development, ADIS is uniquely a SUNY program.

The next step, after selecting an initial software program as a preliminary model, was to assemble an advisory group from SUNY campuses to help define the key elements that should be included in the system. This committee continues to this day, now serving primarily as a user's group to judge the ongoing effectiveness of ADIS and to recommend necessary modifications as dictated by experience.

Finally, in the preparatory stages, we chose the State University Center at Binghamton as the pilot campus for the development of ADIS. Binghamton was selected because it had long expressed a keen interest in such a system and because it has the necessary sophisticated computer facilities and personnel.

The leading force in the program's development, however, was the SUNY Computer Center at SUNY Central Administration in Albany.

Elements of ADIS

The information system that has evolved from these efforts, which now span nearly four years, permit the entry of some 289 pieces of alumni information. In addition to the usual name and address and year of graduation, ADIS can be programmed to contain a number of other important data and services, such as:

Maiden name or other previous names
Undergraduate activities (such as clubs, sports, etc.)

Constituency codes to indicate academic program or major while a student

Degree or degrees earned

Current employment of graduate and spouse

Company codes to identify those participating in the matching gift program

Number, names, and ages of children

Spouse information, including education and employment

Legislative district resided in

Summary of contributions over past years

File-to-file transfers of information with other campus offices (such as the registrar, admissions, placement, etc.)

Additionally, ADIS provides for the entry of answers to personal and attitudinal questions that may be posed by a specific campus.

Information such as this can be cross-referenced in a number of ways and tapped by the alumni office to target all alumni or only specific segments. While all might be asked to support a new performing arts center, for example, only those who graduated from the business college might be solicited for funds to equip a special business library.

With the matching gift codes, alumni can be personally reminded that their company will match their gifts on one-to-one or two-to-one basis.

As children of alumni approach college age, the parents can be gently directed into thinking of the old alma mater as a good place to consider for their sons and daughters.

In other words, the more personal the appeal can be, no matter whether for fund-raising or volunteerism, the more likelihood there will be a favorable response by the recipient. A well-maintained information file will provide this personal approach, and it certainly beats the "Dear Alumnus/a" letter salutation.

It is obvious, of course, that any such information system is only as good as the data put into it. If all a campus wants to do is enter names and addresses, often of dubious currency, the campus will be missing about 98% of the value of ADIS. On the other hand, a campus may not feel in a position to utilize at once all the available alumni data elements that ADIS offers, and it may select those that meet its specific

needs. There is no "all or nothing" character to ADIS. Campuses can grow into it at their own speed.

In any event, we have drafted model alumni survey instruments, adapted to ADIS, that campuses may use to construct their own questionnaires.

Along with the alumni information elements, ADIS provides important assistance to overall development programs through an accounting system and a ledger system.

These systems record all gift and pledge transactions. Gifts are described by type, value, and purpose and can be aggregated into campaign summaries. Users can obtain a daily report or periodic summaries, and the contribution data is automatically referenced into the information part of ADIS.

Properly programmed, ADIS can produce personalized fund-raising and acknowledgment letters, receipts for contributions, alumni-dues billing, mailing labels, membership lists' pledge cards, special surveys, and campaign analyses.

The Alumni/Development Information System, therefore, is much more that alumni records. It is a comprehensive advancement program, providing a wide array of tools for imaginative alumni and development professionals to use in carrying out their tasks.

It is this comprehensiveness, and I really have only touched the surface in this description, that we believe makes ADIS unlike virtually any other system now in use.

Implementation

The preceding discussion has encapsulated a tremendous amount of hard work over a long period of time. I would not care to estimate the hours that have been spent in putting ADIS together, but, as with any advanced program, it has required steadfast dedication and perseverance to see it though, and it is not completed yet.

We are, however, finally at the point of actively encouraging campuses to participate in the ADIS program. The system currently is in place at four SUNY campuses, each of which was chosen to demonstrate a different application of the process.

At Binghamton, for example, the program has been installed on the campus's own IBM computer hardware. The segments have all been

tested and the program has been in operation for more than a year. In fact, we already are receiving modification recommendations from this experience. Binghamton also has the capacity in its computer to serve as "host" to other campuses with compatible equipment.

At the State University College at New Paltz, a different approach is being taken. Since that campus has a Burroughs mainframe that cannot accommodate the IBM program, New Paltz has chosen to use an IBM personal computer to tie into the IBM mainframe here at SUNY Central, where the data is being stored.

On the other hand, the State University College at Oneonta, also a Burrough campus, has chosen to rewrite the IBM program into Burroughs language so that it can use the on-campus equipment. When completed, Oneonta will make this translation available to any of the 15 other SUNY campuses that have Burrough equipment.

Monroe Community in Rochester is the first two-year campus to acquire ADIS, and it will utilize the program on its own IBM computer and be responsible for its maintenance.

Other campuses are exploring these methods to determine which may be the most appropriate for them, and we anticipate more coming on-line in the near future.

All campuses have agreed to share their experiences with the others, and we require that any who wish to modify the program do so only with the approval of Central Administration. The ADIS Advisory Committee will monitor the overall implementation.

Other Implications

It is difficult to predict all of the possible uses of the ADIS system to a particular campus or the SUNY system as a whole. Certainly, a great deal will depend upon how much of the system the campus chooses to utilize.

With respect to its intended use for alumni and development activities, we anticipate dramatic results, but the drama will be measured only over the passage of years. It will take a considerable period for the full potential to be realized.

As for institutional research, again there can be a vast storehouse of material for the researcher to tap, depending upon the quality and amount of the input.

Here at SUNY Central, for example, it may someday be possible for us to survey our campuses and determine the number of doctors and attorneys in the State who are SUNY graduates. We can track our graduates to various geographic areas of New York or to other states. The responses to attitudinal questions in the "free text" elements can offer guidance as to the graduates feelings toward their alma maters, the quality of the education they received, and the use to which they have put it.

Other campus offices, such as Admissions, Financial Aid, Personnel, Placement, and Public Relations, as I have noted, will find the data files produced by ADIS helpful in myriad ways.

Conclusion

ADIS represents a long-term investment by the State University of New York in behalf of its campuses. Maintaining and capitalizing on that investment, however, becomes the responsibility of the individual campus. Commitment and quality will be the key factors in realizing the potential of ADIS.

THE ROLE OF STUDENT OPINION SURVEYS IN CAMPUS PROBLEM SOLVING

Karl J. Beeler and William H. Weitzer
Office of Student Affairs Research and Evaluation
University of Massachusetts at Amherst

Larry G. Benedict
Office of Academic Support Services
University of Massachusetts at Amherst

This paper explores the role of student opinion surveys in campus problem solving, taking as its focus Project PULSE, a Gallup-type telephone polling system developed at the University of Massachusetts at Amherst in 1972. In the 12 years since its inception, Project PULSE has conducted nearly 200 surveys, contacting as many as 40,000 students. As a low-cost way to gather systematic and valid student input to the decision-making process, Project PULSE has become an integral part of program planning, evaluation, and even budgeting activities in the Division of Student Affairs.

It has been nearly a decade since Project PULSE was introduced to NEAIR colleagues at the 1975 Conference in New Haven (Benedict and Luciano, 1976). In the intervening period, Project PULSE has been so successful that the University of Massachusetts now has a full-scale Student Affairs Research and Evaluation Office (SAREO), with responsibilities for numerous other research thrusts. This follow-up paper focuses on the current structure of Project PULSE, actual case studies as they have been applied to decision making, and the relative strengths and limitations of campus polling.

Project PULSE: An Overview

History and Rationale

In 1972, following a period of turbulence at most American universities, it was apparent that the University of Massachusetts had no systematic method for collecting opinion data from and about students. Traditional methods of student input often failed to represent the opinions of "students in general." For example, Student Senate elections at that time drew only 25% of the students to the voting booth. Another vehicle

used for student input, the referendum, garnered only 1,000 or 2,000 votes from a student body of more than 20,000. And "advisory committees" on which one or two students sat were even less likely to represent general student opinion.

Seeking more representative data, the Associate Dean of Students conceived of the notion of starting a telephone information collection system. Project PULSE was designed to meet the need for a systematic, reliable, low-cost data collection technique. Now, more than a decade after its inception, Project PULSE surveys are conducted on a weekly basis and play a direct role in program evaluation, needs assessment, opinion studies, basic research, and special research. Examples of PULSE surveys in each of these areas appear later in the paper.

Functional Operations

Project PULSE is administered under the direction of SAERO's full-time professional staff. A graduate assistant serves as the operational Director, working an average of 20 hours per week. An undergraduate assistant fills the role of Assistant Director and works about 10 hours per week. SAREO's secretary contributes another 10-15 hours per week of clerical assistance. Approximately 15-20 undergraduate students work five hours each on survey nights.

At the beginning of each semester, the Student Employment Office posts advertisements for interviewers to conduct the weekly PULSE survey. Usually 25 students are hired, and nearly all of these are on the Federal College Work Study Program. These undergraduates are trained in telephone interviewing techniques by the Director and Assistant Director of Project PULSE, who monitor their performance during the semester to ensure a high quality of interview.

Project PULSE surveys are scheduled for as many Wednesday evenings as possible during the academic semester (15-20 times per year). Clients bring their needs to the PULSE Director, who works closely with them to clarify their research goals. If the client's research questions are suitable for Project PULSE, the Director then continues to work closely with the client in designing the actual survey instrument. The importance of PULSE's client relationships should be underscored. It is critical to the success of each survey that the final instrument

reflect the client's needs, be technically sound, and be appropriate for administration over the telephone.

Choosing the target population from which the client wants information is another important step. The scope, focus, and purpose of each survey determine whether the entire student population or just a specific subpopulation should be surveyed. Each week a random sample of the appropriate student population is selected by computer from the student statistical file maintained by the administrative Data Processing Center. The computer sampling program prints the student's name, current telephone number, and local address. The average sample size generated is about 1,000 students. Nearly 50% of each sample is contacted in a night, and over 90% of those contacted agree to be interviewed. Therefore, on a typical night, well over 300 students complete the entire phone survey.

During the survey each interviewer completes an answer sheet on each respondent. These data are transferred to optical scanning sheets for processing onto a magnetic tape, and the data are then analyzed using SPSS (Statistical Package for the Social Sciences). The client receives an item analysis for each question (frequencies, percentages) within a week of the survey date, and other statistical analyses (e.g., cross tabulations) are performed if needed. A summary report is then written by the Director and distributed to a mailing list that includes key student, faculty, and administrative groups. Copies of the summary are also sent to all of the survey respondents.

Costs

The major costs for conducting a Project PULSE survey are for personnel. At SAREO, the combined weekly expense for paying the Project PULSE Director (a graduate student on a research stipend), the undergraduate Assistant Director, clerical support, and student interviewers is about $500.

Other costs for phone service, running the computer random sample, processing scanning sheets, and computer time for data analyses can be spared or kept to a minimum by using existing university resources. Duplicating, printing, and general supplies (e.g., op-scan sheets) do not presently exceed $40 per survey. A detailed account of

the history, operations, and costs of Project PULSE is available from SAREO (Benedict and Weitzer, 1982).

Case Studies: Applications for Decision Making

The establishment of Project PULSE provided the Division of Student Affairs with an unprecedented opportunity for utilizing student opinion for problem solving. However, actually formulating the survey tool to have an impact on decision making has taken years of practice. Looking back over the surveys conducted during the last few years, it is clear that some prove more successful than others at linking data to problem solving. It is also apparent that there are different types of surveys that can be of value to decision making. Choosing among those surveys that were most successful, the following examples illustrate the value of five survey types to problem solving:

Program evaluation

Needs assessment

Opinion polling

Basic research

Special studies

Program Evaluation

Perhaps the most direct means of using student opinion surveys is in the realm of program evaluation. Where an organized and recognizable program exists, it is a relatively simple matter to design a brief questionnaire to ask students about their awareness of, use of, and satisfaction with the service. Developing items for a survey of this type is easier than for other types, since the students are being asked about their behavior concerning an existing program.

The Department of Public Safety at the University of Massachusetts employs a large number of students to staff the reception areas in the dormitories. A Project PULSE survey was designed to evaluate student opinions of this student security system. The results gave very high marks to the students' performance in signing in guests, checking to see that doors are locked, and checking for identification. Ratings of the student employees' effectiveness were less positive in preventing

unwanted nonresidents from entering the dorm and in dealing with intoxicated or unruly students. The Office of Housing Security used these results in decisions about their training and supervision of the student security staff.

The University of Massachusetts contracted with an outside vendor to sell advertising space in the Schedule Booklet used for pre-registration. Comments from students and staff concerning the appropriateness of the ads prompted a survey to measure student opinion. Slightly over one-half of the students said that the advertisements "at least somewhat" increased the difficulty of using the booklet. On the other hand, nearly one-quarter of the students reported that the advertisements were "at least somewhat" useful. This survey helped to confirm the administration's decision that the income from the advertisements was not worth the "cost" of their inclusion.

Needs Assessment

When a program or service does not exist, a needs assessment is a means for measuring the prospective use of that program by students. If the service is not organized or recognized by the students, formulating a survey is more difficult than in the previous examples. In particular, it is hard to get students to speculate on their use of a service and equally difficult to ask them to weigh the benefits of such a service against the costs (e.g., due to the reallocation of resources from another service or the increase in tuition or fees).

Academic advising is provided in a variety of locations across the campus. In a survey of students, items focusing on needs assessment determined in which of 13 areas students were most in need of advising. They reported that choosing courses in their majors, satisfying requirements, and discussing how academic activities relate to career possibilities were clearly the most important areas. These data were made available to the advising resources on campus to encourage advisers to provide help in these areas.

The Counseling and Career Development Services asked Project PULSE to do more than a program evaluation. They were interested in the importance to students of counseling and career issues and the best means for addressing student concerns for these areas. This survey provided information on students' needs in areas such as study skills

services (developing and maintaining study skills and conquering procrastination were most popular) and personal/interpersonal issues (developing meaningful relationships was the most pressing concern). Of great value were the data on student preferences for different means of addressing different types of concerns (e.g., one-to-one counseling for family conflicts and ongoing peer groups for study skills).

Opinion Polling

Surveying student opinion about current issues can be difficult. If questions are not worded correctly, they can easily bias the student responses. If there is a socially acceptable response, students may be less inclined to select a response that differs (particularly when they are being interviewed by students!). Furthermore, it is often the case that opinions about current issues cannot be readily applied to problem solving or decision making. Despite these limitations, this type of survey has been conducted with some success.

A recent academic year was declared The Year Toward Civility at the University of Massachusetts. Surveys of student opinion in the early part of the year and near the end of the year were designed to measure student opinions about issues such as racism, anti-Semitism, and sexism. In general, these issues were not reported as major problems by most students. However, the second survey found increased discussion of these issues both in and out of the classroom. While it is difficult to apply these findings in an evaluation of the "civility" effort, the opinion polling was quite useful in measuring the tone of student attitudes toward these important issues.

The success of the "civility" survey led to the development of an "anti-Semitism" survey. Very few students reported that anti-Semitism was discussed in their classes, and one-half of the students reported occasionally hearing anti-Semitic remarks or seening anti-Semitic graffiti. Due to the more specific nature of this opinion survey, the University's two anti-Semitism trainers were in a position to lobby and plan for increased efforts in this area.

Basic Research

Great care is necessary when conducting more rigorous research involving statistical comparisons among groups or over time. After years

of "practice" with program evaluation, needs assessment, and opinion polling, Project PULSE now conducts surveys which can be categorized as "basic research." As might be expected with research of this kind, while the findings are of theoretical interest, they may be less easily applicable to problem solving.

For over a decade, the University of Massachusetts has been a participant in the American Council on Education (ACE) Survey of entering freshmen. A telephone survey of a random sample of students allowed us to compare their responses with the responses given by the same cohort upon entering college. Notable changes were discovered in students' reasons for attending college (fewer agree that they are attending college in order to make more money), expectations about college (more students believe that they will earn a bachelor's degree, make a B average, and be satisfied with the University), and opinions about current issues (more students agree that students from disadvantaged backgrounds should be given preferential treatment in college admissions).

At many institutions minority students are difficult to poll because, when using random samples, they do not appear in sufficient numbers. An intensive effort to pool minorities about their residence hall experience was mounted in cooperation with minority-oriented academic programs at the University of Massachusetts. Data from this written survey were compared to a randomly sampled telephone survey to determine if there were differences between minorities and the general, largely majority, student body. The results indicated that there were differing responses between the two groups in areas such as feelings of safety in the dormitory, satisfaction with programs and services, and satisfaction with academic information. These findings were instructive in planning services for the minorities living in the residence halls.

Special Studies

Two final examples concern studies of special populations. In some cases Project PULSE is called upon to focus on an entire group rather than a random sample of undergraduates. Special studies are often born out of an immediate need to discover something about a special population. Therefore, these studies are often directly applicable to problem solving.

The subject of attrition is, for obvious reasons, a concern to most colleges and universities. Finding out why students leave the University

has always been problematic because they are difficult to locate and, once surveyed, may not be able to state accurately their reasons for leaving. Project PULSE was asked to survey the students who once dropped out, but have now returned to the University. Among the findings were: that leaves of absences were for short periods of time; that the most frequent reason for leaving was uncertainty about academic plans; and that most students worked while away from the University. Clearly this is a biased subset of those who leave, but the results can guide the decision makers on what are the preconditions to a successful return to the University.

Project PULSE moved beyond surveying current students to conduct a poll of prospective students. In particular, the University was interested in why a small group of prospective students paid a nonrefundable deposit and later decided not to come to campus. The survey revealed that most of the "no shows" decided to attend another college and that a variety of reasons were offered for choosing the alternative. The conclusion of the study was that no action could remedy the situation. There was no primary reason for this small group to be "no shows" due to the fact that they were going on to other institutions for a variety of good reasons. In other words, a survey designed to solve a problem resulted in data suggesting that the problem was minor and not solvable.

Strengths and Limitations of Campus Polling

Campus polling has been with the University of Massachusetts for more than 10 years now. During that time the staff has had a chance to work with and observe the results of numerous polls. Based on this extensive experience, the authors offer the following observations on the strengths and limitations of campus polling.

Strengths

The first strength can be understood by noting two general approaches to decision making. One is based on "conventional wisdom," while the other is based on "funded knowledge." Many people seem to think that because they work on a college campus and work with students, they are de facto experts on the student body, its individual and collective

needs, opinions, and attitudes. People share their information or knowledge by using phrases like "Everyone at Oshkosh U. knows that students . . ." or "I have worked as Dean for twenty years, and I can say that our students are . . ." and so on. Other terms such as "intuition" or "by the seat of the pants" or "the school of pious hope" can be used to describe decision making based on such information. "Conventional wisdom" is probably the best descriptor of this approach to decision making.

Many if not most of the readers or the decision makers they serve, spend a good deal of their professional lives making decisions based on conventional wisdom. A major strength of campus polling is that it fosters another approach to decision making, one based on "funded knowledge." It does this by providing to campus decision makers data that are timely, valid, and reliable. In the experience of the University of Massachusetts, decision making across a broad variety of categories, described earlier in this paper, has been improved by using funded knowledge instead of conventional wisdom.

A second strength--improved decision making--has actually evolved because of the existence of campus polling. As funded knowledge gathered by polling has contributed to the campus decision making process, it has generated an increased demand for decision making based on funded knowledge. In other words, data-based decision making has gained considerable respect, and its success encourages broader use of the process. Decision makers like having data available to inform their decisions. Not coincidentally, this improved decision making has fostered an environment in which funded knowledge is respected and used as an integral part of the planning and evaluation processes (Benedict et al., 1982).

A third major strength is that the polling system is relatively inexpensive. When added to the relatively rapid turnaround time for data gathering and the generally highly valid and reliable data gathered, polling emerges as a major cost-effective planning/decision making tool. The skeptics in the audience will want to raise the question, "Well, how many dollars do you save?" The answer at the University is that, to date, no detailed cost analyses have been done. "Well, then," will come the retort, "how do you know that your system is cost-effective?"

There are several ways to address this question. First, prior to the development of the campus centralized polling mechanism, data were often gathered in a number of offices throughout Student Affairs. Data gathering was decentralized; it was done without any guarantee of quality control; staff in various offices spent time and money in data gathering in a fashion that was seldom timely. By centralizing the function, the University realized a significant economy of scale. Most of the savings have been such that traditional cost-analytic methods would be extremely hard to apply. However, there is general agreement among University decision makers that:

1. Data gathered are done so in a more timely fashion
2. Because of the methodologies employed, the data are generally valid for the purposes at hand
3. An attitude toward data-based decision making has been reinforced as a result
4. The combined staff and support money to fund the program is less than those funds expended to fund decentralized activities

Finally, it has allowed Student Affairs to look divisionwide at its data needs and to set priorities among them, thus allowing more efficient allocation of resources to high-priority needs.

While there has been no attempt to attach a dollar figure to these benefits and savings, there is general agreement that polling is a cost-effective method of gathering data on campus. The authors believe that the other campuses which have adopted such mechanisms share these beliefs.

A fourth strength, which probably stems more from the organizational structure at the University than from any inherent characteristic of polling, is that polling is available to a wide variety of users on campus. In addition to the more traditional program users such as Housing Services or Academic Support Services, there are other users who might be referred to as "the little guys." "The little guys" at the University of Massachusetts include student groups like the Commuter Area Government, ad hoc committees such as the University Committee on Alcohol Use, or planning groups like the Arts Council. Regardless of their placement in the organizational structure, these groups and

individuals have decisions to make and have also learned that decision making is improved with data. However, without a polling structure in place, these people would have little hope of ever gathering the data they need. Thus a real benefit to the campus has been access for the "little guys" to a data-gathering process at very modest costs, as noted earlier.

By this time the reader is probably beginning to wonder if polling cures arthritis and rheumatism as well, since it has been given such glowing reviews here. However, rest assured Pollyanna did not write this report, and the authors do want to provide the audience with a full picture. As with all good things, there are some drawbacks, or limitations, to this approach; the paper now turns to them.

Limitations

The first limitation to highlight is that polling at best represents attitudes, opinions, or needs at only a single point in time. Polls are indicators only. They can be very powerful indicators, but the user must be aware of the weaknesses in a data set that is so temporal. Because a group of students had a particular need or set of needs two or three years ago or even a semester ago, does not mean the same holds true today.

The user and researcher must also look very carefully at the nature of the data being gathered since some kinds of data are more volatile than others. Political opinions are a good example of volatility; note how fast polling data has been changing in the last couple of months. Other types of data of course are less volatile (e.g, the respondent's class year or residence); and some data are stable (such as sex or date of birth).

Because of the temporal and often volatile nature of polling, the user must be quite knowledgeable, or have a trained researcher available to help interpret results. This would be particularly true of program evaluation or areas where budgetary and personnel decisions are involved.

Methodologically, telephone polls do not lend themselves to certain very sensitive topics. Questions about sex, drug and alcohol use, and finances are some examples of these. Once again the user may very well

want and need such data, but the user must heed this shortcoming of polling.

Face validity of any given poll can also be a drawback. Many decision makers, at least at the University, generally have no understanding of "randomness" and the power of random samples. The question is often raised, "Is this sample valid?" What the decision maker usually means by this question is, "Is the sample representative of our student body, or of that subpopulation being studied?" To these decisions makers, "more is better." They do not understand that a properly drawn sample of 300 students can represent a population of 17,000. Thus much repetitive time is spent explaining randomness and also at times defending the data against accusations that "the sample was not valid."

A fourth limitation is that polling does not make decisions. Decision makers who are afraid to make decisions or prefer to make them based solely on political reasons will not necessarily have their decision making improved simply because data exists. Data can improve decision making when you have good decision makers. Thus users, current or potential, should in no way assume that polling will automatically lead to improved decisions.

Conclusion

On balance, the University of Massachusetts finds campus polling to be a cost-effective research tool that has enhanced problem-solving and improved the campus attitude toward decision making. It is a system, the benefits of which far outweigh its limitations. The University has already had more than 10 years of positive experience with Project PULSE. It looks forward to another 10 productive and useful years.

References

Benedict, L. G., & Luciano, A. C. Project PULSE: A planning tool in a time of diminishing resources. Papers from the Second Annual Meeting of the North East Association for Institutional Research, 1976, 83-90.

Benedict, L. G., & Weitzer, W. H. Project PULSE: A campus assessment technique at the University of Massachusetts at Amherst (SAREO Technical Report No. 8). Student Affairs Research and Evaluation Office, University of Massachusetts at Amherst, Spring 1982.

Benedict, L., Fiutak, T., McMurray, U., & Weitzer, W. The Institutional Response to Student Life Research. Presentation at the National Conference of the National Association of Student Personnel Administrators, 1982.

MERGER/CLOSURE OF PUBLIC INSTITUTIONS: CRITERIA FOR REVIEW

Jennifer B. Presley
Connecticut Department of Higher Education
Hartford, Connecticut

Common agreement exists that during the next 15 years higher education in many states will face stable or declining enrollments. With the prospect of overcapacity comes pressure to reduce the number of institutions providing higher education services. Described here are criteria that Connecticut's new statewide coordinating board, the Board of Governors for Higher Education, has established to meet its responsibilities for reviewing the merger and closure of public institutions and an example of how these criteria were applied in a real case.

Background

In April 1983, Connecticut's new statewide coordinating board, the Board of Governors for Higher Education, took office. Among its responsibilities was the merger and closure of public institutions. The law creating the Board also prescribed that criteria with which to evaluate such decisions be developed. At its first meeting, the Board of Governors received a recommendation from the Board of Trustees of the University of Connecticut to close one of its two-year branches. Rather than acting immediately, the Board postponed its decision until appropriate criteria could be developed and then applied to the case in question.

The Criteria

The first task was to develop a set of criteria for reviewing public institutions for merger/closure. The objectives of the Board of Governors for Higher Education in reviewing an institution for merger/closure are to strengthen programs and enhance educational excellence, avoid unnecessary duplication, and promote the fullest and most cost-effective use of the state's resources in the provision of higher education. The purpose of the criteria is to ensure a comprehensive and rational analysis of the advantages and disadvantages

of a decision to merge or close. Work is ongoing across the country on the development of indicators to monitor institutional viability. It is important to understand that this is not the purpose of the criteria presented here. Rather, the criteria form a framework for review to be applied after an institution has been identified as a candidate for merger or closure. They encourage the consideration of qualitative as well as quantitative factors. The following nine criteria were adopted as statewide policy by the Board of Governors for Higher Education in November 1983, together with an administrative process that assures adequate opportunity for public comment.

Criterion 1: Institutional Profile

An analysis of current institutional characteristics is the first step in the review for the merger or closure of an institution. The profile of an institution covers trends in enrollment, student characteristics, student preparedness, staffing, finances, facilities utilization, program activity, and productivity. Where appropriate, comparisons are made with comparable institutions.

Criterion 2: Ability of Institution to Fulfill its Role and Mission

An institution's ability to fulfill its role and mission as affirmed by appropriate governing bodies is critical to the effective and efficient operation of the state system of higher education. Specific roles, missions and academic program offerings for each institution are instruments by which appropriate educational opportunities are provided while avoiding unnecessary program duplication. They are an institution's charter of educational responsibility.

Analysis centers on the institution's record in providing adequate breadth and depth of program offerings consistent with its approved role and mission. The analysis also includes an assessment of the ability of the institution to provide adequate student and academic support services, especially libraries, counseling, and special services.

Criterion 3: Impact of Merger/Closure on Instructional Programs

Merger or closure of institution(s) will affect the scope and quality of instructional programs at the institution under review and other institutions in the state and/or region. Consolidation and/or reallocation

of resources could strengthen existing programs and provide a wider array of programs and academic support services for students.

The analysis assesses the extent to which a decision to merge or close would improve or restrict the delivery of instructional programs and the effective utilization of available resources to best meet statewide needs. It includes an assessment of the potential for program improvement through the consolidation and/or reallocation of resources, elimination of program duplication, and utilization of faculty. The analysis also includes an assessment of the impact of alternative actions on the availability of needed programs within the region and whether programs serving a unique statewide purpose would be preserved

Criterion 4: Impact of Merger/Closure on Student Access

One of the goals of the state system of higher education is to provide access to a quality education for citizens of the state while avoiding unnecessary duplication of programs. Analysis under this criterion assesses the extent to which student access is dependent upon the institution and the extent to which students can reasonably take advantage of alternative educational opportunities. The analysis also considers the pattern of attendance of residents in the region, special characteristics of those students attending the institution under review, and transportation concerns. It assesses how merger/closure might affect the number of students enrolling as well as the potential for consolidated recruitment efforts.

Criterion 5: Impact of Merger/Closure on Facilities Utilization

The efficient and effective use of facilities is a goal of the state higher education system. Underutilization of facilities has cost implications while lack of space limits an institution's ability to provide needed instructional opportunities and support services.

The analysis examines the utilization of the physical plant, impact of loss of space to the system, potential fiscal impact, and any benefits, such as enhanced facilities, that would result from merger or closure.

Criterion 6: Impact of Merger/Closure on Administrative and Other Institutional Support Services

Administrative and other institutional support services are integral components of the statewide higher education system. The analysis considers the impact on costs and services that may occur from the consolidation of operations and staffing for services such as a computer center, administration and management, student services, facilities maintenance, and personnel.

Criterion 7: Impact of Merger/Closure on Staff

The analysis assesses the effect of merger/closure upon the faculty and staff of the institution and the potential for relocation of individuals, consistent with credentials and systemwide employment opportunities.

Criterion 8: Fiscal Impact of Merger/Closure

The analysis under this criterion combines the conclusions of each of the previous individual analyses to provide a comprehensive overview of the fiscal implications of merger/closure. It also considers short-term and longer-term costs or savings.

Criterion 9: Legal Issues

Recommendations for merger or closure must be cognizant of any legal constraints that may limit choices (e.g., collective bargaining agreements, prior funding agreements, and endowment requirements). Analysis under this criterion involves an explanation of existing legal conditions that would impact any merger or closure decision.

Application of the Criteria

After adoption by the Board of Governors for Higher Education in November 1983, the nine criteria were used as a framework to guide collection and analysis of data in the review of one of the University of Connecticut's two-year branches for possible closure. The following data were obtained from a number of sources:

Department of Higher Education's Data Base. Enrollment trends; student demographics; expenditures; facilities available; state and local enrollment patterns; statewide academic program inventory.

University's Office of Institutional Research. Student preparedness; enrollment by program; student retention and performance.

Director's Office, Branch Campus. Course offerings and enrollment; noncredit activity; library holdings; alternative plans of current students (survey); community organization utilization; staffing.

Other Institutions of Higher Education. Off-campus instruction in region (survey done by the Connecticut Department of Higher Education).

State Department of Education. Projected high school graduates.

Litchfield County Higher Education Committee (comprised of local residents from the area served by the branch). Local high school graduate enrollment patterns (survey); educational needs of region (survey of local businesses and citizenry).

Local Chamber of Commerce. Educational needs of region.

Connecticut Census Data Center and Connecticut Department of Labor. Demography and economy of region; educational attainment; employment.

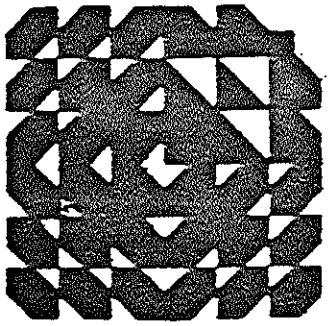
In addition, DHE staff consulted with the heads of institutions serving the region and with the Litchfield Committee. The Board of Governors held two public hearings, one prior to publication of The Torrington Report (1984), and one after publication, to allow for public comment. In January 1984, the Board of Governors voted to close the branch campus effective Fall 1985. The legislature did not act to overrule the decision. Litigation is in process to modify the terms of the endowment under which the branch was originally established. Local community advocates have filed a counterclaim in the case in an attempt to keep the branch open.

Conclusion

The criteria proved to be a useful framework for analysis that encouraged rational consideration of the issues involved in a decision to close an institution. The Torrington Report has withstood considerable public scrutiny without identification of analytical omissions. The associated process of hearings and meetings provided an avenue for assessment of political and local opinion. The Board of Governors' decision was thus the result of a process that drew together the rational and political components of decision making.

Reference

The Torrington Report. Hartford, Conn.: Department of Higher Education, 1984.



North East Association for Institutional Research

Eleventh Annual Conference

Americana Inn, Albany, New York

October 11-13, 1984

* * * * * THURSDAY, OCTOBER 11, 1984 * * * * *

1:30 - 4:30	Workshop: Inst. Compet. 8 King St.	Workshop: Comp. graphics 24 High St.	Workshop: In-box 26 + 30 High	Workshop: Survey research 22 High St.
3:00 - 5:00	Nat. Council for Rsch. & Planning -- 4 King St.			
5:00	Social hour -- King St. Courtyard			
6:00	Dinner and Keynote -- 2 and 4 King St.			
8:30	Social			

* * * * * FRIDAY, OCTOBER 12, 1984 * * * * *

8:30 - 10:00	Student finance 2 King St.	Planning studies 4 King St.	Student outcomes 6 King St.	
10:30 - 12:00	Student finance 2 King St.	Retention and attrition 4 King St.	Student outcomes 6 King St.	Community college 8 King St.
12:00 1:15	Luncheon with discussion tables -- Orange St. Courtyard			
1:30 - 2:30	Microcomputers and decision support -- 24 + 26 High St.			
2:45 - 3:45	Fin. aid & admissions 4 King St.	Micro. & DS: followup 24 High St.	Faculty concerns 6 King St.	In-box followup 26 + 30 High
4:00 - 5:00	Adm. & enroll. planning 2 King St.	Data-sharing & networking 24 High St.	Institutional research 4 King St.	Decis. supt. for enr. mgmt. 6 King St.
5:15	Business meeting -- 2,4,6 King St.			
6:15	Dinner (open)			
8:00 -	Micro. applications -- 24 + 26 High St.			

* * * * * SATURDAY, OCTOBER 13, 1984 * * * * *

8:30 - 10:00	National data definitions 7 Orange St.	Student outcomes 5 Orange St.	Plng. & mkt. research 1+3 Orange St.	Workshop: market research (advanced)
10:30 - 12:00	National data collection 7 Orange St.	Info. for problem-solving 4 King St.	Fund-raising 2 King St.	20 High St.

THURSDAY, OCTOBER 11, 1984

Time	Program	Location
10:00 AM - 5:00 PM	REGISTRATION	

11:30 AM - 1:00 PM — PRESIDENT'S LUNCHEON — 6 King St.

Steering Committee members, conference workers, and workshop presenters invited.

1:30 - 4:30 PM — WORKSHOPS

Institutional competition and drawing power — 8 King St.

Paul Wing, NY State Education Department

30 persons maximum.

This workshop will illustrate how generally available information can be used to better understand enrollment prospects of a campus. Handouts will be provided for some techniques; hands-on examples will be used for several.

Computer graphics — 24 High St.

Leah Hutten, Tufts University

15 persons maximum.

The purpose of this workshop is to introduce those who are somewhat knowledgeable about microcomputers to their capabilities for generating hard-copy black and white or color graphics; discussions of equipment, software, and costs will be included.

"In-box" Workshop for newcomers to the field — 26 + 30 High

Robert Grose, Amherst College

William Lauroesch, UMass, Amherst

Maximum enrollment 35, 15-18 in a session.

Handouts, separate work, then 60-90 minutes the next day.

Survey research for newcomers to the field — 22 High St.

Sidney S. Micek, Syracuse University

Linda Suskie, Millersville University

Maximum 15.

3:00 - 5:00 PM — SEMINAR — 4 King St.

Economic impact studies in community colleges.

G. Jeremiah Ryan, Monroe Community College

Presented by the National Council for Research and Planning, a council of the American Association of Community and Junior Colleges. Open to all NEAIR registrants. To be followed by a discussion of directions for NCRP for 1984-85 and beyond.

THURSDAY, OCTOBER 11, 1984

5:00 - 6:00 PM — SOCIAL HOUR — King St. Court

6:00 - 8:00 PM — DINNER AND KEYNOTE SPEECH — 2 + 4 King St.
Robert H. Zemsky, University of Pennsylvania

8:30 - 11:00 PM — SOCIAL HOUR
Cash bar; complimentary soft drinks.

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FRIDAY, OCTOBER 12, 1984

8:00 - 11:30 AM — REGISTRATION, continued

8:30 - 10:00 AM — STUDENT FINANCE — 2 King St.

Moderator: Judith Dozier Hackman, Yale University

Educational loans: a growing concern for students and for universities
Judith Dozier Hackman, Yale University
Donald McM. Routh, Yale University
Rena Cheskis, Yale University
Mark Jacox, Yale University
As tuitions rise, growing numbers of students are required to borrow increasing amounts of money to finance their education. The panel will draw on their studies of student and alumni borrowers at Yale, on loan projection models, and on non-Yale loan program information to discuss how institutions can develop manageable and fair loan programs.

8:30 - 10:00 AM — PLANNING STUDIES — 4 King St.

Moderator: Nancy Neville, Rochester Inst. of Technology

Structuring an articulation between the campus planning and budgeting processes: a case study.
Michael F. Middaugh, SUNY College of Technology
The planning process at the SUNY College of Technology has been fine-tuned and enhanced in light of a careful review of the literature on strategic planning in higher education. This paper presents a concise review of that literature and describes how it applies to policymaking at the college. A full organizational/structural analysis of the college's planning process is given.

FRIDAY, OCTOBER 12, 1984

8:30 - 10:00 AM — PLANNING STUDIES, continued — 4 King St.

Institutional planning as a participative process: a community college case study.
Alan J. Sturtz, South Central Community College
Planning in a small institution can be accomplished with a representative group discussing and defining the parameters (goals), individual units defining their own objectives, and management setting priorities for new personnel and the operating budget, the process updated annually with the Director of Institutional Research, Planning and Development as facilitator.

Merger/closure of public institutions: criteria for review.
Jennifer B. Presley, Connecticut Dept. of Higher Education
Criteria for evaluating public institutions for merger or closure were developed and then applied to the review of a branch campus of the University of Connecticut. The paper will describe the criteria and their application in the evaluation process.

8:30 - 10:00 AM — STUDENT OUTCOMES — 6 King St.

Moderator: Marjorie Rabb, Nassau Community College

Differences in academic skill development among freshmen, transfers and "native" juniors.
Patrick T. Terenzini, SUNY Albany
Thomas H. Wright, SUNY Albany
J. Fredericks Volkwein, SUNY Albany
Margaret C. King, Schenectady County Community College
This study sought to determine whether the academic impact traditionally associated with the freshman year is a function of academic programs and experiences or of the contrasts between the institutional setting of a college or university and the environment from which new students come.

2 + 2 = 4 -- Transfer articulation -- one year later
Thomas Fernandez, Nassau Community College, Moderator
Pauline Lichtenstein, Hofstra University
Barbran Smith, Nassau Community College
Carol Wurster, SUNY Old Westbury
Outcomes resulting from a cooperative venture between a community college, a four-year private and a four-year public institution, described in a panel at the 1983 conference, will be discussed. Each institution has expanded its data collection to include additional colleges. NCC has compared community college graduate and non-graduate data for various baccalaureate programs, while Hofstra and Old Westbury have included demographic data and comparison of transfer and native students.

10:00 - 10:30 AM — COFFEE BREAK

10:30 AM - 12:00 M STUDENT FINANCE 2 King St.

Co-chairs: Judith Dozier Hackman, Yale University
Donald McM. Routh, Yale University

Innovations in student financing: planning, programming, and evaluation.
Barbara Tornow, Brandeis University
James J. Scannell, Cornell University
Caroline Nisbet, Cornell University
Susan Blanchard, SUNY Central Administration
This panel will examine a variety of student financing innovations at institutions in the North East, including merit scholarships, alumni-initiated work fellowship programs, and parent loan programs. The participants will describe what these programs are, who participates, and why they were created. How analysis has or could be used to plan, monitor, and evaluate these and other similar pprograms will be a major focus of the discussion.

10:30 AM - 12:00 M ATTRITION AND RETENTION 4 King St.

Moderator: Diana Green, SUNY College, Plattsburgh

Applying theory to problem-solving in college student attrition and retention.
Victor M. H. Borden, UMass Amherst
Recent theories of attrition and retention have contributed new ways to look at this phenomenon. However, these theories have fallen short of providing strategies for meeting the retention challenge. Two research oriented retention strategies are reviewed using a "student engagement" model to focus on students' motivations for persisting in college.

Attrition report at a four-year independent institution.
Marilyn Poris, Marist College
External and internal attrition information, beyond demographics, was sought. The process employed included the best possible means to enable generalization regarding issues of concern. Issues were defined as areas of concentration, rationale for leaving, trend consistency, subsequent activity, and predictors. Uniqueness and commonality with other findings are discussed.

Exploring a model of attrition for the Regents External Degree Program.
Elizabeth Taylor, Regents External Degree Program
A model of attrition based on Tinto's (1975) model has been developed to explain attrition at the Regents External Degree Program. The program is unique in that it does not provide direct instruction or have a campus. The model reflects the academic experiences of an externally-based population.

10:30 AM - 12:00 M STUDENT OUTCOMES 6 King St.

Moderator: Kathleen Kopf, SUNY Central Administration

Then and now: a report on the ongoing study of the Amherst College class of 1959.
Robert F. Grose, Amherst College
An on-going longitudinal study of a complete class through college and 25 years will be presented. The relationships among pre-college measures, those obtained during college, and those from post-college years will be explored. Audience suggestions for the future course of the study will be solicited.

A comprehensive approach to outcomes studies: a second look.
Bayard Baylis, The King' College
Ronald Burwell, The King's College
A review of the second year of expanded data collection in a comprehensive student outcomes project. Report on senior testing and implications for curriculum review. Introduction of large scale data base on students, tracking retention and graduation, flagging key variables using SPSS analysis. Integration of student satisfaction survey into outcomes project.

10:30 AM - 12:00 M RESEARCH AND ACCREDITATION AT COMMUNITY COLLEGES 8 King St.

Moderator: Richard Parrish, Ocean County Community College

Faculty educational research can be done at the community college!
G. Jeremiah Ryan, Monroe Community College
Frank Paoni, Brookdale Community College
A Center for Educational Research was established at Brookdale to serve as a focus for special research projects. The Center encourages faculty and staff involved in graduate study to focus their research activities on topics related to and, if possible, located at Brookdale.

The program-by-program evaluation alternative for Middle States accreditation: a case study.
Larene Hoelole, Genesee Community College
Thomas Talbot, Genesee Community College
This paper will describe and assess an on-going experiment cooperatively conducted at Genesee Community College with Middle States. All the College's registered programs and administrative services will complete self-study reports and will be evaluated by external review teams, and this process will form the basis for the reaccreditation decision.

12:00 M - 1:15 PM LUNCHEON Orange St. Ct.

Disoussion topics at each table, including, but not limited to:

a. NEAIR and AIR: the relationship of regional organizations to AIR, and the future of AIR.
Lois E. Torrence, UCONN
Robert Gross, Amherst College
Both discussants were members of the Commission to Reassess the Purposes and Objectives of AIR, and will lead a disoussion of that group's recommendations, the changes in the nature of institutional research over the decade, and the relationships of regional and international groups to AIR.
b. Student finance
c. Market research
d. Miorocomputer applications
e. Student outcomes
f. Community and junior colleges
g. Others to be announced

1:30 - 2:30 PM MICROCOMPUTERS FOR DECISION SUPPORT, 24+26 High St.

William L. Tetlow, NCHEMS
Live demonstration of academic administration decision support programs developed using Lotus 1-2-3 as part of the NCHEMS Decision Support Systems Project. Applications involve enrollment modelling, faculty data-base development, and financial management.

2:45 - 3:45 PM FOLLOWUP SESSION, BEGINNER'S WORKSHOP 26+30 High St.

2:45 - 3:45 PM FINANCIAL AID AND ADMISSIONS 4 King St.

Moderator: Robert Lay, Boston College

Influential factors and sources of influence affecting college choice at Northern Essex Community College.
Richard Pastor, Northern Essex Community College.
A review of the influential factors and sources of information that students used in making their enrollment decision. The applicants are grouped by enrolled, not-enrolled, traditional, and not-traditional.

2:45 - 3:45 PM FINANCIAL AID AND ADMISSIONS, continued

The importance of financial aid in college choice.
Bonnie Newton, Boston College
Among financial aid applicants, the relative importance of financial aid is evaluated. Similarly factors important to non-financial aid applicants are identified and compared to factors identified for aid applicants. Possible generalizations about differences in college choice behavior are described; implications and suggested applications discussed.

An assessment of financial aid practices.
Nancy A. Willie, SUNY Albany
Alan P. Wagner, SUNY Albany
Postsecondary institutions exercise discretion over the allocation of a significant portion of funds available for student aid. As a first step in examining aid policies and strategies, this paper provides information about the volume and distribution of aid to students by selected groups of institutions.

2:45 - 3:45 PM FACULTY ISSUES 6 King St.

Moderator: John Kraus, University of New Hampshire

Evaluating artistic performance in Dance faculty promotion and tenure decisions.
Barbara Kays, SUNY Brockport
Jill F. Campbell, SUNY Brockport
Louis M. Spiro, SUNY Brockport
This preliminary study examines the use of artistic performance evaluations in dance faculty promotion and tenure decisions. Where evaluations exist, there are some similarities in faculty and outside artist roles. This analysis could be expanded to all fine and performing arts to examine these similarities and their impacts on the decision-making process.

Part-time faculty employment and compensation models: a regional comparative study of the practices and plans at 40 institutions.
Larry W. Hetzger, Ithaca College
Deborah Olsen, Ithaca College
Comparative analysis of institutional practices for employment and compensation of part-time faculty, identifying principal market characteristics which differentiate employment models; provides comparative information on use, procedures for search and hire, salary levels, fringe benefits, titles, evaluation and promotion; summarizes executive plans annd perspectives of future changes to current practices.

2:45 - 3:45 PM FACULTY ISSUES, continued

Policy making through faculty collective bargaining: an information-based approach to negotiating.
William E. Campbell, Montgomery College
Frank J. Tusa, Montgomery College
This paper discussed the information-based approach used at one college to develop policy directions and to support management positions on major issues during the course of negotiating a first faculty collective bargaining agreement. The process used to develop negotiating positions is explained and examples of information collected are provided.

2:45 - 3:45 PM MICROCOMPUTERS AND DECISION SUPPORT: FOLLOWUP 24 High St.

Microcomputers and decision support
William L. Tetlow, NCHEMS
Edward Delaney, Southern Connecticut State University
Yvonne Freccaro and Tom Abdella, Smith College
Sr. Marie Genevieve Love, Mt. St. Mary's College
A followup discussion of the value and application of the NCHEMS models for decision support, with comments by institutions serving as pilots for the system.

3:45 - 4:00 PM COFFEE BREAK

4:00 - 5:00 PM ADMISSIONS AND ENROLLMENT PLANNING 2 King St.

Moderator: Anthony Lolli, Cornell University

Modifying admissions office strategies using student choice predictions.
Ronald Perry, Northeastern University
David Rumpf, Northeastern University
A method which successfully predicts over seventy percent of the matriculation decisions for accepted students will be presented. Discussion will concentrate on model stability over time, relative importance of factors versus types of competitive schools, and strategic implications for the Admissions Office.

Forecasting enrollment; simulation via the microcomputer
Richard Wiesen, SUNY Buffalo
Stan Medinac, SUNY Buffalo
Enrollment planning models provide data that enable administrators to make informed decisions on staffing, institutional mission, space requirements and other matters pertaining to strategic planning. The advent of microcomputers and user-friendly software packages has given institutional research officers the opportunity to develop their own enrollment models. This paper describes the evolution of one such model.

4:00 - 5:00 PM INSTITUTIONAL RESEARCH 4 King St.

Moderator: Richard Heck, Colgate University

The role of institutional research: a cornerstone of management or a loose pebble?
Jill F. Campbell, SUNY Brockport
Edward F. Delaney, Jr., Southern Connecticut State University
Michael F. Middaugh, SUNY College of Technology
Louis M. Spiro, SUNY Brockport
Higher education has changed dramatically in the 1980's and institutional researchers must adopt new roles to aid management in decision-making. Three new areas are examined in this panel: an overview of traditional roles and emerging functions; increasing the impact of research on executive management; and developing informal networks.

4:00 - 5:00 PM DATA-SHARING AND NETWORKING 24 High St.

Moderator: Larry Litten, COFHE

Institutional data-sharing: an on-line demonstration
Daniel A. Updegrove, EDUCOM
Leah R. Hutten, Tufts University
John A. Dunn, Jr. Tufts University
Previous presentations at NEAIR, AIR and elsewhere have described the Tufts/EDUCOM data-sharing system. This presentation will feature an on-line demonstration of the micro-computer version, with file transfer to and from a remote mainframe computer data-bank.

Electronic Mail and networks: new developments
Daniel A. Updegrove, EDUCOM
Both intra-campus and inter-campus electronic mail networks represent powerful new tools for institutional researchers and planners. Gateways between academic networks now provide access to hundreds of colleges and universities in the U. S. and abroad. Case studies, current status, and likely future developments will be discussed.

FRIDAY, OCTOBER 12, 1984, continued

4:00 - 5:00 PM — DECISION SUPPORT FOR ENROLLMENT MANAGEMENT — 6 King St.

Designing a decision-support system for enrollment management.
Robert H. Glover, University of Hartford
Over the next two decades, effective enrollment management is going to be critical to the future of tuition/enrollment dependent colleges and universities, especially in states where the number of high school graduates is expected to decline by 30-40%. This paper outlines the conceptual framework, design, and implementation plan for building a decision support system (DSS) for enrollment management at the college level in a private comprehensive university.

5:15 - 6:15 PM — BUSINESS MEETING — 2+4+6 King St.

6:15 - on — DINNER (open)

8:00 - 9:30 PM — TECHNOLOGY APPLICATIONS: MICROCOMPUTERS AND BEYOND — 24+26 High St.

An opportunity for users to demonstrate interesting uses and applications they have developed, and to exchange techniques and equipment information. To include, but not be limited to:

a. An introduction to Lotus 1-2-3 and dBase II.
Laurie Webster-Saft, SUNY Albany
This presentation is intended for microcomputing novices and those thinking about using either Lotus 1-2-3 or dBase II. A software overview, microcomputer requirements, general advice, necessary documentation, and related products and aids will be presented.

b. A demonstration of the use of SCSS and SPSS-PC
Julie Wakstein, Boston College
The demonstration will include how to use SCSS, an interactive statistical package which runs on a mainframe, through the use of slides and a computer terminal. Emphasis will be on its application as a decision support system.

c. Computer graphics
Leah R. Hutten, Tufts University
Discussion and demonstration of microcomputer graphics capabilities.

d. Microcomputers and decision support
Edward Delaney, Southern Connecticut State University
Tom Abdella, Smith College
Demonstrations of the NCHEMS decision support models, and of adaptions and further developments by pilot users.

SATURDAY, OCTOBER 13, 1984

7:15 - 8:30 AM — OFFICERS' BREAKFAST
Incoming and outgoing officers and steering committee members are invited.

8:30 AM - 12:00 M — WORKSHOP — 20 High St.

Academic market research for the advanced practitioner
Robert Lay, Boston College
David Bradley, Marketing Corporation of America
Larry Litten, COFHE
Maximum 15 persons
(1) to discuss the organizational conditions necessary for doing effective marketing research and (2) review and give examples of data gathering and analytic techniques that have proven useful in the support of marketing efforts in a variety of institutional settings.

8:30 - 10:00 AM — NATIONAL DATA DEFINITION EFFORTS — 7 Orange St.

Moderator: Sidney S. Micek, Syracuse University

Data bases for accreditation
Presenter: Dennis Jones, NCHEMS
Reactors: Patrick T. Terenzini, SUNY Albany
Robert W. Gailey, Western New England College
A report and critique on the work of the Council on Postsecondary Accreditation and NCHEMS to establish data definitions proposed for use by all postsecondary accrediting associations.

8:30 - 10:00 AM — STUDENT OUTCOMES — 5 Orange St.

Moderator: Jean Morlock, SUNY Plattsburgh

The quality of college student experience: an evaluation of the Pace questionnaire.
Robert F. Grose, Amherst College
A promising inventory developed by C. Robert Pace allows college students to describe the quality of their efforts in college, their ratings of the college environment and the gains they made in college (outcomes). Five years experience with the scale are reported along with an appraisal for institutional research.

8:30 - 10:00 AM STUDENT OUTCOMES, continued

Evaluating special academic programs: the case of a residential college.
Norman D. Aitken, UMass Amherst
Special academic programs include a variety of academic support services which are administered outside of the academic departments. Academic counseling centers, academic skill centers, internship and honors programs and residential colleges are examples. The paper will examine the methodological issues involved in the evaluation of special academic programs and will present the empirical results of an extensive evaluation of a residential college program at a large state university.

Methodological issues in studying academic performance of student athletes.
Pamela J. Roelfs, University of Connecticut
How can colleges examine the academic retention and success of students participating in intercollegiate athletics and of freshmen athletes subject to the new NCAA standards on minimum grade point average and SAT/ACT scores? Some of the problems and methodological alternatives are discussed.

Quality of teacher education graduates from a public four-year college.
Linda A. Suskie, Millersville University of Pennsylvania
Mark A. Eckstein, SUNY Oswego
To determine if graduates of teacher education programs differ significantly from their liberal arts colleagues in terms of various measures of high school background and college performance, samples of each were compared. Elementary and secondary education graduates did not differ significantly from liberal arts graduates in similar programs.

8:30 - 10:00 AM PLANNING AND MARKET RESEARCH 1+3 Orange St.

Moderator: Michael Middaugh, SUNY College of Technology at Utica/Rome

From ad hoc to hard rock: a case study of planning and research at Mercy College.
Darryl Bullock, Mercy College
This presentation will explore the strategies and consequences of developing a comprehensive planning effort at an institution which grew from 1500 to 9500 students between 1972 and 1983 in a competitive urban area. Included among the topics to be discussed are faculty allocation and the budget process; market research; program development and evaluation; institutional elasticity; and the emergence of IR as a legitimate campus function.

8:30 - 10:00 AM PLANNING AND MARKET RESEARCH, continued

Part-time student market research
Edward L. Delaney, Southern Connecticut State University
This paper presents a market research methodology which profiles the part-time student market segments of a university among competing higher education providers in the region. Discussion will focus on the use of research findings for tuition pricing policies and the generalization of the approach to other institutions.

10:00 - 10:30 AM Coffee break

10:30 AM - 12:00 M NATIONAL DATA COLLECTION EFFORTS 1+3 Orange St.

Presentation of the new NCES HEGIS pilot study forms.
David Bowering, Science Management Corp.
Michael Colella, Science Management Corp.
Marilynn Draxl, Univ. of Maryland
Description and samples of the new NCES HEGIS forms being tried out by pilot institutions this year. The focus will be on what is different about these forms from present HEGIS requirements. Copies of pilot forms will be available to all attendees.

10:30 AM - 12:00 M FUND-RAISING 2 King St.

Moderator: Louis M. Spiro, SUNY Brockport

Measuring attitudes toward "in-house" giving by university faculty, staff, and administrators.
Michael J. Dooris, Penn State University
Carol L. Everett, Penn State University
G. Gregory Lozier, Penn State University
Penn State University is striving to re-define its in-house fund-raising objectives and strategies. A series of focus groups was conducted to interview employees about their attitudes toward contributing to the university. Results will be used in desigining future appeals and to determine the relationship of in-house fund-raising to an upcoming capital campaign.

Comparative fund-raising performance over time
John A. Dunn, Jr., Tufts University
Fund-raising performances of 35 private colleges and universities over a ten-year period are studied to assess comparative performance and the ability of the group as a whole to increase private support in pace with inflation and operating budgets.

A new alumni/development information system at SUNY
Robert Perrin, SUNY Central Administration
This paper will describe the creation of an alumni/development system for a 64-campus state university.

10:30 AM - 12:00 M INFORMATION FOR PROBLEM SOLVING 4 King St.

Moderator:

The role of student opinion surveys in campus problem-solving.
Larry Benedict, UMass
William Weitzer, UMass
Karl Beeler, UMass
If properly understood and carefully conducted, student opinion polls can be of great value to campus problem-solving. A decade of experience at UMass with a telephone survey of students forms the basis for a paper on the advantages, limitations and appropriate uses of research of this kind.

Making information useful for problem-solving.
Charles McClintock, Cornell University
Charles Nocera, Cornell University
In this study, the usefulness of information was found to be influenced by (1) whether it was gathered formally or informally, (2) type and strength of information needs, and (3) program uncertainties. Institutional researchers can be more sensitive to these influences when providing information for problem solving.

Assessing institutional performance: dealing with the liabilities.
Sidney S. Micek, Syracuse University
For many, assessing institutional performance evokes positive sensations regarding rational management and effective responses to accountability demands. Yet, the process of institutional performance assessment carries with it potential liabilities, and warrants careful consideration. This paper describes the political, methodological, economic, and philosophical cautions that should be considered, and suggests strategies for effectively dealing with these issues.