The Assessment of Student Retention Programs

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Effective evaluation designs are marked by four distinct steps; Question Formation, Data Planning, Data Collection, and Information Utilization. Each is comprised of a series of questions and related tasks that must be completed before proceeding to the next step in the evaluation process (Figure 1). In all cases, the overall quality of an evaluation design depends on the quality of each step. No matter how sophisticated, no design is stronger than its weakest link.

Question Formation

The first step in the development of an effective evaluation design is that of question formation. At the very outset, it is important that you are clear as to the question or questions that the evaluation process is intended to answer. This is the case because the character of subsequent decisions will invariably reflect the specific nature of the question(s) asked.

Most evaluation designs focus on one or more of three possible questions, namely questions of description, explanation, and improvement.

Questions of description concern themselves with ascertaining facts about the rate and distribution of student attrition on campus. That is to say they ask not only about the overall incidence of attrition but also about the specific attributes of who leaves and who stays. Questions of explanation concern themselves with the determination of the causes of student attrition. They inquire about the specific types of student experiences which lead different types of students to leave prior to degree completion. Finally, questions of improvement ask about the impact of different policies on student retention. They ask about gains in retention and changes in student behavior arising from the implementation of specific programs or institutional policies.

Though each question is distinct they are necessarily linked in the formulation of retention policy. This is the case because questions of improvement invariably require some sense of both the character and causes of retention on campus. It is for this reason that institutions will often ask all three questions as they proceed to formalize programs to enhance student retention on campus.

There are, of course, a great many specific questions institutions can ask about student retention, whether descriptive, explanatory, or improvement. The trick is to know what questions are essential and what are peripheral to an effective evaluation design. Fortunately, the research on the causes of attrition and the functioning of effective student retention programs provides us with a useful guide to the sorts of questions institutions must

ask of themselves as they move to evaluate and improve their retention efforts.

These questions fall into three areas of inquiry. First, institutions must inquire about the character of student-faculty contact on campus. They must discern the degree and quality of interactions as they occur both inside and outside the classroom and must ascertain how those interactions vary among students of different attributes. Second, institutions must gauge the degree and manner in which students perceive the institution and its various representatives as being committed to serving their needs and interests. Third, institutions must assess the quality of student educational experience, especially in the critical first year, and the manner in which that experience, together with student attributes, shape learning outcomes. They must determine to what degree students have become involved with and benefitted from the educational program of the institution.

Planning Process

What Information is Needed

After deciding on the question to be answered, institutions must decide on what information they need to answer the question posed. Typically, this requires institutions to collect a variety of data on student attributes, abilities, goals, commitments, and pre-entry expectations, on the character of student social and academic experiences within the institution, and on a range of educational outcomes such as measured by achievement tests, student satisfactions and intention to remain in college.

Regarding student experiences, it is important that data be collected not only on the formal attributes of student participation and progress (e.g. grades, credit hours, and achievement tests), but also on the informal dimensions of student contact with other members of the institution, especially the faculty and staff, both inside and outside the formal domains of the institution. When collected, it is equally important that those data contain subjective as well as objective information about student experiences. That is, they should include valid indicators of student views of their own experiences and of the institution in which they are enrolled. Especially important are student perceptions and evaluations of the quality of educational experiences and progress since enrolling. Least we forget, education, not retention, is the point of retention programs. Quality educational experiences are the foundation of student retention, dissatisfying experience the source of student leaving.

Why is Information Needed

To be effective and efficient, the selection of information must be guided by a clear understanding of why each piece of information is needed. If questions of description are involved, institutions must be clear about the sorts of data they need to adequately describe the entry, progress, and eventual completion or departure of students. In this case, the needs of different parts of the institution may come into play in determining what information is collected. Some descriptive information may be needed because particular programs or offices (e.g. Guidance and Counseling) require that information for effective operation.

If questions of explanation are of concern, institutions should be able to document how particular items of information are likely to be causally linked to student educational achievement and retention (Braxton, Duster, and Pascarella, 1988). It is for this reason that current theories and research on college student leaving (Tinto, 1987) are so useful for they help institutions identify the sorts of information they need to pinpoint the sources of student attrition. It is also for this reason that institutions are now focusing on the character of student social and

academic experiences in the college, especially with the faculty both inside and outside the classroom. Classroom experiences and contact with faculty, especially in the first year, prove to be the two most important predictors of student success.

If questions of improvement are the object of evaluation, institutions must be clear not only about the outcomes that are the intended goals of the program to be evaluate, but also the student and institutional factors which must be "controlled" or "contrasted" in order to document program impact. For evaluation to be effective, the institution must obtain information that enables it to distinguish between those outcomes that are a reflection of the students served from those that mirror the impact of the program upon those students.

Data Collection

The collection of data requires a variety of decisions as to who will collect information, where and when the information is the be collected, and what methods are to be employed to collect information.

Who Obtains Information

The first step in the data collection process involves the decision about who shall collect what information. Though such decisions are normally determined by the availability of appropriately trained staff, institutions must be sensitive to the possible impact personal and organizational attributes may have upon the quality of the data collected. The most obvious concern involves the willingness of students to speak freely and honestly to institutional representatives who may be more concerned about institutional welfare than student welfare. It is for this reason that some institutions call in outside evaluators to carry out part of an evaluation design and/or employ trained students to interview other students on campus.

Where Information is Collected

The issue of where data collection is to be carried out is not unlike the issue of who will collect the information. Beyond the pragmatic question of available facilities, one has to consider how the setting of data collection effects the quality of information obtained. Though interviewing students in staff offices may be easier, interviewing students on their own "turf", that is in student lounges, cafeterias, or dormitories, may lead to more valid data. Similarly, though mailed survey questionnaires may be more time and cost efficient, it may not yield either as high a response rate or as representative a response pattern as may calling students directly or distributing questionnaires to pre-selected classrooms in which large numbers of students may be found.

When is Information Collected

Evaluation of student retention requires information to be collected at a variety of times over the course of the student college career. This is especially true for questions of explanation and improvement since those questions require the ability to trace out how experiences at one point in time lead to different types of student outcomes at later points in time. Typically this requires institutions to collect information at some point prior to entry, during the first year, at the end of the first year, and at some later point at or close to completion or departure.

Rather than begin data collection with the start of the academic year, it is preferable, in these instances, that evaluation be initiated prior to students' entry into the institution. The point of doing so is three fold. First, it enables officials to identify early expressions of student concerns and needs before they arrive on campus. And it does so early enough to be of practical value. The early collection of student data gives the institution the ability to target institutional services for new students as soon

as they arrive on campus. In that manner institutions may be able to address potential problems before they become actual problems. Second, it enables the institution to accurately measure the important variable student expectations about college life untainted by early exposure to the institution. Third, pre-entry data collection also makes possible the unambiguous separation of the effect of pre-entry attributes upon retention from those effects which arise after entry from individual experiences within the college environment. It allows the institution to more carefully distinguish between what students contribute to the process of institutional departure and that which the institution in interaction with students may do to induce students to leave. In so doing, evaluation can furnish the types of information needed for the development of selective rather than general policies for enhanced student retention.

Ideally data should be obtained, via questionnaire and, where possible from interviews of selected subsamples of students, from all or a representative random sample of those who either apply for admission and/or who are accepted for entry. The collection of data from all applicants, as opposed to all admitted students, permits the institution to study the nature of the college marketplace and the demand therein for its services relative to other institutions. Equally important, it provides the institution with capacity to carry out "lost inquiry" applicant studies, Together such determinations enable the institution to monitor the manner in which the demand for its services is influenced by its own actions and those of competing educational opportunities.

The capacity is achieve, however, at a price. The one serious constraint to pre-admission data is that in posing questions to individuals during the process of application for admission and often for financial aid, one may illicit only that information which the applicants deem best suited to their being admitted to the institution and being given financial aid. Individual fears, doubts and concerns about making the transition to college may therefore go unexpressed for fear of not being admitted and/or of not receiving financial aid. Though there are steps one can take to deal with this potential distortion of data, they cannot entirely eliminate the possibility of obtaining somewhat misleading information about student views and attributes. For that reason a number of institutions limit pre-entry data collection to those persons who have already been accepted for admission and carry out separate studies of the academic marketplace.

But even at this point in time, data collection may have the desirable consequence of increasing the "conversion ratio" of admitted students (i.e. increasing the proportion of admitted students who enroll). It may do so by conveying to potential students the sense that the institution cares enough about its students to ask about their needs and concerns.

Beyond the point of entry, information must also be obtained on the changing character of student experiences within the institution following entry. Explanatory evaluations of attrition must be sensitive to the critical early stages of separation, transition, and incorporation which mark the typical college career. Particularly important to the process of departure are the stages of separation and transition to college. These are normally experienced very early in the student career, typically during the first semester and year of college life, as students attempt to adjust to the new academic and social life of the college. For that reason more emphasis should be placed on the collection of information about the quality of student experiences during the early, rather than later, stages of their association with the institution. As in the case of pre-entry data, early data collection leaves open the opportunity that actions can be taken to remedy problems before they leave to student withdrawal.

The same principle applies to the evaluation of freshman year courses. Though most evaluations are content to collect pre and post-course data, a better strategy is to collect additional data during the course especially during the first two weeks of the course and later during its later stages. The point of doing so is to allow the instructor to how different experiences within the course lead to varying levels of course achievement as measured in outcome data.

Retention evaluation designs also should seek to obtain data from those students who intend to leave and/or have already left the institution either through graduation or withdrawal. Exit interviewing of current leavers and/or follow-up interviews with recent leavers may prove to be particularly useful. They often reveal important information not easily obtained during the course of the student career as to the existence of recurring problems students faced in attempting to meet the academic and social demands of the college. Persons who have already left or are in the process of leaving the institution are frequently more willing to "bare their souls" in a setting not seen as potentially punitive than are those who are still enrolled in the institution. It is of some interest that institutions which have invested in non-threatening forms of exit interviewing often find that those interviews lead students to reconsider their decisions to withdraw. For some, the exit interview may the first time they have been personally contacted by a member of the institution to discuss matters which concern them as student members of the institution.

When questions of improvement are the object of evaluation, the question also has to be asked at what point in time does one measure outcomes. Though most evaluations are content with pre and post-test designs in which outcomes are measure immediately upon completion of a program, there is much merit to measuring outcomes at some later point in time after the completion of the program. This is the case not only because of the "Hawthorne Effect", but also because of the possibility that some outcomes are delayed in nature. That is to say that some effects accumulate over time.

How Information is Collected

The accurate assessment of student perceptions is not a simple matter. Great care must be taken in the collection of such information to ensure their reliability and validity. All too often insensitive questioning of students on these matters leads to self fulfilling results which produce findings that serve more to fulfill prior institutional expectations that to accurately mirror strongly-held student views. In this instance, trained student interviewers are sometimes more effective than faculty or staff.

A number of methods can be used to collect valid and reliable information on student views of college life. In addition to survey questionnaires and interview techniques, institutions have sometimes employed a variety of unobtrusive indicators as a means of gaining insight into the character of student views and the likely direction of future student behavior. The most commonly recognized of these are repeated class absences, lateness in completing assignments and/or frequent visits home very early in the student career. Another, much less frequently noted measure of future behavior, is the absence of wall hangings and the like in student dormitory rooms. Quite often those objects which grace the walls, doors and windows of student rooms are quite sensitive indicators of the sense of belonging or ownership the individual has regarding his immediate environment. Absence of a sense of ownership or belonging can, in turn, be an important precursor of individual decisions to withdraw.

Also valuable are the use of qualitative methods of participant observation and the keeping of student diaries which enable students to record their daily observation of the

character of their experience in the college. These can be particularly useful when used over an extended period of time as, for instance, in the use of diaries by new students track their experiences from the first day of college to the end of the first semester.

Focus groups can also be gainfully employed in evaluation of retention efforts. Combined with survey questionnaires, they can provide the institution with corroborating data that provides greater detail than is possible in survey instruments. It might be observed that when carried out among program and course participants, the use of focus groups also proves to be a positive intervention strategy. In being involved as partners in an evaluation of a program, students become more involved in that program and thereby more likely to benefit from it. In this case, the evaluation strategy and the intervention strategy are one and the same.

The Use of Evaluation Data

Given the availability of valid and reliable information on student behavior, the question next arises as to how that information is to be used to answer the questions of description, explanation, and improvement that are normally the object of evaluation designs.

The answer to questions of description, namely what types of student departure arise on campus and what are their relative frequency of occurrence among the student population generally and among specific segments of that population, arises directly from the data collected on the activities of members of any given student cohort, that is as they describe the movements of students of varying attributes through the institution. In analysis terms, it results from frequencies, means, and where appropriate simple cross-tabular analysis of the attributes which characters leavers and stayers.

Questions of explanation, namely what we are the events which lead to differing types of departure among various segments of the student population, can be answered, in part, from the longitudinal analysis of the relationship between individual attributes, patterns of experiences within the institution following entry and subsequent patterns of persistence and/or departure during the course of the college career. It is also the outcome of the insights one obtains from the collection of qualitative data (e.g. interviews, observations, etc.) on the nature of student experiences within the various domains of institutional life. In both cases, the analyses appropriate to the question of explanation entail the multidimensional longitudinal comparison of the varying experiences of differing types of entering students as they relate to varying forms of leaving and staying behaviors. In quantitative terms, it may arise from the use of longitudinal path regression equations which trace out the direct and indirect effect of different types of events upon subsequent types of outcomes. In qualitative terms, it may be the result of careful content analysis of interview transcripts and diaries which reveal patterns of response which distinguish persons who leave from those who stay.

Questions of improvement, that is do programs make a discernible difference in student outcomes, can be answered by a range of experimental, quasi-experimental, and time-series analysis. These typically compare changes in outcomes between program participants and similar non-program participants or over a period of time prior to and following the establishment of a program or policy.

In all cases, the selection of the sample to be studied may be as important as is the choice of how that sample is to be studied. Though retention studies normally attempt to randomly select a simple sample of both leavers and stayers, it is also possibly to employ stratified random sampling to highlight the experiences of particular groups of students. It is also possible to highlight the experiences

not of the norm but of those who deviate from the norm in significant ways. For instance, one might wish to study the experiences of the very brightest and/or advantaged students who leave as well as those of the least able and/or most disadvantage who persist.

The results of such analyses can be put to a number of important uses. Most importantly they can serve as the basis for the establishment of long-term institutional policies directed toward the issue of change. Longitudinal collection of data over several cohorts of students may act as a useful and quite sensitive "social indicator" of the continuing functioning of the institution. They may do so by isolating the existence of institutional experiences which are shown to repeatedly relate to patterns of student departure. For example, should longitudinal data indicate continuing displeasure among departing students with quality of classroom teaching or with the frequency and quality of student-faculty contact outside the classroom, it would follow that future institutional policies should seriously consider actions in those areas of institutional functioning. In a similar fashion if it is found that new students continue to enter the institution with largely inaccurate expectations as to the character of their life within the institution and those expectations are related to subsequent disappointments, investigation of the impact of admission procedures and of recruitment policies (e.g. publicity) upon applicant views of college might be called for.

By the same token, such analyses will also enable the institution to monitor the impact of varying actions upon student experiences and student retention within the institution. That is they may be utilized as part of ongoing formative or summative evaluation programs. For example, they can be used to ascertain how existing and/or newly instituted forms of action impact upon student progression through the institution. As related to the already noted impact of admission policies, it may be possible to discern whether changes in recruitment material result in substantial improvements not only in admissions but also in rates of degree completion.

In these and other ways longitudinal assessment of student progress may shed light on the manner in which institutional actions influences the occurrence of student withdrawal. They may, in effect, be applied for institutional self-assessment. Presumably the continued existence of findings of a similar nature over several cohorts of students (e.g. inter-cohort analysis) would suggest the existence of deep-rooted institutional forces which shape the extent and pattern of student departure -- forces which are the result of institutional functioning more than student behaviors.

Retention assessment can also be gainfully employed in the development of institutional early warning systems which flag, at entry or very early in the student career, those students who may have unusual difficulty in completing their degree programs. The repeated association among past cohorts between varying attributes at entry (e.g. h.s. grades, goals, commitments, residence, etc.), first year experiences (e.g. unusually low grades, high rates of absenteeism, frequent visits back home, etc.) and high rates of departure can be used to develop probability functions which indicate the projected likelihood that similar categories of future entrants will persist or departure prior to degree completion. Individuals may be classified as `high risk' in that they possess one or more attributes which, in the past, have been associated with higher rates of departure. In large residential institutions, for example, it is sometimes the case that students from very small rural towns, especially those with only moderate commitments, tend to have greater difficulty in adjusting to college life than do other students. In such settings, they might be flagged as being in higher risk of departing than are other students. Similarly entering

students whose high school grades are below a given level and who in the past have experienced difficulty in meeting the academic demands of the college might also be classified as being more "dropout prone" than are other students.

Early warning systems can also be constructed from data on early student behaviors within the academic and social systems of the institution. Most typically, faculty are asked to report on the class performance (e.g. absences, homework, attentiveness, etc.) of each student. Signs of academic problems or behaviors that suggest withdrawal are then used to flag students for immediate attention. In residential settings, similar data can be obtained by dormitory monitors who report on sign of social isolation or difficulty (e.g. isolation, frequent trips back home, lack of wall hangings, etc.). In a few instances, students may nominate themselves as needing of assistance through the unobtrusive use of peer mentors who are asked to inquire as to difficulties new students are experiencing in attempting to adjust to the life of the college. In any case, data are obtained on current behaviors rather than on projected behaviors and are employed immediately to target services rather than to construct models which will eventually do so.

The determination of high risk or "dropout proneness" can serve at least two important functions in institutional planning. On one hand it may permit institutions with selective admission procedures to more carefully tune their admission procedures to possibly reduce the numbers of entering students who do not complete their degree programs. On the other,m for the greater bulk of institutions most of whom admit virtually everyone who applies, it can be used to target institutional services to students very early, if not at the very outset, of the college career. Thus, to follow the example above, it may lead institutions to provide counseling and early assistance to those students from very small rural communities who are more likely to have difficulty making the transition to the large, seemingly impersonal world of the large residential university.

The identification of "high risk" students is not, however, without some dangers. In developing early warning systems and in using them to project dropout proneness, one must be careful not to assume that past events are perfect predictors of future behaviors. Nor should one suppose that categorical associations between given attributes and/or early experiences and high rates of departure mean that that association need apply for each and every individual sharing those categorical attributes. One must be continually attentive to the dangers of using early warning systems for the uncritical labelling of students and the development, therefore, of self-fulfilling prophecies in the treatment of different students. When employed they must be used discretely least the students so identified come to stigmatize themselves as likely departures.

Early warning systems, at best, are signals of the likelihood of potential problems, not predictors of their occurrence. Though they may be used to flag the likelihood that certain types of entering students may experience difficulties not unlike those experience by similar types of entering students in the past, it does not mean that all future student of similar attributes will necessarily share the same sorts of experiences. Nevertheless, to the degree that repeated longitudinal assessments point to similar observation among a range of different entering cohorts, the results of early warning systems can be employed to sensitize the institution to the likelihood that particular segments of its entering student cohort may be in need of particular types of services.

Valid and reliable information on student views of college and university life is not just valuable in relation to its applicability to the question of retention. It can also be gainfully employed as a barometer of the health

of the institution. Recurring and widespread dissatisfaction with one or more segments of student life may highlight significant problems in institutional functioning. for instance, dissatisfaction with the quality of teaching or with the accessibility of the faculty may be indicators of especially serious problems in the academic life of the institutions, problems which go beyond the question of retention to that of institutional reputation and the ability of the institution to attract students in the future.

Concluding Observation

Though it is apparent that evaluation is an essential component of the development of successful retention programs, it is surprising how little attention programs give to even the most elementary forms of assessment. Many programs are hard pressed to describe their own retention rates and frequently unable to describe how those rates vary among different types of students, and programs within the college. Less frequent still are the number of programs that can report to what degree student participation in different types of retention programs and/or courses is associated with increased rates of persistence as compared to similar students who do not avail themselves of those programs and/or courses. To be blunt, many programs are unable to empirically justify their claims about program impact.

The simple, yet frequently overlooked, fact is that effective evaluation is within the reach of most programs. There is no great secret to effective evaluation, no elaborate theory or computer model that one must refer to in order to build an effective evaluation system. Though such theories and models exist, they are not essential. Similarly, though there are numerous evaluation consultants who can be called upon to construct an evaluation scheme, they are not essential. Most programs have the skills and resources to carry out their own evaluations if they only take the time, especially at the outset, to make data collection, qualitative and quantitative, an ongoing part of

their daily activities. Though such activities seem, at first, unnecessarily time-consuming, their long-term benefits far outweigh their costs. Just follow the simple time-tested principle of sound evaluation: Think carefully about what you need to know and then ask. After asking, make sure you are prepared to listen.

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