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Evaluative statements from alumni have legitimacy with both internal and external stakeholders. Thus, alumni studies can provide valuable evidence of institutional effectiveness and lend themselves to both locally designed and commercial survey instruments for data collection.

Assessing Alumni Outcomes

J. Fredericks Volkwein

Colleges and universities customarily survey their graduates in order to collect subsequent education and career information and to cultivate charitable giving and volunteering. As early as the 1930s, leading colleges surveyed alumni to track their professional degree attainment and collect information on workforce issues and employment (Pace, 1979). During the remainder of the twentieth century, the purposes of alumni research multiplied and proliferated across the full range of institution types (Pettit and Litten, 1999).

In recent decades, institutions of higher education increasingly view their alumni as valuable sources of both information and financial support. Alumni offer important perspectives for evaluating academic programs and student services and are often used in student recruitment and mentoring. Alumni giving now occupies a prominent position in the modern strategic plan. In the past twenty years, more and more campuses have used alumni surveys to assess the impact of the collegiate experience on student cognitive and noncognitive development (Cabrera, Weerts, and Zulick, 2005). The standards of most regional and specialized accreditors now call for outcomes evidence and using assessment feedback for educational and administrative improvement (Volkwein, 2007). Moreover, colleges and universities are beginning to incorporate feedback from alumni in performance and accountability systems (Borden, 2005; Ewell, 2005). These trends also appear to be developing in some European countries (Weerts and Vidal, 2005).

NEW DIRECTIONS FOR INSTITUTIONAL RESEARCH, Assessment Supplement 2009, Spring 2010
Published online in Wiley InterScience (www.interscience.wiley.com) • DOI: 10.1002/ir.335

Value of Alumni Studies

When visiting campuses to discuss assessment, I always identify alumni studies as the most cost-effective way to begin a program of outcomes assessment. Compared to many other forms of data collection, an alumni study, using a survey instrument, can be a relatively inexpensive way to gather an array of outcomes information that is useful at institutional and departmental levels alike.

Alumni provide a Janusian perspective both internal and external to the organization (Volkwein, 1989, 1999). Graduating seniors and alumni can provide the same feedback, but the faculty is likely to discount the views of seniors as being uninformed, whereas they attribute great authority to the same opinions by alumni.

Evaluative statements from alumni and employers have legitimacy with both internal and external stakeholders. Internally, alumni studies can assess important outcomes and provide information for enhancing academic curricula, support programs, and administrative policy. Externally, alumni studies can support accreditation, accountability, recruitment, and fundraising. Such studies provide opportunities for faculty and administrative collaboration because faculty and staff interests in alumni outcomes coincide. Alumni surveys typically have space for both institutional and department questions, so multiple purposes can be served from one data collection. Alumni studies are at their best when they are characterized by centralized data collection and decentralized uses of the data.

Typical Alumni Outcomes

The list below contains a summary of the information that is typically collected by alumni surveys, assembled from the following scholars: Borden (2005), Cabrera et al. (2005), Delaney (2004), Moden and Williford (1988), Murray (1994), Pace (1979), Pettit and Litten (1999), Schneider and Niederjohn (1995), Volkwein (1989), Volkwein and Bian (1990, 1999), Volkwein and Parmley (1999), and Weerts and Vidal (2005). Ideally, the alumni researcher begins with entry-level demographic, family, educational, and precollege characteristics, so these do not need to be collected each time alumni are contacted. The following are common contents in the typical alumni survey:

Collegiate Experiences

- Campus participation in extramural activities and clubs, athletics and recreation, student media, fraternities and sororities, service organizations, and residential life
- Student government participation and leadership
- Civic and community engagement off-campus
- Multicultural activities and tolerance for diversity
- Financial aid received and accumulated loan debt

- Quality of instruction received
- Enhanced abilities and knowledge
- Satisfaction with various academic and collegiate experiences
- Perceived college impact on personal development
- Perceived college impact on professional development
- Preparation for graduate school
- Preparation for career and employment
- General satisfaction with the institution
- Overall evaluation of the undergraduate experience
- Willingness to enroll again in the same institution

Postgraduation Outcomes
- Additional education and degrees earned
- Occupation and career attainment
- Occupation and career satisfaction
- Socioeconomic status
- Personal and household income
- Professional and community leadership and service
- Awards and recognition

Alumni Participation and Support
- Alumni organization membership
- Participation in alumni events, activities, mentoring, and recruitment
- Alumni association leadership
- Frequency and amount of alumni giving

The diversity of this list reflects the evolution of alumni studies from simple descriptions of the alumni population to analytical outcomes studies. The outcomes approach to assessment assumes that institutional quality and effectiveness are at least partly based on what alumni accomplish after leaving the institution, controlling for their characteristics on entry. Moreover, researchers now recognize that the potential outcomes of the collegiate experience range from the academic to the personal, from acquired knowledge to ethical behavior, from social skills to career satisfaction, from earned degrees to earned income. Thus, alumni studies seek to collect information on the full range of student collegiate and postcollegiate experiences.

Under ideal conditions, the results of alumni studies equip faculty and administrators with information for making constructive alterations to programs and curricula, as well as for demonstrating institutional effectiveness. However, several research challenges must be addressed.

Challenging Problems with Alumni Studies

Challenge 1: Which Alumni Do You Survey? Alumni surveys serve different purposes, and each purpose requires different populations and different survey content. Assessment for curricular and program improvement needs feedback from recent graduates. Assessing the student experience and the current academic program should be undertaken while memories of the experience are fresh. Surveys of recent graduates also have the advantage of tracking the graduates as they enter their first jobs and are developing sympathetic habits of mind toward their alma mater.

Assessing educational attainment, however, requires at least a ten-year period for undergraduate alumni to complete advanced degrees in graduate and professional school. Although many alumni enter their first job within a year of graduation, a sizable number delay their entry into the job market while they pursue master's or doctoral degrees, or even military service. And it is not uncommon for some doctoral students in humanities, education, and social sciences to finish their programs after more than ten years.

Assessment for purposes of measuring career outcomes requires an even longer time frame than measuring educational outcomes. It may take thirty or forty years to accumulate a significant record of career accomplishment, honors, awards, civic engagement, and professional or even political leadership. But the institution is likely to have changed a great deal after that many years, so the assessment of older alumni may provide little relevant information for current faculty, curricula, student life, administrative services, and campus climate. One exception may be the general education program. Although department curricula and faculty may change with each generation, older alumni may have wisdom to share about the content of the general education curriculum based on their life experiences.

Thus, the purpose of the alumni study needs clarity before the population is targeted and the survey designed. If the research has a formative purpose, aimed at evaluating and improving curricula, services, and facilities, then a younger population should be targeted. But if the alumni study has a more summative purpose, aimed at gathering evidence of outcomes, then an older population is required. One should not expect young alumni in the aggregate to exhibit community leadership and professional honors, nor should older alumni be expected to evaluate current student services and facilities in an informed way.

Challenge 2: What Alumni Sample Size? You do not need a large, expensive sample to adequately represent the views of the alumni population, so you can carry out most alumni surveys inexpensively with small but representative samples. However, the main value of alumni studies is bringing data to the department level, where the improvement potential is greatest. Ideally the alumni sample needs to yield enough responses to break out the data by academic department, at least for the largest departments. Thus, the need for disaggregating the data may drive up the sample size and the cost.

However, the majority of departments have a small number of graduates in any given year, especially in fine arts, languages, literature, and area studies, but also in some math, science, and professional school departments. Thus, you may need to invest in a survey that aggregates large numbers of alumni across many graduation years in order to have enough cases to provide anything useful to most departments. Moreover, if you present data only at the campus level, rather than disaggregating them to the department level, faculty can exercise denial, as in, "That's not true for my department." Most researchers recommend twenty-five responses per department as a healthy target; fewer than ten not only threatens anonymity but also prevents most multivariate procedures from including academic department as a variable in the analysis.

Challenge 3: Frequency of Data Collection? Although the institution may want to collect contact and placement information from recent graduates almost every year, I suggest conducting alumni outcomes studies no more than once every four or five years. Launching a multipurpose survey every year and attempting to circulate results produces redundant overload, especially for academic departments and administrative services. Alumni attitudes in the aggregate, from one graduating cohort to the next, change very slowly, if at all, over a long period of time—unless there is an institutional scandal or catastrophe. Moreover, academic organizations are notorious for having slow response cycles, so the process of alumni research design, data collection, statistical analyses, campus communication, administrative digestion of results, and curricular and programmatic actions can take several years to play out. Undertaking another survey while all this is going on gains little.

Longitudinal analyses and trends over time provide some of the most valuable outcomes evidence. But if you survey the same people too frequently, they will stop responding. To avoid survey saturation, I recommend surveying the same alumni no more than once a decade and asking respondents each time how much their opinion has changed since they graduated. This provides *ex post facto* longitudinal data.

Challenge 4: What Response Scales Should You Use? Like other assessment efforts, the most useful alumni research moves beyond simple descriptions of the population and attempts to examine relationships and causal connections using multivariate analysis. Reporting descriptive statistics requires only high, medium, and low kinds of responses, but to facilitate multivariate analyses and examine relationships, you need to spread out the data and maximize variation. When collecting evaluative judgments, such as levels of satisfaction, involvement, importance, frequency, and adequacy, I strongly recommend using (at a minimum) a five-point Likert-type scale. Some researchers use seven, nine, and even ten response categories to support scale building and multivariate analysis.

The proper response scale is particularly important when asking about personal and household income. Some researchers try to separate the financial and educational outcomes data collections, and perhaps use proxies for income (such as postal codes and job titles). But most college graduates know that the institution is interested in their support and know that the survey is being used for multiple purposes. Obviously a survey needs to give respondents the option of not completing items that they do not wish to, and most people are reluctant to divulge specific personal and household income. However, my own experience is that 98 percent of alumni are willing to indicate their incomes in ten or twelve large categories (for example, twenty-thousand-dollar increments in the lower ranges and fifty-thousand-dollar increments in the higher ranges), and this is usually adequate variation to use in a multivariate outcomes analysis.

Challenge #5: Survey Length and Content

Length. What is the recommended survey length? Although there's no silver bullet (and every population is a little different), you will usually get the best response by aiming for the middle of each population. You first have to think through your survey goals, but assuming that you want at least *some* demographics, and *some* campus experiences, and *some* alumni outcomes, aim for a maximum of one page of questions on each. A total survey of two pages probably provides too little information, three pages is ideal, the back and front of two pages (4 sides) is okay, five pages starts to dampen responses. Almost everyone now recommends giving respondents the choice of on-line or hard copy response modes as a way to increase responses.

Content. Every survey researcher knows that constructing a good instrument is demanding, and starting with a blank page is rarely the best alternative for a campus. Purchasing a commercial survey or building your own collaboratively with other institutions is often cost-effective. Several institutional consortia and university systems have constructed joint surveys and shared their findings. But if you are an alumni researcher building your own survey, how much can be borrowed from other surveys and how should you give proper credit?

Earlier in my career, I collected all the published collegiate surveys and was surprised to see a high degree of similarity among those copyrighted by ACT, HERI/CIRP, HEDS, CUES, NCHEMS, CSEQ, and now NSSE. Although the response scales vary from one to another, the basic thrust of many of these surveys is highly similar with only minor changes in wording. I believe this happened in part because the same small group of researchers (Stern, Pace, Astin, Pascarella, Terenzini) developed the early concepts and items, and in part because no one really wants to litigate intellectual property rights with professional colleagues. What we have now is a polite understanding that locally developed campus surveys are generally not copyrighted and campuses can borrow a few items or scales from each other without being challenged. Obviously, it is improper to copy whole sections word-for-word (at least not without first obtaining permission to do so and acknowledging the authoring institution somewhere). Even ACT generally grants permission to use selected items or even entire scales with proper acknowledgment. Obviously, the problem is not with demographic items—there are a limited number of ways to gather background data like age, race, sex, family characteristics, and schooling. But using half or more of any scale purporting to measure such attributes as learning outcomes, satisfaction, attitudes, or values without acknowledgment will attract some negative attention.

Challenge #6: Alumni GIGO. The impacts of colleges and universities on their students have received a good deal of attention in the research literature (see Pascarella and Terenzini, 2005). Although college experiences and degree completion exert significant influences, student and family characteristics on entry also explain many differences in subsequent outcomes. Since "good-in/good-out" is a reality, student and alumni outcomes studies need to make statistical adjustments for entering student and family characteristics, especially when the research examines financial and occupational outcomes, but also when other variables like test scores are treated as outcomes of the undergraduate experience. Those with higher admissions test scores as freshmen are more likely to have higher Graduate Record Exam and professional school admissions test scores as seniors, at least in the aggregate. Students from highly educated and affluent families are more likely to become highly educated and affluent alumni (Astin, 1977, 1993; Blau and Duncan, 1967; Bowen, 1977; Feldman and Newcomb, 1969; Pace, 1979; Sewell and Hauser, 1975).

Personal and family characteristics, educational experiences, degree attainment, hard work, motivation, judgment, and luck all combine to produce occupational achievement and socioeconomic status. In order to demonstrate the institution's impact on its alumni, the researcher should include as many of these variables as possible in a multivariate analysis that statistically isolates the influence of each variable on the particular outcome. Using a causal model constitutes one of the best ways to conceptualize and organize such an outcomes research project.

Begin the Alumni Study with a Model

In Chapters Two through Four, we make the case for using an outcomes model for guiding research design, data collection, and analysis. A variety of models are relevant to the undergraduate outcomes examined in this volume (basic skills, general education, attainment in the major, personal growth). The Terenzini-Reason Comprehensive Model and the Albany Outcomes Model are among those that provide good roadmaps for assessment. The Albany model identifies not only an array of collegiate outcomes, but a group of alumni outcomes as well. As shown in Figure 4.2, the model suggests that alumni outcomes such as graduate degrees earned, occupational status and income, career satisfaction, job performance, leadership, awards, and alumni giving are each influenced by a collection of personal and family traits, precollege achievement and motivation, academic and social college experiences, and educational and personal outcomes. These different traits and experiences collectively combine to produce an array of variable outcomes. During the 1980s and 1990s, the Office of Institutional Research at the State University of New York at Albany developed measures for each of the components in the model. This empirical research served as important evidence of institutional effectiveness in the Albany self-study documents for Middle States Accreditation in 1990 and 2000.

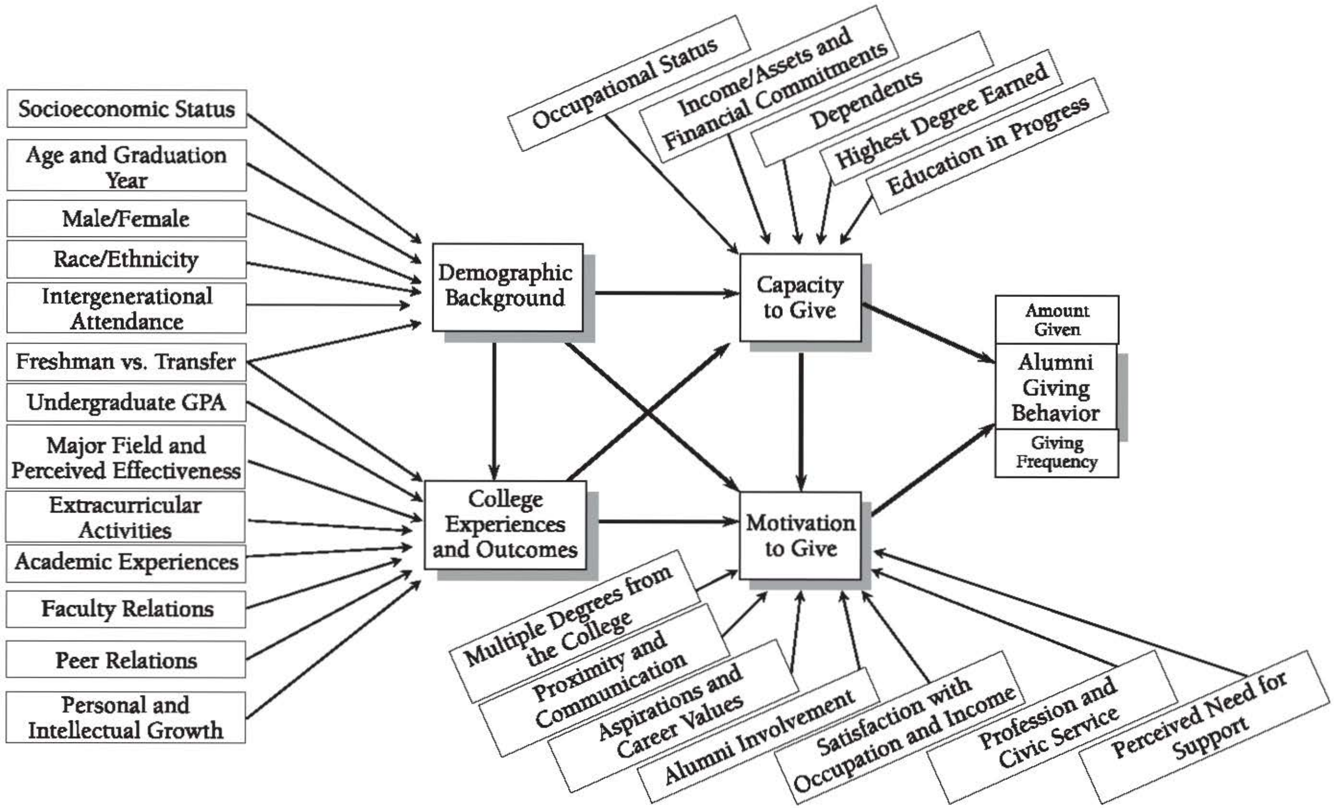
Sometimes researchers find it useful to develop a separate conceptual model for each outcome. For example, Volkwein (1989) focused on one component of the Albany Outcomes Model and developed a separate model of alumni giving, shown in Figure 9.1. (Also see Volkwein and Parmley, 1999).

As state appropriations and financial support from private foundations and industry become less dependable, higher education institutions seek alumni contributions as alternative sources of funding. Drawing on both the fundraising and the outcomes assessment literature, the Volkwein model treats alumni giving behavior as a desirable outcome. The amounts and frequency of alumni giving are functions of both the capacity to give and the motivation to do so. However, the attitudes and values that produce motivation, and the economic attainment and achievements that produce capacity, are themselves the products of the backgrounds and collegiate experiences of alumni. The model incorporates concepts from all these various branches of the literature in an attempt to explain alumni generosity toward the institution. Alumni researchers can use this model to show campus managers and faculty the clear connections between their actions and subsequent support for the institution.

By applying the model to its alumni population, an institution is likely to discover that some traits and experiences exert greater influences on alumni giving behavior than others. Precollege background characteristics are more distant from the actual alumni behavior than the college and postcollege variables, but early indicators of student talent and family wealth are likely to be influential. Private institutions certainly place a high value on them in their student recruitment. The student outcomes literature suggests that college experiences and outcomes on the campus, the curricular and the extracurricular alike, shape student and alumni attitudes and achievements. The financial development and fundraising literature focuses on the importance of alumni involvement, satisfaction, volunteer service, and income. Thinking about all the little things that add up to creating motivation and capacity encourages faculty, administrators, and fundraisers alike to shape their daily campus actions in ways that support the long-term financial health of the institution.

Another relevant model treats socioeconomic achievement as a collegiate outcome. Smart and Pascarella (1986) developed a path model (Figure 9.2) to examine the impact of various precollege characteristics, institutional characteristics, and campus experiences on the socioeconomic achievements of a 1980 population that entered college in 1971. Finding

Figure 9.1. Volkwein Model of Alumni Giving



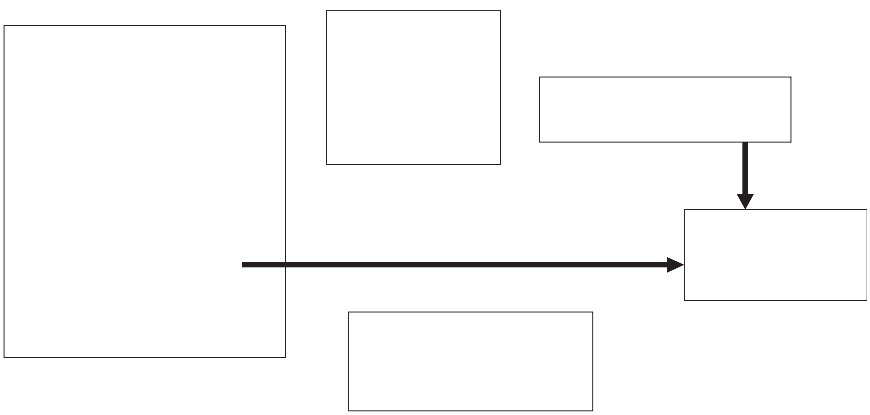
modest support for their model, they found that a scale measuring student academic integration in college proved to be the strongest and most consistent predictor of socioeconomic attainment across male and female, white and minority populations. Although family origins exerted significant influences, these generally were outweighed by collegiate experiences and choices, especially academic ones. Their model is multi-institutional rather than single, so it may have important implications for a variety of institution types.

Sources of Information for Alumni Researchers

Despite the growing importance of alumni outcomes research, only a small number of national and state resources have been developed to assist researchers, and there has been little national benchmarking by institution type. Two attempts to develop a national instrument and database have been discontinued—one by the National Center for Higher Education Management systems and the other by the National Center for Postsecondary Improvement. National public sources of information include the following:

- The U.S. Bureau of Labor Statistics maintains comparative data and statistical reports on occupations and employment from national surveys. http://www.bls.gov/oes/home.htm.
- The National Center for Education Statistics conducts longitudinal studies containing information on educational and occupational attainment of high school and college graduates. http://nces.ed.gov/surveys/SurveyGroups.asp?Group=2.

Figure 9.2. Smart and Pascarella Causal Model of Socioeconomic Achievement



Source: Smart and Pascarella (1986).

- The National Association for Colleges and Employers surveys job and salary outcomes of college graduates that can be used for benchmarking. http://www.naceweb.org/Research.aspx.

Several higher education organizations and consortia have developed surveys that member institutions can administer to their alumni and share comparative data. The most prominent of these collaborations are:

- The Council for Advancement and Support of Education provides member institutions in fifty-nine countries with data, products, and services in alumni relations, communications, development, marketing, and advancement. For example, its collaboration with the Association for Institutional Research resulted in a compendium of articles on campus-based alumni research (Shoemaker, 1999). http://www.case.org/About_CASE.html.
- The Higher Education Data Sharing (HEDS) consortium has 160 relatively selective private colleges and universities as members. HEDS shares data and conducts comparative research on behalf of its members, and the HEDS alumni survey is considered to be well designed and multipurpose. http://www.e-heds.org.
- The Appalachian College Association (ACA) is a consortium of thirty-three private colleges and universities situated in eastern Kentucky, western North Carolina, eastern Tennessee, southwestern Virginia, and West Virginia. Using Patrick Terenzini and Ernie Pascarella as consultants, the ACA developed and administered an alumni survey copyrighted by The American College Testing organization. http://www.acaweb.org/content.aspx?sid=1&pid=73.
- The American Association for Universities Data Exchange comprises AAU institutions that participate in the exchange of data and information to support decision making at their institutions. http://aaude.org.

Some state university systems, such as those in Illinois, New York, and North Carolina, have conducted systemwide surveys. The best of these is the survey developed by ACT for the State University of New York System.

As of December 2009, the best assemblage of multipurpose alumni comparative data is embedded in the norms maintained by the publisher of the leading commercial instruments: the American College Testing Program (ACT; http://www.act.org/ess/postsec.html). ACT offers a choice of two alumni survey instruments for four-year institutions of higher education (http://www.act.org/ess/fouryear.html) and two for two-year institutions (http://www.act.org/ess/twoyear.html). It developed and holds copyrights to the instruments now used by the State University of New York and the consortium of Appalachian Region Colleges, among others. These ACT surveys generally contain a group of twelve to twenty demographic and background items, including reasons for attendance and sources of funding; twenty to thirty self-reported educational outcomes, ranging from problem solving and critical thinking to teamwork and communications skills; twenty to forty items reflecting levels of satisfaction with educational and campus experiences, services, and facilities; ten to twenty items describing levels of participation in activities and organizations; fifteen to thirty items of educational and employment history and career experiences; and thirty or more spaces for additional locally designed questions and comments.

Some college and university Web sites contain copies of surveys and research results from their alumni studies. Often these are embedded in the institution's accreditation self-study document. Here are some good examples:

- Georgia Tech employs a well-designed alumni survey that assesses gains in knowledge and skill, satisfaction with many aspects of the undergraduate experience, and postgraduate education, professional development, and employment. The Office of Assessment generates useful reports from these surveys, and the report's appendix contains a copy of the survey instrument. http://www.assessment.gatech.edu/wp-content/uploads/GR_2006_Alum_Institute_RPT_FINAL_12_7_2007.pdf.
- Indiana University-Purdue University Indianapolis has surveyed recent graduates since the early 1990s and recently began to collect data from graduates five years out. http://www.imir.iupui.edu/infore/infore_recentalumni.asp.
- Massachusetts Institute of Technology has developed a number of good survey instruments, an alumni survey among them. http://web.mit.edu/ir/surveys/.
- New Jersey Institute of Technology periodically surveys its alumni and shares the results online. http://www.njit.edu/irp/reports/2005/Alumni_Survey_Fall_2005_safe_fonts.ppt#256,1,Alumni Survey Fall 2005.
- Penn State's Center for the Study of Higher Education developed an alumni survey as part of its national study of over two hundred engineering programs. http://www.ed.psu.edu/educ/ec2000/survey-instruments/alumni-survey.
- At Texas A&M University-Corpus Christi, the Office of Planning and Institutional Effectiveness administers an alumni survey every two years to assess the effectiveness of the university. www.youtube.com/watch?v=-mVpGmoES3w&NR=1.

Conclusion

Most institutions survey their graduates to collect information on employment and additional degrees earned, especially when preparing an accreditation self-study. Unfortunately such efforts rarely include comparative benchmarks or analysis of collegiate experiences that may have produced the reported results. The best alumni research examines outcomes that occur after college, not only to demonstrate institutional effectiveness (usually within the context of maintaining accreditation) but also to enhance alumni giving (usually within the context of meeting financial goals). Would alumni do it all over again? That is, would they attend the same institution? Select the same major? Enter the same career? And what campus experiences and precollege traits are most likely to influence their responses? ACT appears to offer one of the few commercially available instruments for asking alumni to evaluate their college education and its impact on their lives.

Such alumni feedback attracts attention on and off the campus. Colleges and universities have moved toward a more outcomes-based approach to assessment as a result of increasing pressures from employers, trustees, government, and accreditation bodies. Because they have legitimacy with these various stakeholders, alumni speak with a loud voice when they provide evidence of institutional effectiveness.

Alumni studies are useful not only to assess institutional effectiveness but also to aid institutional planning and revenue generation. Thus, institutional researchers who seek to maximize the utility of alumni research should develop partnerships that include administrative offices and academic departments alike. Alumni are important sources of information and support, and alumni studies should occupy a prominent place in the institutional research portfolio.

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