Alumni Survey:
Three conceptualizations to alumni research

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Alumni Survey: Three conceptualizations to alumni research

Alumni surveys in the USA have been growing rapidly since 1979. Between 1937 and 1976, Pace (1979) was able to identify just ten landmark studies focused on the use of these surveys. Of them, 30 percent focused on alumni outcomes (e.g. job satisfaction, the relationship of college major to the employment field). Almost 70 percent dealt with competencies acquired in college (e.g. critical thinking, interpersonal skills, vocational training). In contrast, between 1980 and 2003, we located over 270 sources—books, articles, and institutional reports—that captured these themes. Of the sources we reviewed, we found over 130-refereed articles of which 70 percent related to alumni outcomes, 15 percent related to engagement and competencies and 15 percent on alumni giving.

The growth of alumni studies in the United States can also be attributed to a number of internal and external demands for assessment, accountability, and market-driven research in higher education (Dellow & Romano, 2002). This is especially true for public and community colleges where legislators and taxpayers have a strong voice in ensuring that postsecondary education yields economic and social benefits to their states and communities. Outside of the university, legislators, trustees, and the general public have increased their demands on higher education to be more accountable, efficient, and aligned with public needs (NASULGC, 1999). Driven by these demands, some states have mandated guidelines for when and how often institutions have to submit accountability reports (Sheehan & Granrud, 1995; Stevenson, Walleri, & Japely, 1985).

The organizers of this conference asked us an important question: *what progress has been made in the development of alumni surveys in the USA?* To answer this question we conducted an extensive review of the literature originating from Pace's 1979 landmark study to the present. We found that there is considerable variance in methodological issues. Under examination, we discovered this variance is guided by two factors: the conceptualization of factors that underlie alumni success and the policy question that the survey seeks to answer. We also noted some important methodological commonality.

The following sections of this paper are organized in terms of the three categories of alumni surveys we identified. For each category we will describe the policy question under investigation, the assessment objectives, the audience, and the unique methodological issues. Table 1 summarizes these findings based on our review of the literature.

Insert Table 1 here

I. Alumni outcomes

The outcomes approach to alumni assessment rests on the assumption that institutional quality and effectiveness can be appraised on what alumni have accomplished in the years following degree completion (e.g., Dellow & Romano, 2002; Melchiori, 1988). Job satisfaction, income, occupational attainment, engagement in civic and political activities, and tolerance for diversity are the primary domains of this approach. This approach also examines collegiate experiences and does so by including assessment of alum's general satisfaction of the institution, the quality of the instruction received, the extent to which the college prepared them for the job, and whether or not they would enroll again (e.g. Pike, 1994). In this context, the outcomes approach to assessment seeks to answer the following three policy questions:

- *How satisfied are graduates with their employment?*
- *How satisfied are the graduates with the degree granting institution?*
- *To what extent are graduates fully participating in civic activities?*

The benchmark in the outcomes approach to alumni assessment is represented by a yearly survey of the National Association of Colleges and Employers (NACE). NACE membership includes over 1800 colleges and universities and more than 1900 employer organizations. NACE's readership is made up of over 1 million college students and alumni (Nagel & Bohovich, 2002). The 2002 NACE report reflects the recent graduate opinions regarding: earnings by majors, job, salary, and benefits expectations as well as difficulties encountered in the job search according to different majors. Beliefs that college education was a worthwhile investment and the extent to which the college based career service was helpful in finding a job are the only questions that NACE employs in assessing the impact of college.

The outcomes-based approach seeks to answer policy questions based on two areas: social and economic attainment and participation in civic activities. The first domain (achievement) focuses on the job satisfaction, social and economic accomplishments achieved by specific cohorts of graduates. This approach also seeks to examine the connection between a college degree and self-reported measures of preparation for work (e.g. Borden & Rajecki, 2000; Midgen, 1987; Pike, 1994; Quereshi, 1988). The second domain (social and civic engagement) explores the policy questions regarding graduates' participation or engagement in relevant civic activities (e.g. Bok & Bowen, 1998)

*Achievement***.** Surveying alumni on their current employment experiences and income attainment are popular and easily understood indicators of institutional success (e.g. Pace, 1979). Measures usually include graduate alumni opinions regarding employment, employers' opinions of college graduate workers, and both the employer and graduate employees' opinions on the degree granting institution. Murray (1994) argues those indicators are also important for recruiting perspective students. Obtaining a good job along with the academic reputation of an institution are the two top factors college freshman report influencing the most their selection of an institution (Higher Education Research Institute, 2001).

Murray (1994) suggests that information on alumni accomplishments can be used for guiding curricular reform as well as changes in counseling and placement services. Quereshi (1988) illustrates the use of this kind of information for assessing the success of an undergraduate psychology program. Quereshi's survey answered questions on curriculum effectiveness, employment outcomes and gender differences. In addition to psychology, Educational Administration and Business departments are using a similar approach to improve the quality of their programs (Borden & Rajecki, 2000; Bailey et. al., 1997; Lester, 1992, Sheehan & Granrud, 1995; Ogletree, 1998).

Civic engagement. Assessing alumni levels of civic engagement is a recent development in the alumni assessment literature. According to a 2000 editorial Change article this emerging interest is due, in part, to Putnam's (2000) argument that Americans' participation in civic and social activities is declining. Specific indicators of civic engagement include volunteerism and leadership in different categories of civic organizations, information on the propensity of a graduate to vote in Presidential elections, and self-reported information of how graduates perceive themselves on the political spectrum considering economic and social issues.

The Shape of the River (Bok & Bowen, 1998) is one of the best examples of this emerging literature. It attempts to document the impact of college on increasing the likelihood graduates will engage in civic activities such as youth organizations, professional associations, political clubs and national charities. This formidable study surveyed the 1976 and 1989 graduate cohorts of 28 highly selective institutions of higher education. The information reported in this book is now informing policy issues ranging from access to education to policies seeking to increase diversity in higher education.

In 1999, a major national study paralleled the efforts of Bok and Bowen in assessing graduate's engagement in civic activities. Sponsored by Institute for Research on Higher Education, the Collegiate Results Instrument (CRI) measured graduate views on politics and volunteerism, as well as, self-reported data on voting and volunteering among 33,000 graduates from 80 four-year colleges and universities.

Methodological concerns. Seeking to assess the impact of college on alumni outcomes by gathering simultaneously information on both collegiate experiences and such job related experiences as job satisfaction yields several methodological problems (see Pascarella, 2002; Pike, 1994). Recalling events, some of which may have taken place several decades ago (e.g., Bok & Bowen, 1998), may produce collegiate experiences that may not actually reflect the ones the alumni underwent while attending college. *Can we trust, then, alumni surveys to gauge collegiate experiences?* A series of landmark studies conducted by Pike (1990, 1992, 1994) provided mixed results. Pike (1992) found considerable stability of perceptions of college when alumni were seniors in college and two-years after graduation. Subjects' reports of learning and academic development while being seniors were the best predictors of their answers to similar questions asked when they were alumni (Pike, 1993). However, this senior-alumni response pattern on collegiate-experiences was far from being perfect. "A significant number of individuals had more negative perceptions of their college experiences as alumni than they did as seniors' (Pike, 1994, pp. 107-108).

Gathering data on collegiate and work experiences simultaneously can introduce another bias: current accomplishment, or lack therefore, can potentially affect the extent to which past collegiate experiences are rated. *Are alumni reflections about college, then, influenced by their job accomplishments?* Pike's (1994) answer to this question is *yes*. Pike examined a 1990 alumni survey among graduates of the University of Tennessee at Knoxville. The alumni survey collected both job satisfaction data and ratings of collegiate experiences. Pike noted that alumnus's patterns of answers to collegiate experiences questions correlated positively with employment experiences. In general, alumni satisfied with their job and working conditions gave positive marks to their experiences with college. Alumni dissatisfied with their employment and working conditions tended to give bad marks to their collegiate experiences.

II. Student engagement & competencies

Focusing on alumni outcomes as a mechanism to judge institutional excellence and guide institutional reform has been questioned since mid 1990s. Critics basically argue global ratings of institutional quality rest on a simplistic view: what an alumnus accomplishes (e.g., occupational prestige, income and other measures of status) can be attributed to the postsecondary institution he or she attended (e.g., Pike, 1994).

Pascarella (2001) recently summarized some of the major methodological flaws to this approach. To begin, the accomplishment approach assumes that merely attending an institution yields per se considerable benefits to the graduate, an assumption that has little empirical grounding. Pike, Kuh and Gonyea (2003) found no evidence that the characteristics of the institution *per se* influence learning or intellectual development. Pascarella and Terenzini (1991) reached similar conclusions after having examined more than 30 years of research on the topic. In a similar vein, Adelman (1999) recently demonstrated that attaining a collegiate degree, a most important measure of alumni success, had more to do with the quality and intensity of high-school curriculum than with the type and prestige of the postsecondary institution attended. What mounting research tells us is that student success has more to do with do with what the college graduate did at the institution than just having matriculated at a particular institution (e.g. Pascarella & Terenzini, 1991, Pike, Kuh & Gonyea, 2003; Kuh & Hu, 2001).

Neglecting the extent to which attainment itself may be the product of competencies secured in contexts other than the college is another problem affecting the outcomes approach. It just presumes alumni acquired critical competencies while attending college. Defining those competencies and establishing their connection with specific campus practices are two issues left unanswered (Pascarella, 2001).

Student engagement in college and attainment of competencies while attending college are being recommended by some of the best scholars in Higher Education as the main focus in assessing institutional quality (e.g. Astin, 1993; Ewell, 1996; Pascarella, 2002; Kuh, 2001). Their methodological advice can best be summarized as: *align assessment efforts with what research shows matters in a student's development, learning* *and attainment of competencies* (see Pascarella, 2002; Kuh 2001; Roberson, Carnes & Vice, 2002).

There are at least four policy questions that this approach seeks to answer (see Table 1). One set of questions deals with the character and nature of the experiences of the student in college. The second asks the extent to which competencies are acquired in college and the extent to which alumni apply those in the workforce of graduate school. Those questions can be summarized as follows:

- *What are the competencies (i.e., outcomes, abilities & values) that college education should foster most?*
- *To what extent were alumni engaged with faculty/staff/peers while attending college?*
- *To what extent do colleges and universities engage students on those learning activities more prone to produce critical competencies?*
- *To what extent do graduates apply those competencies in the job or in graduate school?*

Engagement. Advocates of this approach basically argue that institutional quality can best be assessed in terms of the nature of the collegiate experience the alumni underwent (e.g. Astin, 1993; Pascarella, 2001; Kuh, 2001). This approach presents a radical departure of the view that what alumni know and have accomplished are *per se* the yardstick to measure institutional success. Instead, what the alumni *did* at the institution is what really matters. Student engagement with faculty and peers, exposure to effective teaching practices, involvement in coursework, quality and intensity of student effort, and participation in effective teaching practices are then the focus of assessment efforts (e.g. Kuh, Vesper, Connolly & Pace, 1997).

Most of the assessment efforts we found in engagement are rather recent and target mostly college students (e.g. Cabrera, Colbeck & Terenzini, 2000; Kuh, 2001). Of those dealing with students, the National Survey of Student Engagement (NSSE) is the most ambitious. Funded by the Pew foundation since 1999, NSSE annually gathers information from freshman and senior students from 274 colleges and universities regarding on their exposure to effective practices (National Survey of Student Engagement, 2002). Indicators employed range from engagement in academically challenging activities (e.g. application of theories or concepts to practical problems) to the quality and character of interactions with faculty. The American College Testing's College Outcomes Survey (ACT Alumni Survey), the State University of New York's Alumni Outcomes Survey (Kinnick, 1985; Volkwein, 2002), and the Tennessee Alumni Survey (Pike, 1993), on the other hand, were the only examples of alumni survey we were able to find that included some questions on the extent to which the alumni had satisfactory experiences with faculty, academic advisors and campus services.

Methodological concerns. Developing engagement items is not without methodological problems (e.g., Pascarella, 2002). Being able to capture the whole range of relevant collegiate experiences is the most salient of them. Assessment efforts may rest on college-based practices that can have little value to learning and development. Fortunately, enough research has been accumulated on the impact of college on students to guide assessment efforts in singling out effective practices (e.g., Astin, 1993; Cabrera, Colbeck & Terenzini, 1999; Kuh, 2001; Pascarella & Terenzini, 1991). The second problem pertains to the reliability of the indicators. In general, fewer measurement problems are encountered when assessment efforts concentrate on concrete and observable practices—low-inference items—than when assessment efforts rest on less factual items —high-inference items (e.g. Murray, 1991; Pascarella, 2001). Asking students or alumni the extent to which they worked with "other students on projects during class" (National Survey of Student Engagement, 2002, p. 41), for instance, calls for less inference and thus less error in interpretation than asking for the level of satisfaction with the 'quality of instruction in your major department' (SUNY's Alumni Survey).

Competencies. Attention to what students and graduates know and do with such knowledge as a result of their collegiate experiences is gaining recognition as an important area for future assessment work (Ewell, 1996). This attention to competencies is spurred by public policy, accreditation and the needs of the employers of graduate students. Burke and Serban (1998), for instance, found that most of 11 the states they surveyed in 1997 had introduced indicators gauging impacts or results, particularly in the area of student development and gains in professional competencies, to guide public policy. Accrediting agencies have contributed to this trend by shifting their focus from global resource and reputational measures of institutional quality to indicators of teaching effectiveness. In 1996, for example, the Middle States Association of Colleges and Schools Agency placed teaching and learning as the centerpiece in institutional self-assessment. Recently, the North Central Accreditation Commission encouraged institutional evaluators to focus their attention to students' gains in group interaction, and problem solving skills. Regional accreditation efforts are being matched by professional accrediting organizations as well. Consider the case of the Accreditation Board for Engineering and Technology (ABET), the sole agency in charge of accrediting Engineering and Technical schools in the US. Recently, ABET (2002) enacted eleven criteria requiring colleges of engineering to demonstrate their graduates have developed eleven competencies as a result of their collegiate experiences. Those abilities include things as “ to apply knowledge of mathematics, science and technology’”, “to design and conduct experiments, as well as to analyze and interpret data”, “to design systems or components, or process to meet desired needs”, “to function on multi-disciplinary teams”, “to communicate effectively” and “to engage in life-long learning”, to name just six. Interest in student development of competencies is also heightened by industrial leaders’ calls for college graduates who can work in teams and solve real world problems (Augustine, 1996; Black, 1994; Bucciarelli, 1988; Roberson, Carnes & Vice, 2002).

Methodologically, the literature seems to follow two approaches for identifying competencies. One approach seeks to single out those competencies deemed critical by educational leaders and employers. Delphi studies conducted by Jones (1994) and Jones and associates (1994) among Engineering departmental chairs and influential faculty illustrates the use of this approach. The themes Jones and her associates identified underscored critical competencies in the areas of group skills, problem solving and occupational awareness, which formed the basis for subsequent work on assessing the impact of classroom practices on gains in competencies among Engineering students (see Cabrera, Colbeck & Terenzini, 1999).

The second approach recommends adopting content validation strategies targeted to jobholders. The basic tenant here is to define the relevant knowledge, values and abilities (hereby defined as competencies) that enable a college graduate to succeed in the job while singling out those situations that call for their application (Roberson, Carnes & Vice, 2002). The methodology recommended by advocates of the content validation approach to competencies can be summarized as follows (Roberson, Carnes & Vice, 2002):

1. Define a universe of competencies. Do a comprehensive job analyses of those jobs graduates are most likely to hold. Single out those skills, knowledge and abilities each task involves. Identify those competencies that can be taught in college from those that are learned on the job. Pay particular attention to those contexts where those competencies are most likely to be effective.

2. Develop and adopt assessment measures. Make certain that your assessment tool reflects the competencies that enable graduates succeed on the job under a variety of relevant contexts.

3. Validate assessment measures with experts. Pilot test the instrument with graduates, jobholders and experts.

Using the content validation approach, Roberson, Carnes and Vice, for instance, found that 7 competencies contributed to job success among business graduates. Those competencies are: 1) leadership and influence, 2) implementation, 3) problem solving and decision making, 4) communication, 5) interpersonal skills, 6) coaching and facilitating, and 7) integrity and character. For each of these domains they identified specific skills groups.

Most of the examples in which the competency approach has been followed are in such professional fields as Engineering and Business (e.g. Cabrera, Colbeck & Terenzini, 1999; Graham & Cokriel, 1989; Karathanos, 1991; Van Dyke & Williams, 1996). And, most of the assessment efforts deal with students. However, we identified three alumni surveys that follow the competency approach: the ACT Alumni Survey, the SUNY's Alumni Outcomes Survey and the Tennessee Alumni Survey. The ACT collects information on 24 competencies, which correspond to six areas: 1) planning and organization skills, 2) analytical thinking skills, 3) self-directed learning skills, 4) humanistic or artistic appreciation skills, 5) communication skills, and 6) consumer awareness and responsibility skills (Graham & Cockriel, 1989). Following a similar format than the ACT Alumni Survey, the SUNY's Alumni Outcomes Survey (Volkwein,

2002) collects information on 17 competencies ranging from ability to engage in lifelong learning to managing personal finances. The Tennessee Alumni Survey gathers information on 15 competencies which correspond to four dimensions: 1) personal and social development, 2) growth in quantitative skills, 3) growth in communication skills, and 4) growth in cultural understanding (Pike, 1993). These instruments also ask alumni to indicate the extent to which those competencies were enhanced by their undergraduate program.

Methodological concerns. Assessing competencies posits several challenges as well. To begin, there is the question of identifying those set competencies that can be developed in college from those that can be learned elsewhere (Pascarella, 2001). Deciding among competing set of competencies then involves a deep knowledge of the majors, curricular issues and the occupations college graduates are likely to hold. Acquiring this knowledge can be expensive and time consuming as attested by the studies conducted by Jones and her associates among Engineering chairpersons. However, the challenge of identifying competencies is likely to be minimized to the extent that accreditation agencies themselves single out those competencies graduates deemed important. ABET recent work in spelling out the minimum competencies Engineering graduates should demonstrate is one of the best illustrations of this simplification effort.

Simultaneously collecting information about outcomes and collegiate experiences from alumni can limit forming firm conclusions about the effects of college. For example, Pike (1993) tested two competing models about the nature of the relationship between alumni perceived learning and satisfaction with college. The first model assumed that satisfaction with college was the by-product of learning gains reported by the alumni. The second model argued the relationship between satisfaction with college and learning gains could be the product of a halo effect, an artifact in which an alum's assessment of few items color or 'halo' the entire evaluation. For instance, recalling a single positive experience like participation in athletic activities may lead the alum to rank positively all domains of his/her collegiate experience. Although inconclusive, Pike's results indicated the relationships could be explained by halo rather than by true connections between satisfaction with college and learning and development.

III. Alumni giving

State appropriations for postsecondary education in the U.S. have plummeted by more than 32 percent since 1979 (Mortenson, 1997). As a result of this decline, institutions of postsecondary education have dramatically searched for other sources of funding ranging from tuition and fees, research, private grants to alumni giving. Trend data from the University of Wisconsin system illustrates this increasing dependency on external funding. In the 1973-74 fiscal year, state support accounted for 52 percent of funding for the UW system budget, while alumni gifts, grants, and trust funds supplied 35 percent of the budget. Twenty-five years later, the primary burden of financing UW has virtually reversed from state to private sources (UW System Administration, 1999). Today, gifts, grants, and trust funds cover 50 percent of the total budget for the UW System, while the state covers only 33 percent.

In this context, understanding what factors predispose alumni to support their alma matter is becoming necessary for maintaining the quality of institutional programs. Our review of the literature suggests alumni giving are a function of two factors: willingness to give and capacity to do so.

Willingness to give seems to be shaped primarily by an alum's perceptions of the quality of his or her collegiate experiences (Leslie & Ramey, 1988; Brittingham & Pezzulo, 1990; Bodigan & Dehne, 1997; Taylor & Martin, 1995). In framing alumni surveys, advocates of this approach recommend including the following indicators: 1) quality of educational experiences, 2) extent to which the institution prepared for a career, 3) degree to which faculty members exerted a positive influence, 4) extent to which the alumni maintains contact with faculty and former classmates, 5) current impressions of the institution, 6) history of involvement with the institution (board service, event attendance, etc.), 7) willingness to use influence on behalf the institution, 8) willingness to consider specific assignments or gifts, and 9) ways in which the alum would consider volunteering.

Positive experiences with the institution per se are not enough to prompt alumni support. While motivation to give is shaped by collegiate experiences, capacity is determined by financial resources (Connolly & Blanchette, 1986). Hueston (1992), Pendel (1985), and Connolly & Blanchette (1986) identified some key indicators of financial, political, and social capacity that could be incorporated into the design of alumni survey questions. Those include: 1) age, 2) family income, 3) career and educational history, 4) current job duties and responsibilities, 5) board memberships with both for-profit and nonprofit organizations, 6) honors, achievements, publications, or creative works, 7) leisure activities and hobbies, 8) spouse's career and educational history, board memberships, activities, achievements, and awards, and 9) ages and schooling of children and grandchildren.

Targeting efforts to all alumni may prove costly and inefficient (Melchiori, 1988b). Sturtevant (2002) recommends that institutional efforts concentrate on the top ten percent of potential donors to the institution. Known as the "90/10 Rule", this approach rests on the fact that ninety percent of the philanthropic support for colleges and universities is derived from just ten percent of the donors (Sturtevant, June 4, 2002). Top donors also have the strongest political connections, which can potentially help the institution gain favorable state and federal legislation. Accordingly, the primary objective of many institutional advancement surveys is to identify alumni who are the most financially or politically able to help an institution achieve its goals.

Methodological concerns. In developing questionnaires for alumni giving, the literature suggests considering several issues. Dessoff (1993) proposes using alumni focus groups to pilot test the questionnaire and clarify ambiguous questions. Focus groups can also provide a forum for a free-flowing expression of ideas, bringing attention to those areas that administrators may not have considered in framing the final questionnaire.

Timing in conducting the alumni survey is also relevant. Ample time must be set aside for the administration and analysis of the survey if is used to test the saliency of ideas for a major capital campaign (Fisher, 1988).

The manner in which questions in an alumni-giving survey are phrased is another consideration. Much of the literature discussed the delicate nature of asking alumni to report their net worth and salary (e.g., Melchiori, 1988; Trimarco, 1994. Some alumni associations have found success in asking alumni for salary ranges that capture their financial capacity, while others ask for estimated household income (Trimarco, 1994).

These sensitive areas are often listed in the surveys as "optional" to be less invasive to alumni who may be put off by such questioning. Again, alumni focus groups may be helpful in advising administrators about the phrasing of sensitive questions. These groups may also be called on to test the survey to determine appropriateness of content and length.

IV. Common methodological issues

The three types of alumni surveys—outcomes based, student engagement and competencies, and alumni giving—share some common methodological challenges. Those challenges pertain to: a) census approach and questionnaire format, b) type of survey, c) design and format, d) cost and timeline, and e) confidentiality.

Census approach and questionnaire format. Depending on the census approach followed and questionnaire format employed, we found that the return rates on alumni surveys can range from 25% to 60% (Enger, Manning, Shain, Talbert & Wright, 1994; Pendel, 1985; Smith & Bers, 1987). Smith and Bers (1987) conducted an experiment examining the effect of four different census approaches on the response rates of alumnus of a community college. The researchers reported the highest response rate (51%) was secured when the surveys followed a 'warm approach', consisting of personalized letters hand-signed by the president with two follow-up postcards featuring 'a color of the college at sunset' (p. 222). The lowest response rate was yielded (30%), when the census approach relied on a 'regular approach' consisting of informal letters with just one plain white card follow-up. Enger and his associates (1994) examined response rates and costs associated with three formats of an alumni questionnaire. The questionnaire formats were: 1) a two-page questionnaire with a return envelope, 2) a one-page questionnaire with a return envelope, and 3) a one-page questionnaire whose reverse side was a self-mailer. Of the three formats employed, researchers found that the one pager with a return enveloped yielded the lowest cost and the highest response rate (27%).

Type of survey (phone, mail or Web). Institutional researchers have at least three options to collect information from alumni: mail, phone and Web-based sources. Determining the appropriate collection method for administering the alumni survey can be guided by such considerations as size of sample, budget and timeframe for completion and the reliability of the results associated to each data collection method (e.g. Fisher, 1988; Melchiori, 1988).

Mail surveys have the highest reliability and lowest cost. They also yield lower interviewer bias than phone surveys. The main drawback of mail surveys is that they produce low response rates (Stevenson, Walleri & Japely, 1985). To bolster response rates, Stevenson, Walleri and Japely (1985) recommend using multiple follow up mailings to non-respondents. These follow up mailings could include a cover letter that more forcefully encourages a response. A third option may be to enlist students to telephone non-respondents. This strategy calls upon persuasion by connecting the potential donor with a student who may resemble his/her background and major. Stevenson and his associates estimate that this option can increase response rate by one-third.

A benefit of telephone surveys is that they have higher response rate and are more likely to be completed in full (Melchiori, 1988). Fisher (1988) recommends hiring and training student staff as a cost effective way to conduct the survey. Phone survey etiquette calls for a notification letter to be sent to alumni prior to the solicitation. This letter should outline the times, dates, and purposes of the survey. Fisher (1988) recommends calling in the evenings as the best time to contact alumni. A drawback of telephone surveys is that they limit the complexity of the questions that might be asked and have higher interviewer bias in comparison to mail surveys (Stevenson, Walleri & Japely, 1985).

Web-based surveys promise to be a highly efficient mechanism in increasing response rates and reducing measurement biases. After all, college graduates are computers savvy and familiar with navigating the Internet (Dillman, 2000). In spite of its significant potential, we were not able to locate studies documenting the relative effectiveness of the Web in relation to mail or phone surveys. A recent study among thousands of undergraduate students attending 276 colleges and universities in 2000, however, gives us tantalizing directions as to how to conduct future studies on the relative effectiveness of Web-based Alumni surveys. Carini, Hayek, Kuh, Kennedy and Ouimet (2003) sought to examine the extent college students' responses to a national survey of engagement varied by either using a paper based or Web-based option. To begin, almost 80% of the undergraduate students sampled opted for the paper version of the questionnaire. Subjects who choose the Web-based survey were more likely to live on campus, of Latino or White heritage, being male and majoring in sciences and math while attending institutions that invested more in academic support. Slightly lower response rates were associated with Web-based survey than with paper-based survey (43% vs. 40%). As far as biases, Carini and his colleagues found the Web-based mode producing slightly more consistent positive answers than the ones produced by paper-based. This pattern remained even after controlling for a variety of students' individual characteristics and characteristics of the institutions they attended. In short, Carini et. al's study does not seem to support the notion Web-based formats could yield higher response rates with smaller bias errors.

Design & format. Best practices in the design alumni surveys suggest that offices including admissions, public affairs, development, development research, career services, institutional research and academic deans should all play a role in the development of the alumni survey (Pollick, 1995; Pendel, 1985; Fisher, 1988). This collaboration among key audiences makes certain that the questionnaire gathers information to support decisions ranging from academic advising, career counseling, admissions, public affairs, institutional research, and academic departments to forming development strategies (Melchiori, 1988).

There are important considerations when formatting the alumni survey. Words and instructions must be simply stated to ensure understandability (Murray, 1994). Many articles encourage practitioners to review survey instruments employed by other schools. Trimarco (1994) emphasizes the importance of keeping the survey brief. The author suggests that surveys with multiple objectives be divided into several short surveys to capture the data. This encourages a higher response rate.

The alumni survey literature suggests that the instrument be tested for content and clarity. Focus groups of alumni can be useful in determining the appropriateness of length and content of the survey. These groups can also be used to verify the clarity of the instructions. For example, alumni focus groups might help to phrase important questions about referencing household and family information and membership of an ethnic group.

Finally, the budget, data entry staff, and computational system must be prepared to coordinate and process the results. The format and length must be designed in such a way that your organizational processes can analyze and report data findings (Trimarco, 1994). Likewise, these production considerations must be driven by the size of the project, the timeframe, and the available funding (Fisher, 1998).

Cost and timeline. Cost is determined by sophistication of methods, size of survey, whether the survey is contracted to inside or outside vendors, and the general aesthetics of the survey (Fisher, 1988). Strategies for reducing costs include having student and alumni volunteers conduct the interviews and enlisting technical support from friends and alumni to carry out the data collection on behalf of the institution (Bonnet, 1993).

Confidentiality. Confidentially is both an issue of legal and professional importance (Melchiori, 1988). It is paramount that the individual identities of the respondents be protected and that safeguards are in place to ensure that the privacy of the respondent is insured.

V. Conclusions

Approximately 90 percent of colleges and universities in the US conduct alumni surveys (Palomba & Banta, 1999). This paper examined three approaches to alumni survey: a) alumni outcomes, 2) student engagement & competencies, and 3) alumni giving. Outcomes or alumni accomplishments approach is by far the oldest and most used. This approach rests on the assumption that alumni accomplishments in the labor force and society can appraise institutional quality.

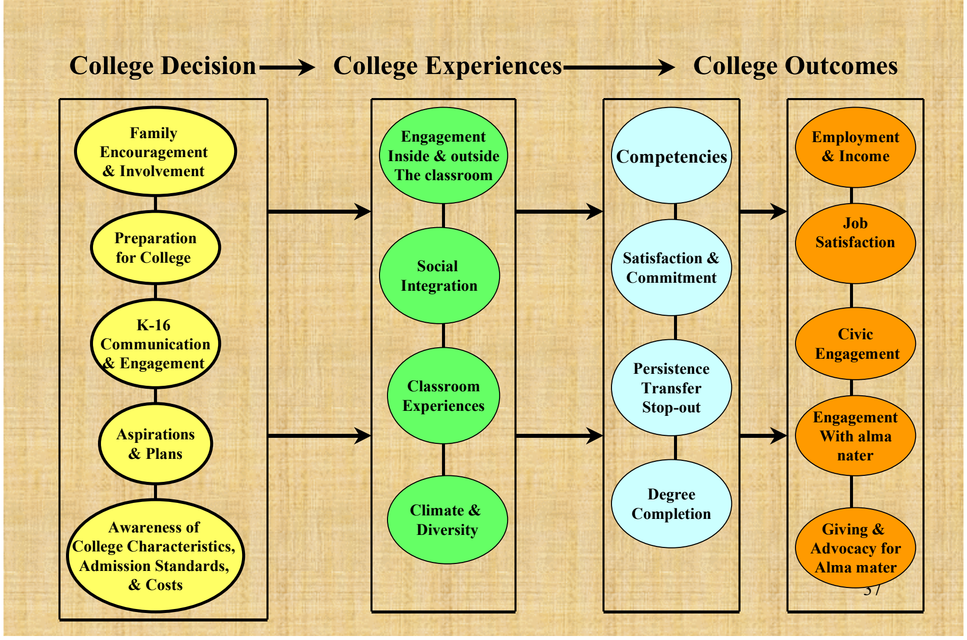
Engagement in college, acquisition and application of competencies and alumni giving are areas gaining increasing interest in the alumni assessment literature. This approach judges institutional success based on effective engagement and instructional practices and acquisition of relevant competencies. The alumni giving approach judges institutional success by the extent to which alumni contribute to the well being of the institution.

Outreach programs, curriculum evaluation, career counseling, complying with accreditation process and even identifying potential donors are some of the byproducts of well-developed alumni surveys. Effective alumni surveys need to meet several criteria. They should be based on research and conceptual frameworks. Accordingly, the content should reflect engagement in effective college-based practices, acquisition and application of competencies as well as willingness to give back to the Alma matter. Reliable results also rest on such methodological considerations as: a) appropriate sampling, b) type of survey, return rates, c) format or design, d) census approach, e) confidentiality, and f) timing.

Capturing data on collegiate experiences, current employment and other accomplishments in one survey can severely limit inferring strong connections between the impacts of college on postsecondary outcomes. Cause and effect and measurement artifacts such as halo effect can inhibit the usefulness of alumni surveys (Pike, 1994; Pascarella, 2001).

Surveying alumni should be part of a comprehensive enrollment management approach. Research shows that the roots of college degree completion take place as early as the 7^{th} grade when parents and their children start making plans for college. This research also shows that on the path to college, the individuals experiences a series of personal growth and developmental stages, which cumulatively prepare them for success in college and beyond (Cabrera & La Nasa, 2000; Cabrera, Kurt & La Nasa, 2002). These stages are summarized in figure 1.

Figure 1. A longitudinal approach to assessing alumni success



We propose that data collection strategies should follow these stages of student development from early college decision to alumni accomplishments. This approach would allow universities to form strong conclusions about the links between college experiences and outcomes at critical stages. In addition, it can simplify data collection, reduce the length of the survey and minimize measurement errors. Figure 2 summarizes the kind of information that can be collected at each stage. Such holistic can only be possible by bringing the collaboration of all those institutional units that have an impact on the college student.

<table>
<tr><th colspan="2">Preparation for College</th><th colspan="2">Collegiate Experiences</th><th>Graduation/
Post College</th></tr>
<tr><th>Middle School
Aspirations & readiness
(7th –10th)</th><th>High School
Application & readiness
(11th-12th)</th><th>Freshman Year</th><th>Junior Year</th><th>Outcomes</th></tr>
<tr><td>School information & transcript
Preparation for college
School district profile</td><td>School information & transcript
Preparation for college
School district profile</td><td>Campus information & transcripts
Enrollment information
Financial aid data
Campus profile
Academic performance</td><td>Campus information & transcripts
Enrollment information
Financial aid data
Campus profile
Academic performance</td><td>Campus information & transcripts
Time to degree
Major & changes
Transfer
Stop-out, return,drop</td></tr>
<tr><td>Student Survey
Family education
Occupation
Encouragement
Family involvement
Saving for college
Aspirations
Plans & intentions</td><td>Student Survey
Family education
Knowledge of careers
Family involvement
Information about universities
Plans & intentions
Transfer plans
Intended major
Inquire process</td><td>Student survey
Orientation & advisement
Remediation
Faculty & peer interactions
Classroom & learning experiences
Family & work responsibilities
Faculty survey</td><td>Student survey
Advising
Faculty & peer interactions
Classroom & learning experiences
Family & work responsibilities
Faculty survey</td><td>Alumni Survey
Grad school
Degrees earned
Occupation/Income
Job/Career/
Satisfaction
Adequacy of college
Preparation
Leadership, service
Awards, recognition
Alumni giving</td></tr>
</table>

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Table 1. Three conceptual approaches to alumni survey

Approach	*Assumption*	*Policy Question(s)*	*Measures*	*Audience*	**Measurement Issues**
1.Outcomes	Institutional quality and effectiveness can be appraised on what alumni have accomplished	• How satisfied are graduates with their employment? • How satisfied are the graduates with the degree granting institution? • To what extent are graduates fully participating in civic activities?	• Job satisfaction. • Satisfaction with the institution. • Income. • Occupational status. • Participation in civic activities. • Demographics	• Accreditation agencies • Employer organizations • Institutions (planning and improvement) • Faculty • Office of career counseling & placement services • State economic development agencies • Legislators • Parents • Perspective students • State regulatory agencies • Foundation boards •Institutional advancement staff •Chancellor •Deans and department chairs	Scope: • Alumni survey • Students' records • Employers surveys • Salary & employment statistics Period of Assessment: • 1-3 years after graduation Sampling methods: • Cohort • Cross-sectional •Census approach **I.** **II. Survey methods** •Telephone •Mail •Web Methodological considerations • Response rate
2. Student engagement & competencies	Institutional quality can be appraised based on what the student did at the institution, learned and applies.	• What are the competencies that college education should foster most? • To what extent are students engaged in effective practices? • To what extent do graduates apply those competencies in the job or in graduate school?	• Measures of engagement inside & outside the classroom • Measures of student growth & development •Measures of enriching educational experiences •Measures of quantity & quality of effort		

3. Alumni giving	Giving is a function of positive experiences with the institution & ability to contribute	• What is the ability and inclination of alumni to support their alma mater through philanthropy, service, and advocacy?	• Perceptions of the quality of college experience. • History of involvement with the institution & nonprofit organizations. • Demographics & measures of wealth		• Measurement errors • Collaboration with campus units • Content valid strategies (focus groups, job analyses) • Relying on alumni & students for interviews • Confidentiality