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A Study of Alumni Engagement and Its Relationship to Giving Behaviors

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A STUDY OF ALUMNI ENGAGEMENT AND
ITS RELATIONSHIP TO GIVING BEHAVIORS

by

Shelby Kloures Radcliffe

A Thesis

Presented to the Faculty of
Bucknell University
In Partial Fulfillment of the Requirements for the Degree of
Master of Sciences in Education

Approved: _____

Candice Stefanou, Thesis Adviser

Lynn M. Hoffman, Department Chairperson

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Abstract

This paper examines the relationship between alumni engagement and two categories of variables, alumni characteristics and alumni giving behavior. The Valley University engagement score was developed using the entire alumni population and information available from the institutional database. The study found that, with the exception of generation, there was no difference in engagement scores based on alumni characteristics. The study also found that the engagement score has a positive correlation to a variety of giving behaviors, including donor status, recent donor status, annual giving behavior (RFM), and adjusted lifetime giving.

To give away money... is an easy matter and in any man's power.
But to decide to whom to give it, and how large and when, and for what purpose and
how, is neither in every man's power-nor an easy matter...Hence it is that such
excellence herein is rare and praiseworthy and noble."

Aristotle

Chapter 1

Introduction

Philanthropy is big business in the United States. According to Giving USA 2010 (*Giving USA*, 2010), total charitable giving in the US exceeded 303 billion dollars in 2009. Over \$40 billion of this total was given to educational organizations, including colleges and universities. While these numbers seem impressive, they represent a sharp decline from previous years; 8.6% less than 2007 totals even when adjusted for inflation (*Giving USA*, 2010, p. 20). The uncertain economy is certainly partly to blame. But competition from other charities and changing attitudes about higher education most likely also contribute significantly to this trend.

Since 1961, when the earliest research into higher education philanthropy was conducted (Taylor & Martin, 1995), researchers have attempted to identify the keys to successful fund raising programs. From qualitative case studies to quantitative analyses of institutional, constituent, and donor data, studies have consistently attempted to identify the common characteristics of successful fund raising programs to inform practitioners about best practices. Indeed, Harrison (1995) found that the more schools spend on fund raising, the more money they raise. But if it were that easy, colleges and universities would simply apply greater and greater resources to the fund raising enterprise.

Investigations of common donor demographic characteristics have yielded little useful information about the most likely donors. Watsyn (2009) demonstrated a positive correlation between age and giving status, a finding that supports the notion that as earning potential increases, individuals are more likely to make charitable gifts. Not surprisingly, research has also shown that higher income is a predictor of donor status (Baade & Sundberg, as cited in Werts & Ronca, 2009) but this provides little useful information for the major gift fund raiser who rarely knows the income of his or her entire constituency or for the annual fund raiser who is tasked with increasing alumni participation and securing gifts of any size. The research consensus is, indeed, that age (chronological or in years since graduation) and income are consistent predictors of giving behavior. After investigations of age and income as they relate to charitable giving, however, the research into donor characteristics becomes quite sparse and provides few insights.

Monks (2003) found that marital status predicts donor status, but this research has never been reproduced. Contradicting studies found, on one hand, that women are more likely to give, and on the other hand, that gender is not predictive of giving behavior (Belfield & Beney, as cited in Sun, Hoffman, & Grady, 2007). McDearmon and Shirley (2009) report that alumni who live closer to their alma mater are more likely to be donors, but this research was done with data from a state university and is therefore difficult to generalize to more national alumni constituencies. McDearmon and Shirley (2009) also discovered a positive correlation between the receipt of loans as a student

and donor status, but Monks (2003) found the opposite. Quite simply, in many cases the research into alumni traits as they relate to donor status contradicts itself. In addition, studies which support or dispute correlations between alumni traits and donor behavior have been conducted with data from single institutions and have never been reproduced, making generalization difficult.

Investigations into alumni attitudes and how they relate to giving behavior have been more promising. The concept of alumni engagement, or how well connected alumni are to their alma mater, has been of interest to researchers and practitioners alike. Clotfelter (2003), Gaier (2005), Hoyt (2004), and Monks (2003), among others, demonstrated that engaged students are more likely to be engaged alumni. Other studies have found that engaged alumni are more likely to be donors (Weerts & Ronca, 2009; Hunter, Jones, & Boger, 1999; Clotfelter, 2002; Gallo & Hubshman, 2003; Hoyt, 2004; Taylor & Martin, 1995). The research clearly establishes that among attitudinal variables, satisfaction with the student experience is by far the strongest predictor of alumni giving behavior. Few development and alumni relations programs can dramatically impact the student experience, however, especially for alumni who graduated long ago. These programs can directly impact the alumni experience though, and in doing so, influence a significant predictor of alumni giving.

The consensus on the importance of alumni engagement produces a real need for college and university advancement offices to study and understand alumni

engagement. The body of research on this topic is problematic for practitioners for several reasons. First, very little of the research is widely available; in most cases it was conducted by practitioner-students who never published their findings. Second, little, if any, of the research on alumni engagement is generalizable. It has been conducted on one school at a time with a unique methodology and limited data sets. Finally, almost all of the research on alumni engagement and giving has been based on self-reported attitudinal behavior, limiting sample sizes and introducing response biases.

Without an industry-wide tool for measuring alumni engagement with the behavioral data that colleges and universities already collect and maintain, there has been no way for advancement offices to easily and consistently quantify their work or to study the relationship between engagement and giving at their institutions. This thesis describes such an effort at Valley University, a private liberal arts college in the Mid-Atlantic region of the United States.

In 2010, Valley University advancement staff worked with private consultants to develop an alumni engagement score which was then applied to the entire alumni database. This study then explored (a) whether there were categorical differences among alumni by engagement score cohorts and (b) whether there were relationships between the engagement score and several types of giving behavior. It is the first known study which does not rely on survey data to explore this connection, making it a

valuable step in the development of an industry-wide methodology for alumni engagement.

Specifically, the study attempted to answer two questions. First, are there statistically significant and practically meaningful differences between Valley alumni who are highly engaged and alumni who are not? Second, is there a relationship between Valley alumni engagement and their giving behavior, and if so, what kind? What the study revealed was rather simple but also quite profound. With the exception of age and generation, there were no significant or meaningful differences in the demographics of Valley alumni across the range of engagement scores. In addition, there most certainly is a relationship between Valley alumni engagement and their giving behavior, and a positive one at that. On one hand, the findings refute professional intuition. The categories professionals rely on to group and understand their constituents are not as useful as expected. On the other hand, the findings support the belief that engagement and giving are related, a belief that provides a foundation for the continued investment in and expansion of alumni programming.

Chapter two of this thesis will provide an overview of the literature on higher education philanthropy. The review is organized into four main categories: research on alumni giving and fund raising practices, research on alumni giving and the external environment, research on alumni giving and institutional characteristics, and finally, research on alumni giving and individual characteristics. The literature in this last

category is examined in greater detail, partly because it is more abundant and also because it is most relevant to this study.

Chapter three of this thesis will provide an outline of the methodology used in the development of the Valley University alumni engagement score as well as the methodology of the analysis conducted for this study. Chapter four and five of this thesis presents the results and discussion with an emphasis on how this study contributes to the academic exploration of philanthropy in higher education and how the outcomes of the study can be useful to Valley University advancement practitioners.

Chapter 2

Literature Review

In almost every dissertation and article on higher education philanthropy, authors begin with the story of higher education philanthropy in general. National support of higher education is diminishing, more and more charities are competing for the philanthropic dollar, expectations for what colleges and universities deliver are increasing, and costs are spiraling out of control making access a significant issue. Whether one studies a large public university or a small private college, there is unanimous agreement among researchers that the need for private funding in higher education is steadily, if not exponentially, increasing and that the primary cohort of private donors is individuals already affiliated with the institution – the alumni.

The earliest academic examination of donors and non-donors was a study of Alfred University alumni conducted by O'Conner in 1961 (Taylor & Martin, 1995). Early research on alumni giving was conducted largely by economists and sociologists and published rarely in peer-reviewed journals. For decades, most of this research was done as part of dissertation work and as a result, it remains difficult to access. As graduate programs in higher education and philanthropy have become more common, however, so too has research begun to originate from within the discipline of philanthropy studies and higher education fund raising. In addition, the creation of the first peer-reviewed

journal in higher education advancement, the *International Journal of Educational Advancement*, and the establishment of research grants and awards from professional associations like the Council for the Advancement and Support of Education (CASE) and the Association of Professional Researchers in Advancement (APRA) have facilitated a significant increase in research activity and availability.

Weerts (2007) found that research on alumni giving focuses on four areas: research into individual donor characteristics, fund raising practices, the external environment, and institutional characteristics. This literature review will summarize the research in each of these areas with special attention to the category of individual donor characteristics. In addition, this review will provide a brief summary of the theoretical frames common in the literature.

Alumni Giving and Fund Raising Practices

Fund raising practices are frequently presented in case study articles and professional association magazines; theoretically grounded research on fund raising practices is far less common. Harrison (1995) compared the cost of fund raising for three years at seventeen schools with a special eye toward institutional characteristics. The goal of the analysis was to estimate the proportion of alumni who donate based on institutional investment in the fund raising enterprise. The study utilized CASE expenditures data during three fiscal years and analyzed the relationships between giving data, fund raising expenditures, and institutional traits. A factor analysis was

utilized to cluster an abundance of variables to a few broad variable sets. A logit regression was employed to predict the percentage of alumni donors at each institution given the institutional traits. The study showed that expenditures on alumni activities have the greatest significance in comparing fund raising success. Most of the literature focuses on researching donor or institutional characteristics when in fact, this study suggests that college relations investments are a more significant factor in fund raising success.

According to Drezner (2009), "the vast majority of the philanthropic literature is based on large-scale quantitative surveys and does not focus on how individuals are encouraged" to give (p. 152). While practitioners consistently claim certain practices are more (or less) effective, the truth is that there is a very small amount of research on fund raising practices.

Alumni Giving and the External Environment

The study of the external environment has focused on two areas. First, how does tax law affect donor behavior and second, how does the economy affect donor behavior? Since tax deductions for charitable gifts lower the cost of giving, one would expect donors residing in deduction states to be more likely to give and to give in greater amounts than otherwise similar donors in non-deduction states. Early research by Taussig, Schwartz, and Feldstein in fact concluded that charitable contributions increase significantly with deductibility (as cited in Leslie and Ramey, 1988).

Feldstein concluded that “voluntary support of institutions of higher education by individuals was concentrated in the upper income classes and the over time these donors were very sensitive to changes in the price of giving resulting from variations in marginal tax rates” (as cited in Leslie & Ramey, 1998, p. 118). More recently Holmes (2009) found that alumni living in states with lower tax deductions give less, a counterintuitive finding. As income increases, however, this effect reverses confirming Holmes' hypothesis that the deductibility of charitable gifts is primarily relevant for those individuals wealthy enough to itemize their taxes and claim such deductions.

Business conditions impact corporate and individual donors differently. In a study of philanthropy and business conditions between 1948 and 1968, Leslie found that corporate giving was positively impacted by good economic conditions, donations from individuals increased most during weak economies which created periods of organizational need (as cited in Leslie & Ramey, 1998). According to Patrick M. Rooney, the executive director of the Center on Philanthropy at Indiana University, the direct correlation between the economy and corporate giving remains. In an interview with *Philanthropy Journal*, Rooney stated that corporate giving is “in large part...driven by changes in corporate profits and overall economic activity” (Boney, 2008, p. 1).

Alumni Giving and Institutional Characteristics

The study of institutional characteristics typically utilizes data from Giving USA and the Voluntary Survey of Education (VSE). Giving USA is an annual publication from

the Giving USA Foundation on data and trends about charitable giving in the United States. Giving USA has been published since 1956 and is one of the richest sources for longitudinal data about philanthropy trends in the country. The Council for Aid to Education (CAE) conducts an annual survey of higher educational institutions which gathers data on institutional characteristics, donor characteristics, and gift characteristics. Data from this survey is made available by subscription and is widely used by authors of college ranking articles and books. Research shows that the type of school (private vs. public), the size of school (small, medium, and large), and the scope of the fund raising operation (in human and financial resources) all affect fund raising outcomes (Leslie & Ramey, 1998). Research supports the notion that spending more money on fund raising results in increased fund raising results (Harrison, 1995), though no attempts have yet been made to compare fund raising expenditures and outcomes at institutions of similar size and prospect pools.

Alumni Giving and Individual Characteristics

For the purposes of this research, the most relevant literature is that on the study of individual donor characteristics. To date there have been two main categories of research into higher education donor characteristics. First, there is a body of research into the demographic characteristics of donors. These studies, primarily conducted at large, state university by graduate students, attempt to identify characteristics which distinguish donors from non-donors or small donors from large donors. Results from these studies are sometimes contradictory and rarely are studies

conducted at more than one institution. As such there has been little consensus in the literature about the common demographic characteristics of donors. Second, there is another body of research into the behaviors, attitudes, and beliefs of donors vs. non-donors. These studies are based on survey data and analyze self-reported information from alumni in combination with institutionally-collected giving data. Consistently these studies find that there are several behaviors and attitudes which are predictive of donor behavior.

Demographic Characteristics of Donors

Age. Hoyt (2004) and Leslie and Ramey (1998) found that age was a significant predictor of donor status in that older alumni were more likely to be donors. Watsyn (2009) identified a number of additional studies which proved the same positive correlation between age and giving status (Bristol, Jr., 1990; Clotfelter, 2001; Conner 2005; Grant & Lindauer, 1986; Harrison, Mitchell, & Peterson, 1995; Koole as cited in Wastyn, 2009; and Quicley, Bingham, & Murray as cited in Wastyn, 2009). Van Syke and Brooks found that age was the most consistent variable affecting giving (as cited in Baldwin, 2008). Similarly, Sun, Hoffman, and Grady (2007) found several studies which found that time since graduation a significant predictor of giving. These studies are confirmed by the findings of McAlexander and Koenig (2001). Bruggink and Siddiqui found that for donors, a one year increase in age increased gift size by 5% (as cited in McDearmon & Shirley, 2009). As more and more college students are of non-traditional age, this research question can better evaluate correlation between years as an

alumnus vs. years of age. Bristol (1990), Wunnava (as cited in Wastyn, 2009), and Okunade (as cited in Sun et al., 1997) report that while age is a positive predictor of giving, the growth of alumni donations declines after age 52.

Income. There is some consensus that age may be a proxy for income as a predictor of donor status. While research has not determined the amount of overlapping correlation between age and income, it is true that the majority, if not all, of the research into demographic characteristics of alumni focused on a general student body which would be mostly comprised of traditional aged students. Some researchers have pointed out that studying years from graduation instead of age would help to distinguish the roles of the two variables more clearly. Regardless, it is clear that higher income is a predictor of donor status (Baade & Sundberg as cited in Weerts & Ronca, 2009; Belfield & Beney as cited in Weerts & Ronca, 2009; Brittingham & Pezzullo, 1990; Bruggink & Siddiqui as cited in Wastyn, 2009; Coltfelter, 2001; Koole as cited in Wastyn, 2009; Monks, 2003; Leslie & Ramey, 1988; Lindhal & Winship as cited in Wastyn, 2009; Olsen, Smith, & Wunnava as cited in Weerts & Ronca, 2009; Schmidt, 2001; Thomas & Smarts as cited in Weerts & Ronca, 2009; and Tsao & Coll as cited in Wastyn 2009). Hernandez-Murillo and Roisman (as cited in Baldwin, 2008) report the claim that "income is by far the most important predictor of giving behavior" (p. 35). There are few dissenting voices to this assertion. Wastyn (2009) reported two studies which found that income did not predict donor status (as income increased, individuals were

no more or less likely to be donors), but that higher income did correlate to higher gift sizes (Schervish & Van Horn, as cited in Watsyn, 2009).

Other Demographic Characteristics. Beyond age and income, there is little depth in the research of other alumni demographic characteristics and how they correlate to giving behavior. Two studies have found that females have a higher propensity to give than males (Belfield & Beney, as cited in Sun et al., 2007; Van Slyke & Brooks, as cited in Baldwin, 2008), but in most studies where gender is considered it is not found to have a correlation to giving behavior. Belfield and Beney (as cited in Sun et al., 2007) and Monks (2003) also found that marital status is a predictor of donor status. Family ties to the alma mater (relatives and/or children who attended) appear to predict donor status (Okunade & Berl as cited in Weerts & Ronca, 2009; Wunnava & Lauze, 2001) but very little of the literature studies this characteristic. Two studies found that distance from the alma mater was statistically significant (Bruggink & Siddiqui, as cited in Sun, et al., 2007; McDearmon & Shirley, 2009) and that alumni who lived closer to their alma mater were more likely to be donors. These studies; however, were conducted on state school alumni populations and should not be considered generalizable to schools which have more nationally distributed student populations.

Several researchers have explored the link between receipt of financial aid as a student and alumni donor status. McDearmon and Shirley (2009) found that receiving loans was not predictive of donor status but that more alumni who graduated without

institutional loans made gifts. Marr et al. (as cited in McDearmon & Shirley, 2009) and Monks (2003) found that receiving student loans had a negative correlation with donor status but that the receipt of need-based grants increased the probability of giving. Hoyt (2004) reported that alumni in donor groups were much more likely to have received a scholarship of \$1,000 or more.

Demographic Characteristics and Status as Occasional vs. Consistent Donors.

While most research in this category focuses on identifying demographic predictors of donor status, Wunnava and Lauze (2000) investigated the difference between occasional donors and consistent donors. In keeping with fund raising practice, this research differentiated between consistent donors who often fall into the LYBUNT (Last Year But Not This) category and occasional donors who often fall into the SYBUNT (Some Years But Not This) category. The research did identify differences in residence, some of which were unexpected. According to their research, half of occasional donors live in states with institutional alumni chapters compared to only 20% of consistent donors, the opposite of what was expected. The study also investigated the donor life cycle. For the vast majority of donors, once giving begins it increases for a period of years, then plateaus, then decreases, then ends. This is commonly referred to as the donor life cycle. Occasional donors, who may be less motivated to give, were found to have a shorter life cycle than consistent donors, a much more intuitive result. Being an alumnus of a Greek-letter organization was a significant predictor of occasional donors but had no predictive quality for consistent donors.

Attitudinal and Behavior Characteristics of Donors

Researchers have evaluated student behaviors and attitudes and how these relate to giving intentions as well as alumni behaviors and attitudes and how these relate to giving intentions and behaviors. This research is typically conducted by analyzing data which is gathered from surveys paired with institutional data (demographic and giving). Attitudes and behaviors evaluated by researchers in survey tools have consistently assessed (a) feelings about the undergraduate experience, (b) feelings about the alma mater's reputation, and (c) involvement with alma mater activities as an alumnus.

Research consistently shows that engaged college students are more likely to become engaged college alumni and that alumni engagement is a predictor of alumni giving (Caboni, 2003; Clotfelter, 2003; Gaier, 2005; Gallo & Hubschman, 2003; Hoyt, 2004; McAlexander & Koenig, 2001; Monks, 2003; Sun et al., 2007; Wastyn, 2009; Weerts, 2007; Weerts & Ronca, 2007). Almost exclusively, the studies which report these outcomes are based on alumni surveys which gather self-reported attitudinal behavior about the college experience, current activity with the college, and current beliefs about the college and giving. More recent studies of alumni giving claim that the beliefs and attitudes of current alumni are far more helpful to practitioners than demographic predictors (Hunter, Jones & Boger, 1999).

Alumni Reports of Student Experience. Early studies of donor attitudes and self-reported behaviors and their correlation with giving behavior found that “financial contributions made by alumni are socially motivated and related to involvement in social groups and alumni associations” (Allen, as cited in Hunter et al., 1999, p. 529). Indeed, many studies found strong connections between the self-reported student experience and alumni involvement and/or giving level. Pearson (1999) reported that Stanford Alumni are more likely to give if they are satisfied with their student experience and/or are engaged as alumni. In a study of alumni who were donors, Weerts and Ronca (2009) found that a high level of student engagement was predictive of alumnus volunteer activity.

In some cases, research showed that alumni who report positive feelings about their college experience were more likely to be involved with their alma maters (more broadly than as volunteers) and that their emotional attachment to the university is a significant predictor of giving (Gaier, 2005; Gallo & Hubschman, 2003; Harrison, 1995; Sun et al., 2007). In one of the few studies on multiple institutions, Monks found that the most significant determinant of alumni giving level was satisfaction with the undergraduate experience (Monks, 2002). This finding was supported by Coltfelter (2003) and McDearmon and Shirley (2009), who reported that donations are highly correlated to satisfaction with the college experience. While alumni giving rates do not “adequately measure graduates’ satisfaction with educational experience” (Brant &

Regan, 2002, p. 24), research clearly demonstrates that satisfaction with the college experience plays a significant role in alumni giving.

Alumni Engagement. Whether engagement comes in the form of participating in social alumni groups (Allen as cited in Hunter, Jones, & Boger, 1999), reading alumni publications (Weerts & Ronca, 2009), visiting campus (Shadoian, as cited in Sun et al., 2007), attending events (Hunter et al., 1999; Netzer, Latin, & Srinivasan, 2008), or serving in a formal volunteer role (Van Slyke & Brooks, as cited in Baldwin, 2008), researchers agree that alumni who are engaged with the institution are more likely to give (Brittingham & Pezzullo, 1990; Coltfelter, 2003; Gallo & Hubschman, 2003; Heckman & Guskey, 1998; Hoyt, 2004; Hunter et al., 1999; Miracle, as cited in Weerts & Ronca, 2009; Oglesby, as cited in Sun et al., 2007; Taylor & Martin, 1995). Wastyn (2009) reported that in his unpublished dissertation, Conner (2005) found no difference in the level of alumni involvement between donors and non-donors, this being the one dissenting voice in the literature. Hunter et al. found that the best predictors are attachment to the school and participation in alumni events (1999). In addition, Korvas found that the longer the engagement continues, the more developed the relationship between alumnus and alma mater, the more generous alumni are over time (as cited in Weerts & Ronca, 2009).

Many studies have shown that alumnus involvement with the alma mater was a significant variable in alumni giving (Brittingham & Pezzullo, 1990; Gallo & Hubschman,

2003; Heckman & Guskey, 1998; Hoyt, 2004; McDearmon & Shirley, 2009; Sun et al., 2007; Weerts & Ronca, 2009). Schmidt (2001) found "no conflicting findings to suggest that emotional attachment to the institution is not a determining factor in donor status or donor level" (p. 23). Hoyt (2004) suggested that alumni "who have greater involvement in alumni activities...are more likely to perceive a college need for donations [and] as a result, these alumni are more likely to donate (p. 19)."

Proxy Data for Attachment. Since alumni survey results can only be collected on a portion of the alumni population and almost always come with a response bias (those alumni who are more engaged may be more likely to respond to surveys), some researchers have attempted to find proxy variables for attachment. Tom and Elmer (1994) found that alumni who owned insignia goods were more willing to give. Heuston (1992) suggests that attendance at reunions and other university functions is a proxy for emotional investment.

Theoretical Foundations

Students of philanthropy have attempted to identify a theoretical foundation for the study of charitable giving but there is little consensus in the literature. Common frameworks cited in the literature include economic and sociological frameworks. One economic theory which can be applied to philanthropy is utility theory, based on the assumptions that people prefer outcomes which maximize the utility of their actions and that people behave independently and rationally based on complete information. A

commonly referenced sociological framework is altruism, often cited by researchers of philanthropy as a "primary motive for why individuals make [charitable] donations" (Mann, 2007). Altruism suggests that charitable persons give to non-profit organizations due to an obligation to provide collective goods and services to society. The idea that donors derive utility from providing service to recipients or a public benefit through charity (Keating, Pitts, & Appel, as cited in Weerts & Ronca, 2009) is sometimes referred to as 'impure altruism.' This combination of the economic and altruism perspectives has become more popular in recent research. Most researchers, however, agree with Hunter et al. (1999) who stated that there are "more promising models of individual behavior as donors depart from models of pure altruism in favor of exchange models" (p. 531). Social exchange theory focuses on the human interaction during the social exchange, in the case of philanthropy during the act of gift making and receiving (Sun et al., 2007).

Equity Theory posits that "society rewards individuals for equity in their interactions with others" (Sun et al., 2007, p. 310). The theory suggests that imbalance in relationships causes stress and, accordingly, philanthropic acts are attempts on the part of the donor to balance the abundance in their lives by distributing wealth to organizations or people who are less fortunate.

Researchers who base their work on Expectancy Theory discuss donor awareness of need and efficacy. They posit that people give based on whether they feel that the

organization needs their support and whether their gift will make a difference to the organization (Vroom, as cited in Werts & Ronca, 2009). This same argument is utilized by researchers who discuss Utility Theory because those alumni who feel that the institution needs their support may derive more utility (satisfaction) from giving and thus may make a larger gift than those not holding this belief (Werts & Ronca, 2009).

Utility Maximization Theory, in fact, focuses on the intangible rewards of giving (such as a boost in self-esteem from affiliation or increased happiness from renewing the connection with alma mater). Yoo and Harrison found that intangible rewards of giving increased levels of alumni gifts, suggesting that utility maximization relates to giving levels (as cited in Weerts & Ronca, 2009). "Whether it relates to tax advantages, a desire to improve society, the potential to reap intangible rewards, or an ability to foster positive social interactions, each of these motivations for giving relate to maximizing one's satisfaction" (Weerts & Ronca, 2009, p. 98).

Social exchange theory suggests that an individual's decision to give is not pure altruism, but part of an exchange cycle. The donor makes a gift and in return receives emotional benefits such as positive feelings, connection, access, and even influence. Sun et al. (2007) explain that an "exchange occurs only when both parties in the exchange find their rewards attractive" (p. 310). Recently, social exchange theory has emerged as the favorite of practitioners and a commonly cited theory in peer-reviewed academic research as well.

In her doctoral dissertation, Karen Meshad Baldwin (2008) defines the six major categories of donor motivation found in the literature: "religious, spiritual, or philosophical beliefs; guilt; recognition or ego; obligation; satisfaction or joy; and belief in the mission or cause" (p. 35). Some researchers look to economic frameworks to understand philanthropic behavior while others suggest that social and psychological motivations play a powerful role, but in the end, "philanthropy cannot be viewed in the context of a single field or discipline" (Mann, 2007, p. 36). Instead, Mann (2007) suggests that philanthropy is "embedded throughout many traditional scholarly areas, including organizational behavior, sociology, economics, consumer behavior, and marketing and sales" (p. 36).

Chapter 3

Methodology

This study explored the connection between several demographic characteristics of Valley University (hereafter referred to as “Valley”) alumni and their engagement with the university as alumni (hereafter called “alumni engagement”) as well as the correlation between alumni engagement and alumni giving behavior. Specifically, the study attempted to answer these research questions:

R1: Are there statistically significant and practically meaningful differences between Valley alumni who are highly engaged and alumni who are not engaged?

R2: Is there a relationship between Valley alumni engagement and their giving behavior, and if so, what kind of relationship?

Designing the Engagement Score

In the fall of 2010, Valley University hired higher education statistical consultants to develop an alumni engagement score. Alumni engagement is a term used in university advancement offices to describe the way alumni are, or are not, connected to their alma maters. There is no industry-wide definition of alumni engagement. The term can be used to describe attitudes, such as how alumni self-report feelings of emotional attachment to their alma mater, or behaviors, such as how many events an

alumnus attends or what volunteer roles an alumnus has, or a combination of both. At Valley, alumni engagement is used to describe quantifiable behaviors which demonstrate connection to the University.

Valley University alumni relations staff members were consulted as experts during the score development process. A policy capturing technique was used to rate every living, degreed alumnus for his or her level of engagement with Valley University, thus creating a unique engagement score for each. Policy capturing is a statistical method used to convert professional assessment into a numerical formula which can reproduce that assessment. According to Kline and Sulsky (1995), the goal of the policy capturing approach is to “understand an individual's decision making ‘policy’ by observing the relationships between the decision cues given to the individual (e.g., GPA, GRE scores), and the final decision made by the individual (e.g., probability of accepting the student into graduate school) and then modeling that relationship using an idiographic multiple regression analysis (i.e., regression analysis carried out for a single individual). The results of the analysis provide a description of how the individual decision-maker weights the various cues to arrive at his or her decision” (Kline & Sulsky, 1995, p. 394).

The goal, in this case, was to develop a numerical formula which would reproduce the collective staff’s assessment of low to high engagement based primarily on documentation of alumni behavior, as opposed to alumni self-reported behavior.

The first part of the process involved identifying available variables on alumni behavior and evaluating the variable data sets. It is important to note that giving behavior variables were not used in the policy capturing exercise. This intentional omission was significant for several reasons. First, it was extremely important to the alumni relations professionals that the engagement score could be a tool to measure their effectiveness in building relationships, not in raising money. Second, it was critical to the analysis of correlation between engagement behavior and giving that the engagement score be based on variables that would not serve as proxies for, or references to, giving behavior. Finally, while few colleges and universities have developed engagement scores using institutionally owned data rather than survey data, no published studies were identified that excluded giving variables from their scores, making this research especially unique.

When evaluating variables for inclusion, the consultants and University staff considered the following: Is this piece of data available on all alumni and for what period of time? Is the data accurate? Is the data serving as a proxy for giving behavior? Data points which were not available across the entire population and data sets which were questioned for accuracy were excluded from the analysis.

An example of a data set that was considered but rejected for inclusion in the list of variables is Club Tier. Valley University has a tiered Alumni Club program, where Tier

One Clubs are very active and provide a robust event calendar, Tier Two Clubs are less active with a more limited event calendar, and Tier Three Clubs are very small and may not even have one event per year. Analysis of this data showed that the tier system was constantly changing and therefore the current status of an alumnus' Alumni Club Tier may have changed very recently. Consultants and university staff agreed that this data set was too problematic for inclusion as a variable.

Another data set that was considered for inclusion but then rejected was student activity data. While Valley University had very good data on student participation in varsity athletics and social Greek organizations for the alumni population, efforts to track other student activities have been much more recent. Data on student activities such as admissions tour guides, orientation leaders, student calling program callers, homecoming hosts and hostesses, and reunion ambassadors was available inconsistently at best, and not-at-all, at worst. Again, consultants and university staff agreed that this data set was too problematic for inclusion as a variable.

A final example of data that was considered for inclusion but then rejected was bequest society membership. While it is true that alumni who have recorded bequest intentions which support the university are likely to be engaged alumni, this variable clearly served as a proxy for donor status and was therefore rejected for inclusion as a variable for the policy capturing exercise. Table 1 provides the final list of the variables which were used in the policy capturing exercise.

Table 1
Variables used in the policy capturing exercise

ID Number	Unique identifier for the alumnus in the Valley University alumni database
Class Year	For alumni, “preferred” class year, which is the graduating class with which the alumnus identifies most strongly. This is used most frequently for alumni who left Valley University during a war and then returned later to complete their degree. Most of these alumni prefer to be identified with the class year they were planning to graduate when they matriculated, not the class year they actually graduated.
Number of Relatives	The number of relatives listed in the constituent’s database record who also have a Valley University record. This can include Valley University parents who are not alumni, Valley University parents who are alumni, spouses/partners who are alumni, children who are alumni, and other relatives who are alumni.
Valley Spouse	Indicates constituents whose current spouse/partner also attended Valley University
Valley Parent	Indicates constituents who have at least one parent (living or deceased) who attended Valley
Non-Valley Child	Indicates constituents who have reported at least one child who did not attend or has not yet attended Valley
E-Mailable	Indicates constituents who have provided an e-mail address
Business Phone	Indicates constituents who have a business phone listed in the alumni database
Solicitible	Indicates constituents who have contact information in the alumni database and have not requested “no solicitation”

Online Alumni Community	Indicates constituents who are registered in the online-alumni community
Affinity Group	Indicates that the constituent is a member of an Alumni Relations & Career Development Center Affinity Group
Event Count	The number of the alumni database events that the constituent has attended. Data for this field exists from 1995-present.
Reunion Attendance Count	The number of Reunions that the constituent has attended within years for which the data is available electronically (1996, 1997, 2000-2010)
Year Most Recent Reunion Attended	If the constituent has attended Reunion, the most recent year in which this attendance occurred
Years of Volunteering	The total number of years in which the constituent has a volunteer role listed in the alumni database
Volunteer Activity Count	The number of formal volunteer roles in which the alumnus has served
Internship/Externship	Indicates constituents who offered to host an internship/externship
Mentoring	Indicates constituents who have registered a willingness to mentor a student
Number of Contacts	The number of contacts in the constituent's record with the contact type of personal visit, campus visit, contact copy, cancelled visit, event, e-mail/letter, gift/pledge RGP transaction posted, phone call, presidential response draft, presidential survey response, student calling comment, and/or televisit
Campus Visit	Indicates constituents who have a recorded campus visit in the alumni database; Campus Visits are all-day on-campus visits customized for constituents who often include class observation and/or presentation, meetings with faculty

and/or administrators, presentations to the Valley Community, and participation in major campus events

The second part of the process involved creating a profile report that included all of the selected variables in an accessible format. A sample profile is included in Appendix A. The entire alumni relations team gathered for a one hour profile review and rating session. During this session, each rater reviewed a set of 100 profiles and was asked to grade each profile using a 13 point scale (F, D-, D, D+, C, and so on) for engagement level, where an F was the lowest engagement grade and an A+ was the highest engagement grade. The raters were unaware of this, but in each set of 100 profiles, 75 were unique (profiles 1-75) and 25 were duplicates (76-100) to allow for the evaluation of intra-rater reliability. Raters were told to complete the profile review and rating process without too much analysis, but instead to rely on their professional opinion. Raters were also told to work alone and to avoid looking at colleagues' ratings or sharing notes or observations.

An analysis of intra-rater reliability was performed by computing the Pearson's Product Moment Correlation Coefficient between each rater's grading of the first 25 profiles and the last 25 profiles, which were duplicates. These correlations are listed in Appendix B. The correlations ranged from $r = .276$ to $r = .913$. Low intra-rater reliability indicated that a rater was significantly inconsistent in rating the same exact data from one moment to the next. This suggested that the rater did not have a clear definition in his/her own mind for low to high alumni engagement, which is necessary for the policy

capturing exercise to create a consistent and valid predictor equation. University staff and the consultants agreed to eliminate all raters with an inter-rater correlation coefficient below .40. This eliminated one rater from the remainder of the analysis and resulted in a mean inter-rater reliability coefficient of .762.

Two steps were taken to evaluate inter-rater reliability. First, the Pearson's Product Moment Correlation Coefficient was calculated for the raters' scores on each of the 75 unique profiles resulting in an r value range between .559 and .903, with a mean inter-rater reliability coefficient of .781. Second, a correlation matrix showed the inter-rater r values. An inter-rater reliability of .70 or above provides a reasonable estimate of engagement that is locally defined, and showed that the analysis will be built upon trustworthy ratings.

The Engagement Score Formula

The intra-rater and inter-rater analysis provided sufficient confidence to the investigator and the statistical consultants that proceeding with the policy capturing technique was feasible. At this point, the consultants collapsed the ratings of all 23 raters for each profile. Multiple regression analysis resulted in a formula which could generate an outcome variable Y which had a very strong correlation to the collapsed rater grades ($r = .0787$). All of the variables were used in the formula, in spite of the fact that the correlation for three of them was not significant at the .05 level (Number of Valley Relatives, Willing to Mentor, and Non-Valley Child) which resulted in an r^2 value

of 62.3% and an adjusted r^2 value of 61.9%. The formula created a predicted Y (engagement score) with the highest possible correlation to the actual Y (the collapsed engagement rating from the policy capturing exercise). This was done to minimize the difference between the actual rating and the predicted rating. This preliminary engagement score formula is provided in Appendix C.

After the preliminary engagement score formula was developed, additional variable data became available. This data, listed in Table 2, provided significant information on alumni on-line community behavior.

Table 2

Additional variables considered after the policy capturing exercise

Online Alumni Community Registration Date	If the constituent is registered in the online alumni community, the date he/she registered.
Last Login Date	If the constituent is registered in the online alumni community, the most recent date he/she logged in.
Number of Logins	Number of days that the constituent has logged into the online alumni community since his/her registration.
Days Since Registration	The number of days since the constituent registered in the online alumni community
Days Since Login	The number of days since the constituent logged in to the online alumni community

In addition, review of the preliminary score revealed that two individuals who had both attended five events, but whose last event attendance was in 1996 and 2009

respectively would, with all other variables being equal, receive the same engagement score. The same was true for service as a volunteer. To address this, two additional data points listed in Table 3 were added to the analysis.

Table 3
Recency variables added to the analysis

Latest Year Event Attend	If the constituent has attended any events which are recorded in the alumni database event (including Reunion), the most recent year in which this attendance occurred.
Year of Most Recent Volunteering	If the constituent has volunteered for a formal volunteer role, the most recent year in which this volunteering occurred.

Rather than repeat the policy capturing exercise, the consultants built a regression model where the dependent variable was the preliminary engagement score and the independent variables were the new variables described above. Then the predicted values from this regression model were added to the preliminary engagement score to provide "extra credit" for those alumni who showed additional engagement behavior. In point of fact, the new scores increased the apparent engagement of some alumni, decreased the apparent engagement of others, and left some unchanged. As a result of the additional analysis, the final engagement score formula was developed. This formula is provided in Appendix D. Using this formula, an engagement score was created for each alumnus in the advancement database.

Once the engagement score was entered into the advancement database, a dataset was developed for the study. This data set included all of the variables used in the score as well as additional demographic, activity, and giving behavior variables. These additional variables are listed in Table 4.

Table 4
Additional variables utilized in study

Gender	Male or Female
Greek	If the constituent was a member of a fraternity or sorority as an undergraduate at Valley.
Varsity Sports	If the constituent was a member of a varsity athletic team as an undergraduate at Valley.
Class Year Decade	Class year transformed into class year decades. Classes between 1920-1929 became 1920, between 1930-1939 became 1930, etc.
Generation	Birth date transformed into generations (Greatest, Silent, Baby Boom, Generation X, Millennial).
College	College which awarded the undergraduate degree(s): College of Engineering, College of Arts & Sciences, or both
Degree Type	Degree type awarded: BS, BA, or BSBA
Donor Indicator	Indicates individuals who have made at least one gift to Valley
FY10 Donor Indicator	Indicates individuals who made at least one gift to Valley in FY10

Cornerstone Community	Indicates individuals who are members of the Cornerstone Community in FY11 (gifts to Valley in FY11, FY10, and FY09)
Cornerstone Renewals	Indicates individuals who were members of the Cornerstone Community in FY10, but not yet in FY11 (gifts to Valley in FY10, FY09, and FY08)
Cornerstone Prospects	Indicates individuals who have two years of consecutive giving and will be members of the Cornerstone Community if they make a gift in FY11 (gifts to Valley in FY10 and FY09, but not in FY08 and not yet in FY11)
Last Gift Date	This is the date of the most recent gift or pledge payment made by the constituent.
Lifetime Giving	All multiple credit, memo credit, and match projections associated with a donor.
Adjusted Lifetime Giving	Lifetime giving divided by the number of years since graduation
RFM Score	Recency, Frequency, and Monetary Score; the formula for this score is in Appendix E.
R Score	The recency portion of the RFM score
F Score	The frequency portion of the RFM score
M Score	The monetary portion of the RFM score
Bequest Society Indicator	Indicates constituents who have indicated that they have Valley in their estate plans

Analysis

Due to the fact that some of that data which was used in the policy capturing exercise was only available from 1995 forward, the distribution of the alumni engagement score was studied for three populations: the entire alumni population, the

mature alumni population (with graduation years prior to 1995) and the young alumni population (with graduation years from 1995 forward). An independent t-test was run on these populations to determine if there was significant variance. These populations were utilized during much of the remaining analysis for research question one.

Descriptive statistics were used to investigate the mean of the dependent variable, engagement score, for the independent categorical variables of men/women, Greek/independent, varsity athlete/non-athlete, college, degree type, and generation.

For the variables of men/women, Greek independent, and varsity athlete/non-athlete, an independent t-test was run to evaluate whether or not there were statistically significant differences between the mean engagement scores. When statistically significant differences were found, a Cohen's d value was calculated to determine if the statistical difference was also meaningful. For the variables of college, degree type, and generation, an analysis of variance (ANOVA) was run to evaluate whether or not there were statistically significant differences between the mean engagement scores. When a statistically significant difference was identified, posthoc testing (Tukey's) was conducted to identify where the significant differences existed. Then, a Cohen's d value was calculated to determine if that difference was also meaningful.

To investigate the relationship between the alumni engagement score variable and the giving variables of donor status, FY10 donor status, Cornerstone Community

status, Cornerstone Renewal status, Cornerstone prospect status, Bequest Society membership, RFM score, R score, F score, and M score, correlation coefficients were calculated .

Chapter Four

Results

Defining the Population

An alumni engagement score was calculated for all living (as of January 1, 2011), degreed alumni and the resulting data set contained 39,861 records. The engagement score is a number which represents a practitioner's assessment of how involved an alumnus is with Valley based on his or her activities since graduation, such as volunteering, event attendance, and participation in the online alumni community. The engagement scores range in value from 0.0 to 13.0. The distribution of the engagement score met the assumptions of normality. The mean engagement score for the entire population is 7.18, the median engagement score is 7.0, and the mode engagement score is 5.0. The engagement score for the whole alumni population has a standard deviation of 2.86.

A review of the data set utilized to build the score revealed that, while Valley University has a very strong data set on alumni behaviors in comparison to most colleges and universities, the data set remains significantly limited. Information on event attendance and volunteer activities is far more robust from 1995 forward. Therefore, an alumnus who graduated in 1960 and attended his fifth and 10th reunions would not have these events reflected in his engagement score. Alternately, an

alumnus who graduated in 1998 and attended his fifth and 10th reunions would have these events reflected in his engagement score.

When alumni who graduated in 1995 or later are considered, the population size is reduced to 13,495, still a substantial research population. The distribution of the engagement score for this population also meets the assumptions of normality. Among this younger population, the mean engagement score is 7.811, the median engagement score is 8.0, and the mode is 5.0. The engagement score of the young alumni population has a standard deviation of 2.55.

When only alumni who graduated before 1995 are considered, the population size is reduced to 26,366. The distribution of the engagement score for this population also meets the assumptions of normality. For this population of mature alumni, the mean engagement score is 6.86, the median score is 6.0, and the mode is 4.0. The standard deviation of the engagement score for the mature alumni population is 2.95. Table 5 shows the population sizes, mean engagement scores, and standard deviations for all three populations (all alumni, mature alumni, and young alumni).

Table 5
Population Size, Mean, and Standard Deviation of Population Groups

Population	<i>N</i>	μ	σ
All Alumni	39,861	7.18	2.86
Mature Alumni	26,366	6.86	2.95
Young Alumni	13,485	7.81	2.55

An independent t-test showed that there was a statistically significant difference between the mean engagement scores of mature and young alumni groups ($t_{39859} = -33.40, p < 0.01$) with young alumni having higher engagement scores ($\mu = 7.81; \sigma = 2.55$) than the mature alumni ($\mu = 6.86; \sigma = 2.95$). This difference, however, is not a meaningful one ($d = 0.4261$).

Research Question 1

Are there statistically significant and practically meaningful differences in engagement levels among significant cohorts of alumni?

To answer the first research question, an analysis of engagement score on the basis of gender, student activity participation (social Greek organizations and varsity athletics), college, degree type, and generation was conducted.

Gender. Among the all population groups (all, mature, and young alumni) women have a higher mean engagement score than men. In the total alumni population, the difference between the engagement scores of men ($\mu = 7.18; \sigma = 2.86$) and women ($\mu = 7.81; \sigma = 2.55$) was statistically significant ($t_{38327} = -15.195, p = .00$) but not meaningful ($d = 0.1531$). In the mature alumni population, the difference between the engagement scores of men ($\mu = 6.86; \sigma = 2.95$) and women ($\mu = 7.0; \sigma = 2.97$) was also statistically significant ($t_{26364} = -6.777, p = .00$) but not meaningful ($d = 0.0478$). In the young alumni population, the difference between the engagement

scores of men ($\mu = 7.5$: $\sigma = 2.48$) and women ($\mu = 8.12$: $\sigma = 2.58$) was also statistically significant ($t_{13484} = -14.227$, $p = .00$) but not meaningful ($d = 0.35$). Table 6 shows the population sizes, engagement score means, and standard deviations for males and females by each population group (all alumni, mature alumni, and young alumni).

Table 6
Mean engagement scores for men and women in all three populations

	Total <i>N</i>	Male				Female			
		Population		Engagement Score		Population		Engagement Score	
		%	<i>N</i>	μ	σ	%	<i>N</i>	μ	σ
All Alumni	39,861	54.5%	21,705	7.18	2.86	45.5%	18,156	7.81	2.55
Mature Alumni	26,366	56.9%	15,001	6.86	2.95	43.1%	11,365	7.00	2.97
Young Alumni	13,495	49.6%	6,704	7.50	2.48	50.3%	6,791	8.12	2.58

Greek Life. Among all of the population groups, Greek alumni have a higher mean engagement score than Independent alumni. In the entire alumni population, the difference between the engagement scores of Greek ($\mu = 7.5$: $\sigma = 2.91$) and independent ($\mu = 6.71$: $\sigma = 2.70$) alumni was statistically significant ($t_{35904} = -27.378$, $p = .00$), but not meaningful ($d = 0.3458$). In the mature alumni population, the difference between the engagement scores of Greek ($\mu = 7.17$: $\sigma = 3.01$) and independent ($\mu = 6.37$: $\sigma = 2.79$) alumni was statistically significant ($t_{23124} = -22.101$, $p = .00$) but not meaningful ($d =$

0.3212). In the young alumni population, the difference between the engagement scores of Greek ($\mu = 8.15$; $\sigma = 2.59$) and independent ($\mu = 7.34$; $\sigma = 2.41$) alumni was statistically significant ($t_{12663} = -18.783$, $p = .00$) but not meaningful ($d = 0.4133$). Table 7 shows the population sizes, the mean engagement scores, and the standard deviations for Greek and independent alumni in all three populations (all alumni, mature alumni, and young alumni).

Table 7

Mean engagement scores for Greek and independent alumni

	Greek				Independent			
	Population		Engagement Score		Population		Engagement Score	
	%	<i>N</i>	μ	σ	%	<i>N</i>	μ	σ
All Alumni	60.0%	23,909	7.50	2.91	40%	15,952	6.71	2.70
Mature Alumni	61.0%	16,075	7.17	3.01	39.0%	10,291	6.37	2.79
Young Alumni	58.1%	7,834	8.15	2.59	41.9%	5,661	7.34	2.41

Varsity Athletics. In the whole alumni population, alumni who were varsity athletes as undergraduates have a higher engagement score ($\mu = 7.3092$, $\sigma = 2.99508$) than non-athletes ($\mu = 6.7256$, $\sigma = 2.92059$). This is also true for the mature alumni population, where the varsity athletes ($\mu = 7.31$; $\sigma = 3.0$) have a higher engagement score than non-athletes ($\mu = 6.73$; $\sigma = 2.92$). In the whole alumni population, the

difference between the engagement scores of athlete and non-athlete alumni was statistically significant ($t_{39859} = -12.609$, $p = .00$) but not meaningful ($d = 0.1986$). In the mature alumni population, the difference between the engagement scores of athlete and non-athlete alumni was statistically significant ($t_{9732} = -13.380$, $p = .00$) but not meaningful ($d = 0.1986$). In the young population, the difference between the engagement scores of athlete ($\mu = 7.81$; $\sigma = 2.51$) and non-athlete ($\mu = 7.81$; $\sigma = 2.58$) alumni was not statistically significant ($t_{6845} = 0.171$, $p > .864$). Table 8 shows the populations, mean engagement scores, and standard deviations of athletes vs. non-athletes for all three population groups (all alumni, mature alumni, and young alumni).

Table 8

Mean engagement scores for athlete and non-athlete and independent alumni

	Varsity Athletes				Non-Athletes			
	Population		Engagement Score		Population		Engagement Score	
	%	<i>N</i>	μ	σ	%	<i>N</i>	μ	σ
All Alumni	24.5%	9,764	7.50	2.83	75.5%	30,097	7.08	2.86
Mature Alumni	23.0%	6,052	7.31	3.00	77.0%	20,314	6.73	2.92
Young Alumni	27.5%	3,712	7.81	2.51	72.3%	9,783	7.81	2.58

College. Mean engagement scores of alumni with degrees from the college of engineering ($\mu = 7.14$; $\sigma = 2.84$) are not different from those of alumni with degrees from the college of arts & sciences ($\mu = 7.20$; $\sigma = 2.86$), nor are they different from alumni with degrees from both colleges ($\mu = 7.41$; $\sigma = 2.87$). An ANOVA revealed that the differences between the mean engagement scores among these population groups (alumni with degrees from the college of engineering, the college or arts & sciences, or both) are not significant ($F_{(3, 39748)} = 3.114$, $p = .025$). Table 9 shows the populations, mean engagement scores, and standard deviations for alumni based on college.

Table 9
Population, mean engagement scores, and standard deviations for alumni based on college.

College	<i>N</i>	μ	σ
All Alumni	39,752	7.12	2.85
College of Engineering	10,987	7.14	2.84
College of Arts & Sciences	27,916	7.20	2.86
Both Colleges	839	7.41	2.87

An ANOVA found that there is a statistically significant difference in the mean engagement scores between alumni from the various college groups among the mature alumni population ($F_{(3, 26254)} = 7.963$, $p = .00$). Tukey's post-hoc test showed that there is a pairwise difference between all college pairs. Among mature alumni, alumni who graduated with degrees from both colleges (the BSBA) have higher engagement scores

($\mu = 7.25$; $\sigma = 2.90$) than those with degrees from the college of arts & sciences ($\mu = 6.90$; $\sigma = 2.96$), who have higher engagement scores than those with degrees from the college of engineering ($\mu = 6.76$; $\sigma = 2.91$). These differences, however, are not meaningful ($d = .12$). A second ANOVA found that there is no statistically significant difference in the mean engagement scores between alumni from the various colleges among the young alumni population ($F_{(3, 13490)} = 3.681$, $p = .012$).

Table 10 shows the populations, mean engagement scores, and standard deviations of alumni by college of graduation for the mature and young alumni populations.

Table 10

Mean engagement scores by college of graduation for mature and young populations

	Mature Alumni				Young Alumni			
	Population		Engagement Score		Population		Engagement Score	
	%	<i>N</i>	μ	σ	%	<i>N</i>	μ	σ
College of Engineering	65.3%	7,173	6.76	2.91	34.7%	3,814	7.86	2.55
College of Arts & Sciences	65.8%	18,371	6.90	2.96	34.2%	9,545	7.78	2.55
Both Colleges	84.3%	707	7.25	2.90	15.7%	132	8.30	2.54

Degree Type. When degree type is considered, alumni who graduated with a BS have a higher engagement score ($\mu = 7.33$; $\sigma = 2.92$) than alumni who graduated with a BA ($\mu = 7.11$; $\sigma = 2.83$). An ANOVA revealed that the differences between these means is significant ($F_{(3, 39748)} = 18.974$, $p = .00$). Tukey's post-hoc test showed that the only pairwise difference is between alumni with BS and alumni with a BA. This difference, however, is not meaningful ($d = .08$). Table 11 shows the population, mean engagement scores, and standard deviations for all alumni with each degree type, while Table 12 shows the population, mean engagements scores, and standard deviations for young and mature alumni with each degree type.

Table 11
Mean engagement scores by degree type

College	<i>N</i>	μ	σ
All Alumni	39,752	7.12	2.85
BS	13,235	7.33	2.92
BA	25,674	7.11	2.83
BSBA	833	7.39	2.86

Table 12
Mean engagement scores by degree type for mature and young populations

	Mature Alumni				Young Alumni			
	Population		Engagement Score		Population		Engagement Score	
	%	<i>N</i>	μ	Σ	%	<i>N</i>	μ	σ
All Alumni	66.1%	26,258	6.87	2.95	33.9%	13,494	7.81	2.55
BS	63.1%	8,353	6.89	3.00	36.9%	4,882	8.08	2.60
BA	67.0%	17,191	6.84	2.92	33.0%	8,483	7.66	2.51
BSBA	85.0%	707	7.25	2.90	15.0%	126	8.19	2.53

Generation. Because higher education advancement practitioners often develop programming around generations and life-cycle stages, it was important to explore how the engagement score did or did not vary by the actual ages of the constituents in the population. To do this, alumni birthdates were used to group the population by generations. Generations were defined as follows:

Generation 1 (*N* = 785) The Greatest Generation includes individuals born between January 1, 1901 and December 31, 1924.

Generation 2 (*N* = 6,563) The Silent Generation includes individuals born between January 1, 1925 and December 31, 1945.

Generation 3 (*N* = 12,528) The Baby Boom Generation includes individuals born between January 1, 1946 and December 31, 1964.

Generation 4 ($N = 14,815$) Generation X includes individuals born between January 1, 1965 and December 31, 1982.

Generation 5 ($N = 4842$) The Millennial Generation includes individuals born between January 1, 1983 and December 31, 2000.

Older generations of alumni have lower mean engagement scores than younger generations. An ANOVA showed a statistically significant difference in the mean engagement scores across generation groups ($F_{(4,29528)} = 820.547, p = .00$). Tukey's post-hoc test showed that there was a statistically significant pairwise difference between all generation pairs but that none of these differences are meaningful. Members of the Greatest generation have significantly lower engagement scores than members of the Silent Generation ($d = .43$), who have significantly lower engagement score than members of the Baby Boom Generation ($d = .45$), who have significantly lower engagement scores than members of Generation X ($d = .18$), who have significantly lower engagement scores than members of the Millennial Generation ($d = .20$). The reader is referred to Table 13 for the means and standard deviations for each group.

Table 13
Mean engagement scores by generation

Generation	<i>N</i>	μ	σ
All Alumni	39533	7.20	2.85
Greatest Generation	785	4.71	2.47
Silent Generation	6563	5.85	2.66
Baby Boom Generation	12528	7.14	2.93
Generation X	14815	7.65	2.81
Millennial Generation	4842	8.19	2.13

Class Year Decades. Another way to consider the distribution of alumni across the entire population is by decade of graduation. For the purpose of this analysis, alumni from the classes of 1910-1919 are in the 1910 decade, from the classes of 1920-1929 are in the 1920 decade, and so on. The greater number of alumni in more recent decades is primarily due to two factors. First, class sizes at Valley have increased steadily over time, producing more graduates per class and therefore more graduates per decade. Second, the decrease rate for older classes is significantly higher than it is for younger classes, so a greater percentage of alumni in those younger classes are still living. Table 14 shows the populations, mean engagement scores, and standard deviations of alumni groups by decade of graduation.

Table 14
Mean engagement for alumni based on decade of graduation

Decade of Graduation	<i>N</i>	μ	σ
All Alumni	39859	7.1819	2.85543
1930s	113	3.8319	2.12091
1940s	1194	4.8199	2.37236
1950s	2811	5.8538	2.72871
1960s	4479	6.0587	2.66817
1970s	6244	6.8909	2.86502
1980s	7462	7.6146	2.95935
1990s	8158	7.5134	2.81761
2000s	8531	8.0346	2.49226
2010s	867	7.8443	1.76310

With only a few exceptions, the mean engagement score increases as graduation decade becomes more recent. An ANOVA showed a statistically significant difference in the mean engagement scores across graduation decade groups ($F_{(8, 39,848)} = 468.593$, $p < .01$). Tukey's post-hoc analysis showed that there was a statistically significant pairwise difference between almost all decade of graduation pairs.

Research Question 2

Is there a relationship between Valley alumni engagement and their giving behavior, and if so, what kind of relationship?

Donor Status. The most basic way to evaluate donor behavior is to consider whether people have or have not made at least one charitable gift to a non-profit organization. Practitioners utilize the terms “donor” and “non-donor” (or “never-donor”) to describe this behavior. Alumni with higher engagement scores are more likely to be donors than non-donors ($r = .20$, $p = .00$). While this correlation is moderate, it gets stronger when the population with the best available engagement behavior data set (the young alumni population) is considered. Table 15 shows the correlation coefficient and significance for the correlation between engagement score and donor status for each population group.

Table 15
Correlation between engagement score and donor status for each population group

Population	ρ	p
All Alumni	.200	.00
Mature Alumni	.236	.00
Young Alumni	.294	.00

The correlation between the engagement score and donor status is still moderate, but stronger among mature alumni ($r = .236$; $p = .00$) and strongest among young alumni ($r = .294$, $p = .00$).

FY10 Donor Status. While donor status is a useful tool to study an entire population and an inclination to give at the most basic level, the fact that someone made a gift once in his/her entire life does not provide much information for practitioners about current fund raising goals and projections. Giving in the past year, called “FY10 donor status” can be a more useful variable to consider. The correlation between engagement score and donor-status becomes stronger when only recent fiscal year donor status is considered. Specifically, the engagement score is positively correlated to FY10 donor status, more so for the mature alumni population ($r = .331$; $p = .00$) than either the whole alumni population ($r = .302$; $p = .00$) or the young alumni population ($r = .302$; $p = .00$). Table 16 shows the correlation coefficient and significance for the correlation between the engagement score and FY10 donor status for each population group.

Table 16
Correlation between engagement score and FY10 donor status for each population group

Population	<i>P</i>	<i>p</i>
All Alumni	.302	.00
Mature Alumni	.331	.00
Young Alumni	.302	.00

The correlation between the engagement score and FY10 donor status is stronger in all three population groups than the correlation between the engagement score and donor status.

Cornerstone Community. Valley University created a recognition society called the “Cornerstone Community” to honor donors who make gifts every year. Specifically, the Cornerstone Community is a group of donors who have made gifts in all three of the past three fiscal years. For this data set, Cornerstone Community members have (as of January 1, 2011), made gifts in FY11, FY10, and FY09. Table 17 shows the correlation coefficient and significance for the correlation between the engagement score and membership in the Cornerstone Community for each population group.

Table 17

Correlation between engagement score and Cornerstone Community membership for each population group

Population	ρ	p
All Alumni	.153	.00
Mature Alumni	.181	.00
Young Alumni	.185	.00

The correlation between engagement score and current Cornerstone Community status is strongest for young alumni ($r = .185$; $p = .00$), less strong for mature alumni ($r = .181$; $p = .00$), and weakest for the alumni population as a whole ($r = .153$; $p = .00$). The correlation between engagement score and current cornerstone status for FY11 is statistically significant in all three population groups, but very weak and not meaningful.

Cornerstone Renewals are defined as individuals with giving in FY10, FY09, and FY08, but no giving yet in FY11 (as of the date of reporting). Cornerstone Potentials are defined as individuals with giving in FY10 and FY09, but no giving yet in FY11 (also as the date of reporting). Table 18 shows the correlation coefficient and significance for the correlation between the engagement score and membership in the Cornerstone Renewals group as well as membership in the Cornerstone Potentials group, for each population group.

Table 18
Correlation between the engagement score and Cornerstone Renewals and Potentials Memberships for each population group

Population	Cornerstone Renewals		Cornerstone Potentials	
	ρ	p	ρ	p
All Alumni	.177	.00	.069	.00
Mature Alumni	.193	.00	.063	.00
Young Alumni	.190	.00	.076	.00

The correlation between the engagement scores and individuals who were members of the Cornerstone Community last year ($r = .193$ for mature alumni, $r = .190$ for young alumni, and $r = .177$ for all alumni; in each case $p = .00$) is the strongest among the Cornerstone Community variables, but it is still weak and not meaningful.

RFM Score. The Recency, Frequency, Monetary (RFM) score is another common way that fund raisers describe donor behavior. Individuals with no RFM score have not made a gift in the past 15 fiscal years. Individuals with a low score have made at least one gift, but are not frequent, recent, or large donors. Individuals with higher scores are more frequent, more recent, and larger donors. The score, which ranges from 0-15, is useful for segmenting a donor population for the purposes of program planning and research. Fund raising practice begins with securing the first gift from a donor (i.e. donor vs. non-donor status). However, without recent, frequent, and larger gifts, the

return on investment of a fund raising program would be quite low. Table 19 shows the correlation coefficient and the significance for the correlation between the engagement score and the RFM score, as well as for the correlation between the engagement score and each element of the RFM score (the R score, the F score, and the M score).

Table 19

Correlation between the engagement score and the RFM Score, the R Score, the F Score, and the M Score for each population group

Population	RFM Score		R Score		F Score		M Score	
	ρ	p	ρ	p	ρ	p	ρ	p
All Alumni	.367	.00	.358	.00	.312	.00	.334	.00
Mature Alumni	.454	.00	.400	.00	.417	.00	.437	.00
Young Alumni	.366	.00	.370	.00	.321	.00	.287	.00

For the whole alumni population, the total RFM score has a stronger correlation ($r = .367$; $p = .00$) to the engagement score than any of the individual scores (R, F, or M), but not dramatically. This trend is also true for the mature alumni population, but not for the young alumni population, where the correlation between the engagement score and the R score is strongest of the four correlations ($r = .370$; $p = .00$). When only the individual elements of the RFM score are considered for the whole alumni population, the Recency score ($r = .350$; $p = .00$) has the strongest correlation to the engagement score, then the Monetary score ($r = .334$; $p = .00$), and then the Frequency score ($r =$

.312; $p = .00$). The reader is referred to Table Fourteen for the correlations coefficients for each group.

Bequest Society. Members of the Valley University Bequest Society are alumni who have made provisions for charitable donations to Valley University in their estate plans and have documented these provisions with the University. There is a very weak positive correlation between the alumni engagement score and bequest society membership ($r = .105$, $p = .00$). Table 20 shows the correlation coefficient and significance for the correlation between the engagement score and bequest society membership in all three population groups.

Table 20

Correlation between engagement score and bequest society membership in all three population groups

Population	ρ	p
All Alumni	.105	.00
Mature Alumni	.138	.00
Young Alumni	.022	.01

Giving and Generations. In general, the positive correlation between the engagement score and the two basic giving variables (donor status and FY10 donor status) becomes stronger as the younger generations are considered. This trend begins to reverse for

the youngest, the Millennial Generation. Table 21 provides the correlation coefficient and significance between the engagement score and donor status and FY10 donor status for all alumni and alumni by generation.

Table 21

Correlation between engagement score and donor status and FY10 donor status across generations

Population	Donor Status		FY10 Donor	
	ρ	p	ρ	p
All Alumni	.200	.00	.302	.00
Greatest Generation	.208	.00	.226	.00
Silent Generation	.233	.00	.374	.00
Baby Boom Generation	.274	.00	.386	.00
Generation X	.311	.00	.328	.00
Millennial Generation	.311	.00	.249	.00

Table 22 summarizes the correlations between the Engagement Score and the RFM score, the R score, the F, score and the M score for the entire alumni population and the generational cohorts. Of these relationships, the correlation between the engagement score and the M score for the greatest generation is the strongest ($r = .607$, $p = .00$).

Table 22

The correlation and correlation significance between engagement score and the R Score, F Score, and M Score for across generations

Population	RFM Score		R Score		F Score		M Score	
	ρ	p	ρ	p	ρ	p	ρ	p
All Alumni	.367	.00	.358	.00	.312	.00	.334	.00
Greatest Generation	.480	.00	.354	.00	.399	.00	.607	.00
Silent Generation	.512	.00	.443	.00	.474	.00	.539	.00
Baby Boom Generation	.498	.00	.445	.00	.463	.00	.463	.00
Generation X	.438	.00	.433	.00	.403	.00	.360	.00
Millennial Generation	.343	.00	.327	.00	.354	.00	.304	.00

For the older generations (the Greatest Generation and the Silent Generation), the strongest correlation is with the M Score. For the middle generations (the Baby Boom Generation and Generation X) the strongest correlation is with the overall RFM score. For the youngest generation (the Millennial Generation), the strongest correlation is with the F score ($r = .354$; $p = .00$)

Chapter Five

Discussion

Fund raisers and administrators in higher education make a many assumptions about alumni, their cohorts, and their behaviors. These assumptions, based on professional intuition and anecdotal evidence, are useful because they help professionals to define and understand target audiences for engagement and solicitation activity. The desire to group alumni to better understand, and possibly predict, their behavior is natural for professionals who need to design programs which resonate with thousands, and in some cases hundreds of thousands, of alumni. Professional intuition about alumni and their wants and needs has been the primary driver of program development at Valley University since the advancement program there began. For decades, professional intuition has helped colleges and universities gradually, and sometimes dramatically, increase their fund raising revenues. It is just this kind of intuition; however, that may keep university advancement offices from competing with far more sophisticated national and international charities which are now building far more sophisticated and well-informed membership and development enterprises.

Higher education gifting has never experienced as competitive a philanthropic environment as it does today. Once the leaders in non-profit fund raising, academic fund raising programs are being challenged, and in many cases surpassed, by national and international non-profit organizations, hospitals, and community foundations. As

the vice president of advancement at Valley University says, professional intuition is not enough when “some other charity is sitting in your donor’s office today.” While the technology to store and study constituent data has existed for some time, the increasingly competitive philanthropic environment has created a demand for a more analytical approach to the administration of a fund raising program.

The struggling economy has resulted in the tightest higher education budgets, especially among private schools, for decades. This, in combination with the growing availability of data and a new interest in data mining and analysis, has resulted in peak interest in research on constituents’ behaviors from social science researchers and advancement professionals alike.

Research Question One

Are there statistically significant and practically meaningful differences between Valley alumni who are highly engaged and alumni who are not engaged?

One of the primary benefits of a study like this one is that a simple, but important, re-calibration of the constituency profile can occur. When asked to discuss their instincts about the outcomes of the research in this study, Valley University alumni relations professionals unanimously predicted that there would be significant differences in the engagement levels of alumni based on the categorical variables studied. Contrary to the intuition of the Valley University alumni relations professionals, however, this research demonstrated that there is no statistical or meaningful difference in alumni engagement scores for all but one of the categorical variables

studied. With the exception of generation, there were no differences in mean engagement scores for men vs. women, Greek alumni vs. independents, varsity athlete alumni vs. non-athletes, graduates of the college of engineering vs. the college of arts and sciences, or graduates with BS degrees vs. BA degrees. While this was clearly counterintuitive for these alumni officers, it is not that surprising when individual alumni are considered.

Any experienced alumni relationship manager will tell you that each alumnus has a unique story about his or her connection to alma mater. Some alumni will certainly cite a coach who pushed them or a friend who became a spouse. Just as many alumni, however, will recall a professor who kept them from dropping out or a leadership experience in a small student organization was the key to their “Valley experience.” That professor is long retired and that club may not even exist today, but for that alumnus these connections had the power to transform the undergraduate experience and to create a foundation for engagement as an alumnus.

Historical data on professor-student relationships and co-curricular club membership is difficult, if not impossible, to come by. Even when it is available, when 40,000 records are considered it can be difficult to find trends, or to identify cohorts to consider in an attempt to make meaning out of an overwhelming amount of data. As a result, advancement professionals often use obvious groups to segment the alumni population into manageable subgroups; they can be guilty of making assumptions about these groups (all men, all athletes, all engineers, etc.) because no data is available to

prevent them from doing so. This finding, however, suggests that advancement professionals should avoid making assumptions about groups and their behaviors or they risk making resource investments which are unnecessary at best, and counterproductive at worst. This finding also suggests that collecting and studying even the most basic categorical variables on constituents can have tremendous value.

While this study explored the categorical variables of gender, college of graduation, degree type, generation, and two co-curricular activities (Greek organizations and athletics), earlier research identified links between additional variables and giving, suggesting that more analysis of the potential link between these variables and engagement could be instructive. An investigation of alumni engagement and overall student engagement, distance of residence from alma mater, receipt of financial aid as an undergraduate (in grants and/or loans), ethnicity, religion, and/or the pursuit of an advanced degree could provide additional opportunities to either dispel myths or confirm suspected truths.

In addition, further exploration of whether (and if so, how) engagement differs among populations when multiple categorical variables are considered could be very useful for planning, and even possibly, predictive purposes. While this research answers the question of whether men are more engaged than women (or visa versa), it does not answer questions about whether male athletes are more engaged than female athletes, whether male Greek organization members who are also athletes and received financial aid are more or less engaged than their female counterparts and so on. Truly, a variable

list of this size and a data set this large can provide years of interesting questions to pursue.

Research Question Two

Is there a relationship between Valley alumni engagement and their giving behavior, and if so, what kind of relationship?

Advancement professionals know that engagement leads to giving because their professional experience and intuition tells them it is true. College and university presidents and finance directors know this too, or alumni offices and programs would not exist. The premise of this study, however, is that intuition cannot always be trusted. While the need for professional intuition in a relationship business will never go away, it is important for advancement professionals, and the universities that fund advancement programs, to make information based programmatic decisions. As alumni demand for services increases at a faster pace, sometimes more often than alumni gifts in number or dollars, it becomes harder and harder to justify the investment in alumni programming when budgets are tight and board members are nervous about the economy.

Research consistently shows that the student experience is the single largest predictor of alumni giving. But advancement offices have little power to affect the student experience in significant ways. Research has demonstrated links between alumni engagement and giving behavior as well, but extant studies rely on self-reported information gathered via surveys, which is problematic due to limited response rates

and response biases. In addition, the literature does not include studies which have been reproduced at multiple institutions or studies which include data from multiple universities in their samples. As such, it has become increasingly important for professionals in educational advancement to study the impact of engagement activities on giving behavior at their own institutions.

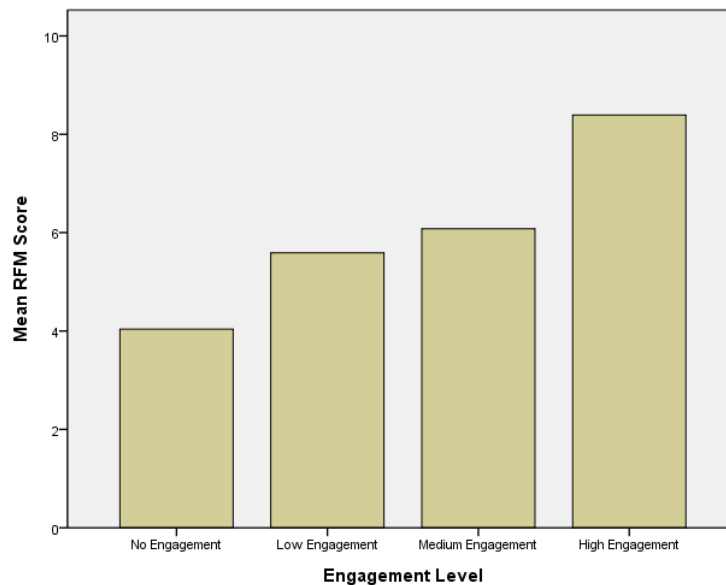
This study demonstrated that, at least for Valley University alumni, alumni engagement is positively correlated to giving behavior. Specifically, engagement is correlated to donor status, recent donor status (previous fiscal year), a donor's gift recency, gift frequency, and adjusted lifetime giving, as well as a constituent's membership in repeat giving societies and bequest societies.

The correlation between alumni engagement and two types of giving behavior is particularly important: universities need alumni who will both make regular gifts of any size (high RFM scores) and alumni who will make larger gifts (high adjusted lifetime giving). First, universities need annual donations, small and large, to support operations. At Valley, the ideal annual donor is described with the RFM score and the RFM score is positively correlated to giving. In fact, when alumni are divided into four quartiles of engagement levels (none, low, medium, and high), there is a significant difference between the mean RFM scores for each group and, as one might expect, the mean RFM scores go up as engagement increases.

To place the alumni population in cohorts for use by practitioners, the population was divided into quartiles by engagement score. The bottom quartile (with

engagement scores ranging from 0 to 4) has been named the no-engagement cohort. The middle two quartiles (with engagement scores ranging from 5 to 6, and 7 to 8) have been named the low engagement cohort and the medium engagement cohort. The top quartile (with engagement scores ranging from 9 to 13) has been named the high engagement cohort. Figure 1 shows the mean RFM score among the four engagement cohorts.

Figure 1. RFM Score across engagement cohorts.

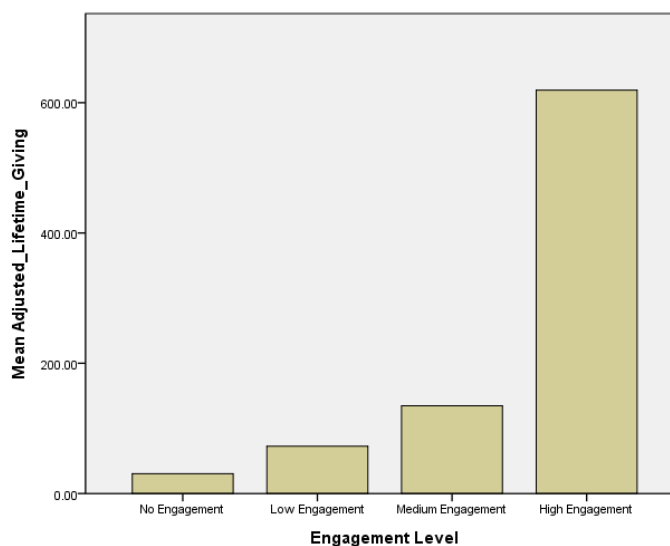


Second, universities need individuals who will make their alma mater a philanthropic priority to support institutional stability and expansion (endowment and capital gifts). Over a lifetime, alumni may give regularly in small amounts, but they will, hopefully, also give occasional significant gifts to support programs and projects in which they believe. Understanding how engagement impacts an institution is not just

about one fiscal year or the annual fund; it is also about understanding the lifetime value of an alumnus, or in fact, of the whole alumni body.

This research showed that there is a significant positive statistical correlation between alumni engagement and lifetime giving. When lifetime giving is adjusted for years since graduation, this levels the playing field between younger and older alumni. And while the difference between the first three levels of engagement (none, low, and medium) is not significant, the difference between all three of the lower levels and the highest level of engagement is significant. Figure 2 shows the mean adjusted lifetime giving by engagement score cohort.

Figure 2. Mean adjusted lifetime giving by engagement score cohort.



This finding confirms the practitioner's institution and may allay university trustees concerns about the return on investment in alumni programming. While this research does not suggest causality, it is clear that the most engaged constituents are

also the constituents who have supported Valley with the most substantial monetary contributions. More research is, perhaps, warranted to determine which elements of engagement mean most to potential donors.

Study Limitations

Engagement Score Development. There were some limitations in the development of the engagement score. First, the data used for the policy capturing exercises and the subsequent development of the score was incomplete. Event attendance data was limited before 1995. In addition, data on alumni interaction with their online community became available only after the policy capturing rating exercise occurred. While these gaps in data did not prevent the engagement score from being useful to Valley University practitioners, the gaps do limit the accuracy of the scores as they are applied to the alumni body for the study. Second, the university staff and consultants who developed the engagement score utilized somewhat lenient standards for intra-rater reliability during the policy capturing process, rejecting only those raters with an intra-rater correlation below .40. It is possible that a higher standard during this stage of the process may have yielded a stronger engagement score.

Finally, the type of volunteer activity was not considered during the development of the score. With the current engagement score formula, two alumni with three volunteer roles each (and all other data being equal) would receive the same engagement score, even if one was a board chair, a campus speaker, and an event host while the other had interviewed one student for admissions, offered to serve as a career

mentor, and been a class notes editor thirty years ago. While it is possible that the volunteer variables used (number of volunteer roles, most recent year of volunteering) were sufficient, a weighted analysis of volunteer roles prior to the policy capturing exercise may have further informed the development of the score.

Data Quality. Data quality is always a limitation in research when alumni records are concerned. First, access to electronic records for the lifetime of currently living alumni is unheard of. Valley University implemented its first data base (Fund Raising Information System, or FRIS) in the late 1980s. The primary focus of data gathering and maintenance at this time was contact information (correct addresses and phone numbers) and giving information. When the Valley University advancement office converted to the Benefactor database in 1995, more attention was paid to gathering volunteer information, event information for reunion and significant off-campus events, and historical information for some volunteer roles, which was entered on all living graduates. It wasn't until 2005, however, when Banner Advancement was implemented at Valley, that the collection of event data became a priority. While the data set for this study was large and well populated in comparison with data sets from similar institutions, these data limitations still have an impact on this study.

Second, several conditions of the data gathering process may have limiting effects on data accuracy. Until very recently (with the onset of online event registration), event attendance at Valley has been captured using sign-in sheets at event registration tables. The rush of attendees at a registration table and the importance of

providing a personal experience rather than a clinical one create many scenarios where event attendee lists are considered to be “mostly accurate” by the employees working the event. In some cases, name tags are used to determine who attended but the possibility that some attendees did not register in advance and still others did not collect their name tags leaves room for errors. Second, until recently student activity information was gathered from yearbooks rather than administrative records.

Historically students have been able to select what activities were listed in year books and so this information can be less than precise. More recently a senior-class survey has been used to capture student activities but this data-capturing technique still relies on self-reported information. Valley University is currently discussing the implementation of a co-curricular transcript, which would dramatically improve records on student activities. However, the data set for this research is limited by these data-capturing techniques.

Generalizability. A final, but important, limitation to this study is its lack of generalizability. As is so often the case in higher education philanthropy research, this study utilized data from one university. While the population was large, it is impossible to generalize the results of this study to other colleges and universities. Because the study uses data that many institutions will already have, however, a duplication of this study would be fairly simple to implement and unlikely to cost a great deal in terms of human or capital resources. Ideally, future research would include a similar analysis

with data from multiple institutions, including institutions with a variety of profiles (private, public, large, small, etc.).

Implications for Future Research

When this research is considered in the context of the discipline, it provides several new ways of thinking about alumni engagement. First, the policy capturing technique provides a map for other institutions to use when developing new scores of alumni behaviors. Second, the research was based on a score built from data which was available for all living alumni at Valley University, eliminating limited response rates and survey bias and facilitating the reproduction of this research at other institutions with limited investment. Third, unlike engagement scores at other institution, the Valley engagement score purposefully didn't include giving variables which enabled the analysis of the correlation between engagement and giving behaviors.

The Valley University data set now available for study is significant and could be explored extensively. While this study explored some alumni characteristics (such as age and gender), there are many more to consider, including ethnicity, state of residence, GPA, Presidency during undergraduate years, housing type, marital status, etc. Any trait that a university may gather on its constituents could be studied as it relates to alumni engagement. In addition, a more refined exploration of characteristics and elements of engagement could reveal interesting information. While the engagement levels of males and females overall were not different, are women more likely than men to attend events while men are more likely than women to volunteer to mentor? Are

younger alumni more likely to engage electronically with Valley than older alumni? An almost endless amount of assumptions practitioners continue to make could be tested with this approach.

In addition, the relationship between engagement and giving could be explored in much greater depth. Are some types of engagement opportunities more strongly correlated to giving behavior, or is some combination of engagement opportunities the most effective for building a donor population? When evaluating donors with a similar capacity to give (a known level of wealth), how does engagement correlate to giving? Perhaps the most popular use of this kind of research is to conduct a multiple regression analysis to develop a predictive model. A model which could identify individuals who are most likely to be donors can help advancement practitioners to focus resources and develop programs.

The next investigation recommended by this researcher, however, is a study of student engagement data (available through the National Survey of Student Engagement, NSSE) in combination with this data. Since the literature clearly shows that student engagement is a significant factor in alumni engagement and giving, it would be useful to Valley University to append its own NSSE data to the alumni data file compiled here. While it would only be available for fairly recent graduating classes, an exploratory study of this combined data set could provide tremendous insights into philanthropic education and programming for current and recent students.

Conclusion

Every dollar an organization spends raising money is a dollar that could be used to serve that organization's mission. Ideally, donors are ready and willing to give to charities in which they believe so the cost of raising funds should be low. The reality however, is that organizations often spend significant resources on the fund raising enterprise. Even when organizations carefully monitor the cost per dollar raised, once institutional activities which support fund raising but are not exactly fund raising (such as communications, or alumni relations) are considered, evaluating the return on investment in programming can become extremely complex or impossible. After conducting the most comprehensive reviews of the research in educational philanthropy, Brittingham and Pezzullo (1990) remind practitioners and researchers alike: "increased spending is not the same as *wisely* increased spending and little research is available for guidance on how to spend well." While Valley University has much data which remains to be studied, this research provides Valley University practitioners with a much needed tool to help Valley administrators understand alumni engagement and its relationship to fund raising outcomes.

Fund raising is, and always will be, a relationship business. For decades, alumni relations practitioners relied on that assumption and alumni demand for services to justify their expanding programs. But as constituencies grow in size and staff sizes do not expand in synch, organizations must prioritize relationship building activity and focus on that which is most likely to yield results. Twenty-first century donors demand

accountability and efficiency from the charities they support, and as such, organizations must design their advancement programs as strategically as possible.

The good news for practitioners at Valley University is that alumni engagement is clearly linked to alumni giving. This information helps alumni leadership support their case for human resources and budget dollars. This information also, however, provides a foundation for more critical analysis of how resources are invested and provides a much-needed tool for institutional leadership to evaluate effectiveness across the entire advancement spectrum. The more alumni relations professionals embrace the metric of engagement as a meaningful tool and not just a measure applied by outsiders, the more they can create, expand, or eliminate programs according to the institutions needs.

Appendices

Appendix A: Sample Policy Capturing Profile

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
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Class Year 1993

North East, MD

ID: 10301912

Cultivation

Campus Visit, most recent:

Personal Visit, most recent: 1/10/2008

Total contacts: 17

Career Sponsorship & Activity

Affinity Group Member? No

Internship/Externship Sponsor? Yes

Volunteer Activity

Current: None

Former:

Bison Gathering Host

Bucknell Club Committee

CDC Bison Connect

CDC Education Progra

Class Committee Member

Engineering Career Development

Engineering College Volunteer

Potential Engineering Volunteer

Reunion Program 15th Year

Years of Volunteering: 11

Event Attendance

Reunions Attended 3

Most Recent Reunion 2009

Travel Program Participant? No

Event Attendance List

01 Alum Assoc. Bd. Mt.

03 Alum Assoc. Bd. Mt.

08 Reunion

09 Reunion

10 CDC Externship Sponsor

Baltimore Dinner 99

Baltimore Pres. Reception

Career Networking 2007

Christy Mathewson Cmte.

Reunion 2003

Bucknell Family

Bucknell spouse/partner? Yes

Parents who are BU? No

Children who are BU? No

Number of BU Family, Total 1

Online Alumni Community

Registered? Yes

Willing to mentor? Yes

Information Sharing

Provided business phone Yes

Provided job title? Yes

Provided employer name? Yes

Can we mail? Yes

Can we e-mail? Yes

Can we call? No

Appendix B: Inter-rater reliability analysis

Rater	<i>r</i>
1	0.913
2	0.761
3	0.866
4	0.879
5	0.640
6	0.593
7	0.827
8	0.836
9	0.877
10	0.590
11	0.701
12	0.879
13	0.422
14	0.666
15	0.826
16	0.276
17	0.825
18	0.721
19	0.764
20	0.598
21	0.830
22	0.846
23	0.844
24	0.814

Appendix C: Preliminary Engagement Score Formula

Preliminary Engagement Score = $-48.8621 + 0.020392(\text{Class Year}) + 0.286144 (\text{Years of Volunteerism}) - 0.027223(\text{Number of BU Relatives}) + 0.101067(\text{ Total \# of Contacts}) - 1.27237(\text{ Reunion Attendance Count}) + 0.636134(\text{BUSpouse is Y}) + 0.57730(\text{ BU Parent is Y}) + 0.417938(\text{E-mailable is Y}) + 0.449451(\text{BusPhone is Y}) + 0.730474(\text{Solicit is Y}) + 1.08138(\text{Internship is Y}) + 0.621475(\text{Reg in BLink is Y}) - 0.248253(\text{ Willing to Mentor is Y}) + 0.094949(\text{Most Recent Reunion Attended Revised}) - 178.413(\text{ Most Recent Reunion Attended Present}) - 2.82007(\text{Most Recent Campus Visit Present}) + 0.230621 (\text{Non BU Child is Y}) + 2.11409(\text{Affinity Group is Y}) + 0.167151(\text{ Events Count}) - 0.325073(\text{Activities Count})$

Appendix D: Final Engagement Score Formula

Final Engagement Score = $-48.8621 + 0.020392(\text{Class Year}) + 0.286144 (\text{Years of Volunteerism}) - 0.027223(\text{Number of BU Relatives}) + 0.101067(\text{ Total \# of Contacts}) - 1.27237(\text{ Reunion Attendance Count}) + 0.636134(\text{BUSpouse is Y}) + 0.57730(\text{ BU Parent is Y}) + 0.417938(\text{E-mailable is Y}) + 0.449451(\text{BusPhone is Y}) + 0.730474(\text{Solicit is Y}) + 1.08138(\text{Internship is Y}) + 0.621475(\text{Reg in BLink is Y}) - 0.248253(\text{ Willing to Mentor is Y}) + 0.094949(\text{Most Recent Reunion Attended Revised}) - 178.413(\text{ Most Recent Reunion Attended Present}) - 2.82007(\text{Most Recent Campus Visit Present}) + 0.230621 (\text{Non BU Child is Y}) + 2.11409(\text{Affinity Group is Y}) + 0.167151(\text{ Events Count}) - 0.325073(\text{Activities Count}) + 2.47682 + 0.011887(\text{Frequency of Login}) - 0.00035536(\text{Reg Date in Days}) + 0.00010245(\text{Last Login in Days}) - 4.00120(\text{Last Login Present}) + 14.6156(\text{Registration Date Present}) - 272.903(\text{Latest Yr Volunteering Present}) - 182.488(\text{Latest Yr Event Attended Present}) + 0.136867(\text{Latest Yr Volunteering Revised}) + 0.091583(\text{Latest Yr Event Attended Revised})$

Appendix E: The Valley Recency, Frequency, Monetary (RFM) Score

The RFM score is a numerical representation of the past 15 fiscal years of a constituent's giving history. Gifts and pledge payments are considered, and the score is based on a formula (below) which allocates points for (a) how recently someone has given, (b) how frequently someone gives, and (c) how much someone gives. The score is calculated at the end of each fiscal year and updated in each constituent record. Scores can be utilized in parts (the frequency score alone, for example) or in sum.

Recency

If the constituent's most recent gift/pledge payment was in fiscal year X, then he/she gets Y points.

X	Y
2010	5
2009	4
2007-2008	3
1992-2006	2
1996-1991	1
1995 or Prior, or No Giving	0

Frequency

If the constituent has made a gift/pledge payment in X out of 15 years, then he/she gets Y points.

<u>X</u>	<u>Y</u>
14-15 years	5
11-13 years	4
5-10 years	3
2-4 years	2
1 year	1
0 years	0

Monetary

If the constituent has at least one year of giving (including gifts and pledge payments) at the X level in the past 15 years then he/she gets Y points.

<u>X</u>	<u>Y</u>
\$2,500+	5
\$1,000-\$2,499	4
\$500-\$999	3
\$100-\$499	2
\$1-\$99	1
0	0

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