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# Relationships Among Student Leadership Experiences and Learning Outcomes

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UNIVERSITY OF MIAMI

RELATIONSHIPS AMONG STUDENT LEADERSHIP EXPERIENCES  
AND LEARNING OUTCOMES

By

James Richard Walker

A DISSERTATION

Submitted to the Faculty  
of the University of Miami  
in partial fulfillment of the requirements for  
the degree of Doctor of Education

Coral Gables, Florida

June 2009

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The relationships among students' reports of learning outcomes based on leadership experiences in various types of student organizations and various roles within organizations were investigated. Relationships between demographic variables (i.e., ethnicity, gender, age, and type of housing) and type of organization, role within an organization, and learning outcomes, were also examined. A new instrument, the Student Leadership Learning Outcomes Assessment (SLLOA), was created to measure student generated learning outcomes; it has good internal consistency and validity. The SLLOA was completed by 328 student leaders at a private southeastern university. SLLOA scores indicated student leaders in cultural and service groups reported learning more than student leaders in sports/athletic groups. Vice Presidents and Presidents reported learning more from the leadership experience than Treasurers. Female student leaders reported learning more than male. Relationships were found between ethnicity of student leaders and type of organization and between type of housing (i.e., on campus, off campus without parents/parental figures, off campus with parents/parental figures) and type of organization. There was no relationship between type of organization and leaders' gender and age, or between the role held and leaders' gender, ethnicity, and type of housing. The results revealed no relationship between ethnicity and SLLOA scores.

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## Chapter 1

### Introduction and Literature Review

Leadership development and leadership experiences are prominent themes and objectives in higher education (Smart, Ethington, Riggs, & Thompson, 2002; Thompson, 2006). Nearly every college and university has an expressed commitment to the development of students as leaders, as evidenced by mission statements and the increased presence of both curricular and co-curricular programs targeting college student leadership development (Astin & Astin, 2000; Dugan, 2006a; Dugan, 2006b). The creation of these programs is consistent with research linking students' collegiate involvement to students' developmental gains (Astin, 1993; Dugan, 2006a). Studies have linked leadership programs to experiences with students' developmental learning outcomes, including civic responsibility, multicultural awareness, skill development, and personal and societal awareness (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Posner, 2004).

In recent years the assessment of student learning has become central to the process of evaluating institutional effectiveness. The trend toward assessing student learning outcomes is the result of higher education professionals' concern for the quality of the educational experiences, both inside and outside the classroom, as well as an effort to identify and better address diverse student learning needs (Beno, 2004). The growing public interest in learning outcomes has put pressure on nearly all areas of the higher education enterprise to make a more explicit and measurable contribution to student learning. Assessment has become a crucial means for allowing departments and divisions to prove their worth, to both internal and external constituents, and has often focused on

whether or not student co-curricular involvement influences student development and learning (Hernandez, Hogan, Hathaway, & Lovell, 1999).

Developing statements of intended learning outcomes is an important foundational step in the assessment process (Diamond, 1998). Student learning outcomes should address what students know, understand, believe, and are able to do as a result of their experiences (Palomba & Banta, 1999). It is critical that intended learning outcomes are general enough to capture the breadth of important learning, but clear and specific enough to be measurable. These outcomes should focus on aspects of learning that will develop and endure, but that can be assessed in some form now (Shipman, Aloii, & Jones, 2003). Determining the full effect of the college experience on a student's life is difficult; however, measurement of learning outcomes can gauge progress that students make.

One of the areas of educational activity that has distinct importance on learning outcomes is students' personal and social development, which includes leadership experiences (Serban, 2004). Therefore, many universities have turned to activities beyond the classroom to enrich the college experience and to maximize learning potential (Logue, Hutchens, & Hector, 2005). Research has suggested that leadership experiences of students, for example holding an office, position of responsibility, or active membership status within co-curricular organizations, are directly proportional to the richness and magnitude of learning experiences, as well as to their personal development during college years (Astin, 1985; Logue, Hutchens, & Hector, 2005). Researchers have endeavored to conceptualize, operationalize, and predict collegiate student leadership experiences in order to better understand the benefits of such roles. The literature has suggested that many factors, such as previous experience, belief in leadership potential

(Astin, 1977), action orientation (Erwin & Marcus-Mendoza, 1988), gender (Romano, 1996), and available training (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001) contribute to the unique quality of leadership experiences students have reported.

#### *Existing Leadership Measures*

Prior to the 1990s there were no leadership instruments that had been designed for and targeted to college students. According to Posner (2004), the 8<sup>th</sup> Edition of *Leadership Resources: A Guide to Training and Development Tools* (Schwartz & Gikbel, 2000) lists 68 instruments “that are supported by technical data” (p. 195) to measure a variety of leadership skills and styles. Only a few indicate application to student populations and these have focused on various aspects of the student leadership experience:

*Student LPI.* The student version of the Leadership Practices Inventory (Student LPI) developed by Posner and Brodsky (1992) focuses on leadership behaviors as identified in the Leadership Challenge Model. Posner (2004) asserted that the Student LPI approaches leadership as a measurable, learnable, and teachable set of behaviors. Identified as practices common to successful leaders, the statements in the instrument focus on leadership behaviors and the frequency with which the individual engages in the particular behaviors. Posner categorizes these behaviors into five leadership practices: Modeling the Way, Inspiring a Shared Vision, Challenging the Process, Enabling Others to Act, and Encouraging the Heart. A number of empirical studies using the Student LPI have been conducted. The initial study involved fraternity chapter presidents across the United States (Posner & Brodsky, 1992). Posner and Brodsky (1994) conducted a study of sorority chapter presidents, which paralleled the study of fraternity chapter presidents

in both design and findings. The results indicated there was no difference between genders in terms of effectiveness and that the most effective chapter presidents engaged in each of the five leadership practices much more frequently than did their less effective counterparts. Results of a study of resident advisors from seven diverse collegiate environments revealed that the resident advisors who engaged in the five leadership practices most frequently, as compared to those who engaged in the five practices less frequently, were the most effective (Posner & Brodsky, 1993). Also, the impact of leadership was investigated for students serving as orientation advisors (Posner & Rosenberger, 1997). Results indicated that the effectiveness of orientation advisors was directly related to the extent to which these leaders engaged in the five leadership practices, even though the advising was short-term. Results of a study with first-year undergraduates revealed that pre- and post-test scores on the Student LPI were significantly higher for those students who went through a leadership education program versus those who did not (Mendez-Grant, 2001).

In most of the studies involving the Student LPI, the research suggests that overall the internal reliability coefficients were highest for the behaviors of Inspiring a Shared Vision and Encouraging the Heart and lowest for Modeling the Way and Challenging the Process. The internal reliability coefficients ranged from  $\alpha = .60$  to  $\alpha = .90$  (Posner, 2004). Specifically, the research has indicated consistent positive relationships with various measures of effectiveness across multiple constituencies. The Student LPI has demonstrated that it is robust across different student populations and is relatively unaffected by a range of demographic variables (Posner).

With regard to the Student LPI, Posner (2004) suggested that future studies of more diverse college student populations would be beneficial in furthering the understanding of both leadership and student development. Some of the more diverse populations described by Posner would be student body officers, officers in professional clubs, and sports teams. Posner further believes that future studies investigating the relationship between leadership and such factors as thinking and learning styles, along with cognitive complexity, would be beneficial.

*Socially Responsible Leadership Scale (SRLS)*. The SRLS is an instrument that was designed to operationalize and measure leadership development across the eight constructs of the Social Change Model (Higher Education Research Institute, 1996). The internal reliability coefficients for each subscale are: Consciousness of Self = .82, Congruence = .82, Commitment = .85, Common Purpose = .82, Collaboration = .77, Controversy with Civility = .69, Citizenship = .92, and Change = .78 (Tyree, 1998). Research utilizing the SRLS has suggested that the type of leadership involvement and the role within an organization does indeed influence the scores on the SRLS, indicating change along the social change continuum.

The few studies that have been conducted using the SRLS have focused on single institutions. Dugan (2006b) conducted a study to examine college students' leadership development as measured by the Social Change Model testing the null hypothesis that "there are no mean differences across the eight constructs of the social change model based on participation (involved and uninvolved) in community service, positional roles, student organizations, and formal leadership programs" (p. 336). Results revealed that different types of involvement were associated with different scores on the SRLS. Dugan

concluded that the type of involvement affected scores on the subscales of the SRLS differentially (Dugan, 2006b). Dugan (2006a) also conducted a descriptive study utilizing the SRLS; the study examined the mean differences between male and female college students. Dugan reported that women scored higher than men across all eight of the leadership constructs and that the differences were statistically significant across six of the eight scales. Dugan also believes that focus needs to be paid to examining whether or not the type of involvement experiences (i.e., student governance, athletics, multicultural involvement, community service, positional roles) influences the amount of developmental gains.

*Leadership Attitudes and Beliefs Scale III (LABS III)*. Wielkiewicz (2000) developed this leadership assessment instrument useful for assessing attitudes and beliefs about leadership in college students and others. This instrument measures how students think about leadership, irrespective of their perceived experience in or predisposition to leadership-based activities, in the context of Allen et al.'s (1998) Leadership Process Theory (Thompson, 2006). LABS-III consists of descriptive statements related to leadership and organizational adaptability within two subscales - Hierarchical Thinking and Systemic Thinking. Alpha coefficients are .88 and .84 respectively (Wielkiewicz). While the LABS-III instrument is yet another way of examining college student leadership development, this instrument is not one that is readily used by higher education professionals because its usefulness and ease of understanding does not translate well to practical application.



### *Limitations of Prior Research*

According to Hall, Forrester, & Borsz (2008), prior research has been limited by a focus on: behaviors of successful leaders, measurement of leadership development, gender differences (with mixed findings), and leadership roles within one specific type of student organization. Furthermore, few researchers have endeavored to understand the experience of holding leadership roles from the perspective of the student (Logue, Hutchens, & Hector, 2005). However, in a recent case study, Hall et al. (2008) examined the self-reported effects that leadership experiences have on students within the context of a campus recreational sports department. The study documented how student leaders benefited, and the leadership skills they developed, as an outcome of their leadership experience within a campus recreational sports program. The results revealed seven broad themes of leadership skill development as identified by the student leaders in the study, these included: organizing, planning and delegating; balancing academic, personal and professional roles; motivating and influencing others and being a mentor or role model; problem solving and decision making; communication skills; working with others and diversity; and giving and receiving feedback. Hall et al. indicated that one area for future research is to compare student leaders in campus recreation programs with other student leaders on campus, which the current study addresses.

### *Need for Current Study*

While much has been written about the importance that leadership development and leadership experiences play in higher education, as well as the increased emphasis placed on learning outcomes for curricular and co-curricular collegiate experiences,

absent from the research on college student leadership is an examination of the relationships between self-reported learning outcomes and type of student organization, role within an organization, and student demographic variables. This study responds to repeated calls for studies to address these weaknesses in the literature. Furthermore, few instruments designed to specifically measure the leadership development of college students exist. While the Student LPI identifies specific behaviors and actions that students report using when they are at their personal best as leaders and the SRLS is centered around the Social Change Model of leadership development, which is a values-based approach to leadership, what these existing instruments do not do is focus on what students actually learn as a result of their leadership experiences in relation to established learning outcomes. Additionally, the research falls short in examining how the type of organizations, positional roles, and demographic variables relate to students' reports of learning outcomes as a result of their leadership experience.

Therefore, the purposes of this study were two-fold: (a) to develop a new measure that is based on student-generated learning outcomes of their leadership experiences, and (b) to examine the relationships among aspects of student leadership experiences (role within and type of organization), student demographic variables, and learning outcomes. The following research questions guided the study:

1. What are the psychometric properties of the Student Leadership Learning Outcomes Assessment (SLLOA)?
2. To what extent, if any, do different types of student organizations and roles within an organization relate to learning outcomes?

3. To what extent, if any, do student demographic variables relate to the type of student organization and role within an organization?
4. To what extent, if any, do demographic variables relate to learning outcomes?

## Chapter 2

### Method

#### *Participants*

Participants were undergraduate students who held a primary leadership position (i.e., president/captain/chairman, vice president/vice chairman, treasurer, secretary, resident assistant, senator) at a private southeastern university for the 2007-2008 academic year. The positions were in one of nine types of student organizations: (a) sports/athletic; (b) cultural; (c) Greek letter; (d) academic/professional/honor; (e) programming boards; (f) resident assistants; (g) service; (h) campus/student governance; and (i) religious. The names of the student leaders were obtained by utilizing the student organization data base.

All 760 undergraduate student leaders were contacted via e-mail and asked to participate in the study (see Appendix A – Initial E-Mail to Participants). Two additional follow-up e-mails were sent to the student leaders requesting their participation (see Appendix B – Follow-up E-Mail to Participants). A total of 328 useable instruments were returned, creating a return rate of 43.2%.

More women (61.1%,  $n = 181$ ) completed the instrument than men (38.9%,  $n = 115$ ). The majority of participants identified their academic classification as Senior (58.1%,  $n = 169$ ), followed by Junior (30.2%,  $n = 88$ ), sophomore (10.7%,  $n = 31$ ), and Freshman (1.0%,  $n = 3$ ). When asked where they were residing, 54.7% ( $n = 162$ ) reported living on campus, 28.4% ( $n = 84$ ) lived off campus without parents/parental figures, and 16.9% ( $n = 50$ ) lived off campus with parents/parental figures. Age was assessed as a categorical variable with the following results in years: 18 (1.4%,  $n = 4$ ), 19 (9.8%,  $n =$

29), 20 (26.7%,  $n = 79$ ), 21 (34.5%,  $n = 102$ ), 22 (21.6%,  $n = 64$ ), and 23+ (6.0%,  $n = 18$ ). Participant ethnicity, type of organization, and role within an organization are reported in Table 1.

### *Measure*

In the summer of 2006, a group of university students was convened to serve as a think tank regarding the development of learning outcomes for the overall co-curricular student life experience, including the student leadership experience. The group of seven students consisted of sophomores, juniors, and seniors and represented a broad range of student organizational involvement (service groups, programming boards, cultural groups, sports groups, and resident assistants). *Learning Reconsidered: A Campus-Wide Focus on the Student Experience* (Keeling, 2004) and *Learning Reconsidered 2: Implementing a Campus-Wide Focus on the Student Experience* (Keeling, 2006) was utilized as the framework for the think tank discussion. Keeling (2004) suggested seven constructs of learning outcomes (see Appendix C) and Keeling (2006) suggests a process for developing student learning outcomes, both of which were implemented.

The students were given the following questions: (a) What do students want to learn, understand and be able to do as a result of the university's co-curricular experience? and (b) What makes the university's student co-curricular experience unique? Professional staff served only as facilitators for the think tank. The result of this process was the creation of 35 learning outcomes within seven constructs, which are similar to Keeling's (2004). The seven constructs are: (a) Self Awareness; (b) Cognitive Complexity/Systems Thinking; (c) Multicultural Competence; (d) Civic Engagement; (e)

Knowledge Acquisition; (f) Integration and Application; and (g) Understanding Group Dynamics. The students generated 4 - 9 learning outcomes for each construct.

Based on the 35 learning outcomes generated by the student think tank, the author created the Student Leadership Learning Outcomes Assessment (SLLOA), consisting of 77 items that were designed to operationalize the 35 learning outcomes within the seven constructs. Table 2 provides sample learning outcomes for each construct along with sample items. A four point Likert-type response set ranging from 1 – *strongly disagree* to 4 – *strongly agree* was used. Additionally, 8 questions were designed to gather information regarding student leadership experiences such as the type of organization and roles within an organization, and 7 questions assessed demographic variables, for a total of 92 items. (see Appendix D – “Student Leadership Learning Outcomes Assessment – Learning Outcomes within Seven Constructs” for the complete list of learning outcomes.)

#### *Procedure*

The SLLOA was administered as a web-based survey (see Appendix E – Computer Display Version of the SLLOA). The study followed institutional protocol and obtained informed consent from all participants prior to completion of the instrument. One iPhone was raffled off as an incentive to participate.

## Chapter 3

### Results

#### *Development of the Student Leadership Learning Outcomes Assessment (SLLOA)*

Descriptive statistics at the item level revealed that items tended to be skewed toward the *agree* end of the response set, indicating positive development. The means ranged from 1.44 to 3.66 and the standard deviations ranged from .51 to .88 (see Appendix F - Item Level Statistics). In general, responses to items were fairly normally distributed. Only one had a kurtosis of more than 2.0, 4 items had a kurtosis of more than 1.0, and 8 items were skewed slightly more than 1.0.

The items were combined into subscales according to the seven constructs by taking the mean of each group of items. Then the SLLOA was created by taking the mean of the subscales. Descriptive statistics of the scale and subscales can be found in Table 3. High Cronbach's alphas revealed excellent internal consistency of the subscales. All of the subscales are highly inter-correlated, ranging from  $r = .62$  to  $r = .81$ .

An exploratory factor analysis was conducted to test the empirical validity of the SLLOA subscales. Using all 77 items, data were factor analyzed using various procedures including orthogonal and oblique rotations. Principal Axis Factoring with no rotation was the best fit for the data. Nearly all of the items loaded on the first factor (see Appendix G – Factor Analysis Results). When the data were forced into seven factors, there were two factors with eigenvalues greater than 2.00 and these accounted for 42% of the total variance. However, the items in each factor did not match the items in each subscale for the most part. As a result of the factor analysis, the SLLOA was considered

to be a single factor scale. Therefore, overall SLLOA scores were used in subsequent analyses.

The validity of the SLLOA was supported by the results of a one-way ANOVA with the factor being the number of prior leadership positions held at the institution and the overall SLLOA being the dependent variable. The means and standard deviations for SLLOA scores are presented in Table 4. The significant results showed that the more prior positions held, the higher the SLLOA score,  $F(5, 311) = 5.73, p < .001$ . Post hoc comparisons using the Scheffé test revealed that student leaders with no prior leadership experience to two prior leadership experiences differed significantly from those student leaders with more than four prior leadership experiences.

An additional test for validity utilized a t-test to determine if there was a difference between SLLOA scores of student leaders who were members of an organization that was advised and trained by a Student Life staff member (i.e., cultural groups, programming boards, service groups, campus/student governance groups) versus student leaders who were members of an organization that was advised by someone outside the Student Life staff (i.e., sports/athletic groups, Greek letter groups, academic/professional/honor groups, resident assistants, religious groups) and received variable amounts of training ( $t = 3.99, p < .01$ ). Student leaders trained and advised by a Student Life staff member reported learning more from the leadership experience ( $M = 3.49, SD = .36$ ) than the other student leaders ( $M = 3.31, SD = .42$ ).

### *Primary Analyses*

*Relationships between Types of Organizations and Roles within an Organization to Learning Outcomes as Measured by the SLLOA.* An ANOVA using type of



organization as the independent variable and SLLOA scores as the dependent variable showed differences in SLLOA scores across the type of organization,  $F(8, 306) = 3.48$ ,  $p < .01$ . Students holding leadership positions in programming boards/groups ( $M = 3.56$ ,  $SD = .33$ ) and cultural groups ( $M = 3.53$ ,  $SD = .29$ ) reported learning the most from the leadership experience, while students involved in sports/athletic groups ( $M = 3.10$ ,  $SD = .47$ ) reported learning the least. A post hoc comparison using the Scheffé test showed that the only significant difference was between the student leaders in cultural organizations and those in sports/athletic organizations. There was also a trend indicating that student leaders in service organizations reported having learned more than student leaders in sports/athletic groups. (See Table 5.)

An ANOVA using roles within an organization as the independent variable and SLLOA scores as the dependent variable showed differences in SLLOA scores across the roles within an organization,  $F(6, 306) = 2.61$ ,  $p < .05$ . Vice Presidents reported learning the most from the leadership experience ( $M = 3.46$ ,  $SD = .38$ ) with Presidents next ( $M = 3.42$ ,  $SD = .40$ ) while Treasurers reported learning the least from the leadership experience ( $M = 3.16$ ,  $SD = .42$ ). A post hoc comparison using the Scheffé test revealed that the only significant difference was between student leaders who held the position of Treasurer and those holding the position President or Vice President. (See Table 6.)

*Relationships of Demographic Variables to Type of Organization and Roles within an Organization.* The demographic variables utilized in the analyses were age, gender, ethnicity, and type of housing. An ANOVA revealed that there was no difference in the age of the leaders of various types of organizations,  $F(8, 286) = .909$ ,  $p = .51$ .

Pearson chi-square tests were performed to test for potential relationships between the type of organization and leaders' gender, ethnicity, and type of housing. There was no relationship between gender and the type of organization,  $\chi^2 (16, N = 323) = 17.2, p = .38$ .

A statistically significant Pearson chi-square test was found in the relationship between ethnicity (African American, Asian, European (white, non-Hispanic), and Hispanic) and the nine types of organizations,  $\chi^2 (24, N = 259) = 73.3, p < .001$ . Ethnicities with low frequencies were excluded (American Indian, Middle Eastern, and Pacific Islander). The student leaders of sports/athletic groups and Greek letter organizations were more likely to be European (white, non-Hispanic). In academic/professional/honor organizations African Americans had a lower frequency than expected and Hispanics had a higher frequency. For Resident Assistants the frequency was higher than expected for African Americans and lower for Hispanics. For service groups the frequency for European (white, non-Hispanics) was lower than expected and higher for Hispanics. For religious groups African Americans had a higher frequency and European (white, non-Hispanics) had a lower frequency than expected.

There was a statistically significant relationship between the type of organization and type of housing,  $\chi^2 (14, N = 258) = 46.7, p < .001$ . The student leaders of Greek letter and campus/student governance organizations were significantly more likely to be living off campus without parents/parental figures as compared to student leaders from academic/professional/honor and programming organizations who were significantly more likely to be living off campus with parents/parental figures. Student leaders involved in service and religious organizations were significantly more likely to be living

on campus. Student leaders of cultural organizations were significantly more likely to be living on campus and off campus with parents/parental figures.

An ANOVA revealed significant differences in the ages of student leaders based on their role within the organization,  $F(6, 287) = 6.38, p < .001$ . The results are displayed in Table 7. Therefore, age was used as a covariate for further analyses that included leadership role. Not surprising, Senators, Resident Assistants, and Presidents/Chairpersons/Captains were significantly older than the leaders in other roles.

Pearson chi-square tests were performed to test for potential relationships between the role held within an organization and leaders' gender, ethnicity, and type of housing. No significant relationships were found between role held and gender,  $\chi^2(12, N = 321) = 15.9, p = .20$ , or type of housing,  $\chi^2(6, N = 224) = 8.60, p = .20$ , or ethnicity,  $\chi^2(18, N = 258) = 22.8, p = .20$ . A trend in the results did suggest that Asians were more likely to serve in the role of Treasurer.

*Relationships between Demographic Variables and Learning Outcomes.* A t-test was performed to examine potential differences between male student leaders and female student leaders in their reports of learning outcomes, as measured by the SLLOA. The results,  $t = -2.10, p < .05$ , showed that women reported learning more from the leadership experience ( $M = 3.42, SD = .37$ ) than men ( $M = 3.32, SD = .43$ ).

ANOVAs were used to test for potential relationships between other demographic variables and learning outcomes, as measured by the SLLOA. Although the  $F$  was significant,  $F(3, 256) = 2.66, p < .05$ , the Scheffé post hoc test indicated there was no significant difference between any two ethnic groups. (See Table 8.)

Results of an ANOVA indicated there was no significant difference in SLLOA scores based on student leaders' housing arrangements,  $F(2, 292) = 2.60, p = .08$ . The results of a Pearson correlation revealed there was no significant relationship between student leaders' ages and SLLOA scores.

## Chapter 4

### Discussion

This cross-sectional study contributed to the body of knowledge regarding college student leadership development in a number of ways. First, the study created a new, psychometrically sound, student leadership measure – the Student Leadership Learning Outcomes Assessment (SLLOA). It is the first measure of student leaders' learning outcomes that is based on student-generated, specific outcomes derived from experiences in their leadership roles. The SLLOA is a single-factor instrument that has excellent internal consistency. Two tests of criterion-related validity supported the validity of the SLLOA. In addition, the cultural diversity of the participants suggests that the measure may be generalizable to culturally diverse populations of college student leaders.

Second, this study, which compared student leaders from various types of student organizations with regard to learning outcomes, furthers the findings of Logue, et al. (2005) that suggested that student leaders may experience leadership differently based on the organization and its context. The finding leaders in sports/athletic groups reported learning less than leaders in cultural groups and service organizations may be explained by examining the organizations' purpose statements. Sports/athletic groups tend to be more social, skill, and competition oriented, while cultural and service groups tend to be more focused on educational objectives and serving others.

Third, in comparing learning among student leaders who held various types of leadership roles this study builds upon Astin's (1985) research, which indicated that holding an office or position of responsibility within an extracurricular organization has a proportional impact on the leadership learning experience and personal development. The

finding that Vice Presidents and Presidents reported learning the most and Treasurers learning the least may be a function of the fact that by nature Treasurers focus mainly on business operations of the organization and less on interactions with people and interpersonal relationships. Additionally, the constitutional structure of most student organizations tends to give Vice Presidents oversight of committees, which allows them to have a greater breadth and depth of responsibility and may explain the reason for them reporting learning the most from the leadership experience.

Fourth, when examining the relationship of demographic variables to learning outcomes, two important findings were observed. Women reported learning more from the leadership experience than men; this may be a function of female socialization regarding pleasing others—in this case, the researcher. However, this finding is consistent with Dugan (2006a). He suggested that women possess an advantage with regard to the leadership experience, which is based on women's focus on relationships, their process orientation, and their proneness toward rewarding their followers. This difference may point to the need for increased leadership training and exploration for college men. Additionally, providing leadership training opportunities focused on gender interaction may be a way to capitalize on the leadership advantage of women.

Fifth, the relationships identified between the ethnicity of student leaders and the types of organizations suggest the need for qualitative follow-up studies. The finding that the proportion of Hispanic student leaders was higher than that of European student leaders (white, non-Hispanic) in service groups is not surprising, because service groups at the institution tend to be culturally focused. However, the finding that African Americans had proportionally less involvement in academic/professional/honor groups

than Hispanics is puzzling. Membership in most of these organizations requires an invitation or high academic achievement. Perhaps African American students are not meeting the academic requirements for membership in these type organizations at the same rate as other ethnic groups. Perhaps many African American students self-select not to join these organizations because they do not have the financial resources to pay the dues required for membership, or because the organizations do not appeal to them for cultural reasons. More research is needed to better understand this finding. These results are consistent, however, with the research of Kezar and Moriarty (2000). They suggested that varying opportunities for leadership involvement are clearly important for leadership development among all groups of students, and that different types of involvement opportunities are helpful in developing leadership for various ethnic groups.

Among Resident Assistants the proportion of student leaders was higher for African Americans, probably because there is a concerted effort by the institution to recruit African American students to serve as Resident Assistants. It is likely that the proportion of Hispanics was low, because most Hispanic students live off campus with parents. The relatively high participation of African Americans within religious organizations may be a result of a general trend for African Americans to be more involved than others in religious activities.

Sixth, the finding that student leaders of Greek letter and campus/student governance organizations were more likely to be living off campus without parents/parental figures may reflect the independence of this group of student leaders. The finding that student leaders involved in service and religious organizations were significantly more likely to be living on campus suggest they may have a stronger bond

with the institution. The finding that student leaders involved in cultural organizations were significantly more likely to be living on campus and off campus with parents/parental figures may be explained by the fact that many of the students involved in these organizations are international students and the Hispanic student leaders of cultural groups are from the local community. However, these results are all correlational. Further qualitative research is needed to answer the important question of how housing arrangement might influence participation in student leadership.

Finally, it is encouraging that the type of roles held were not related to most demographic variables, with the understandable exception of age being related to status of the role. Qualitative research with Asian students could respond to the question of why they were more likely to be treasurers than other leadership roles.

### *Implications*

The results of this study have implications for college leadership development educators and student affairs professionals in general. First, there is a new scale developed with a culturally diverse sample—the SLLOA—for use in studying student leaders' learning outcomes. Second, the study suggests that explicit leadership training by student affairs professionals yields more leadership-related learning than simply holding a leadership role. Third, students holding leadership positions that require less interpersonal interaction (e.g., treasurer) than other roles may learn less from their leadership experience. Fourth, students holding leadership positions in some types of organizations appear to learn less than those in other types. This suggests that it might be beneficial for student affairs professionals to consider designing leadership training programs targeted to student leaders in organizations whose mission does not include



leadership development (e.g., sports), especially if there is an institutional desire to assess student leader development in all leadership positions.

#### *Limitations and Future Research*

Several limitations associated with this study provide suggestions for future research. The first concerns the sample--student leaders from a single, medium size, private institution. Future research replicating this study should be conducted at both smaller and larger private and public institutions. Further, another sample might reveal a different factor structure for the SLLOA.

Because this study was the first to identify self-reported learning outcomes of student leaders in a variety of organizations through the development and implementation of the SLLOA, future research needs to be conducted to further test the reliability and validity of the SLLOA. Additionally, there exists the potential for built-in bias when utilizing self-reporting instruments. Cognitive dissonance would be created if student leaders did not indicate they had learned a great deal from the leadership experience. Furthermore, retrospective data are vulnerable to bias created by selective memory. Also, it might be beneficial to shorten the number of items contained in the SLLOA.

Since this was one of the first studies to compare learning outcomes of student leaders across different types of organizations, roles within an organization, and type of housing, as well as age and gender, replication examining these variables is needed. Longitudinal data collected using the SLLOA would be beneficial to examine the effects of learning participation in leadership roles and leadership training over time. Utilization of the SLLOA with student leaders in a pre-test, post-test design or following a sample of

student leaders over the course of their college experience from freshman year to senior year might be advantageous.

Finally, qualitative research should be conducted to understand better the meaning of some of the results. Questions could include: Why is there a relationship between ethnicity of student leaders and type of organization? How does type of housing influence the type of organization that student leaders choose? Is the gender difference in reports of learning a real difference or a difference in response bias? Additionally, conducting a content analysis of the mission statements of the different types of student organizations might be useful in understanding the relationship of organizational context to learning outcomes.

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Table 1

*Counts and Percentages of Demographic Variables*

Variable	N	%
<b>Ethnicity</b>		
Black or African American	31	11.5%
American Indian	2	0.7%
Asian	22	8.2%
European (white, non-Hispanic)	139	51.7%
Hispanic	68	25.3%
Middle Eastern	7	2.6%
Pacific Islander	0	0.0%
<b>Type of Organization</b>		
Sports recreation or Athletic Group	25	7.7%
Cultural Group	37	11.5%
Greek Letter Group	62	19.2%
Academic/Professional/Honor Group	74	22.9%
Programming Board/Group	12	3.7%
Resident Assistant	40	12.4%
Service Group	35	10.8%
Campus/Student Governance Group	28	8.7%
Religious Group	10	3.1%
<b>Role within an Organization</b>		
President/Chairperson/Captain	120	37.4%
Vice President/Vice Chairperson	64	19.9%
Treasurer	39	12.2%
Secretary	20	6.2%
Resident Assistant	38	11.8%
Senator	8	2.5%
Other	32	10.0%

Table 2

*Sample Learning Outcomes and Items for the Student Leadership Learning Outcomes Assessment (SLLOA)*

Construct	Sample Learning Outcome	Sample Item
Self Awareness	Develop strategies to be more comfortable interacting with others in both social and professional settings.	I am more comfortable interacting with others in social settings.
		I am more comfortable interacting with others in professional settings.
Cognitive Complexity/ Systems Thinking	Be able to demonstrate the ability to create standards of accountability for themselves and others and hold people and themselves accountable to their actions.	I am better able to create standards of accountability for myself and others.
		I am better able to hold people accountable for their actions.
		I am more comfortable accepting responsibility for my actions.
Multicultural Competence	Develop an appreciation for others without regard to differences – which include race, religion, nationality, ethnicity, language, sexual orientation, skin color, disability, and socio-economic status.	I am better able to appreciate individual differences such as race, religion, nationality, ethnicity, language, sexual orientation, skin color, disability and socio-economic status.
Civic Engagement	Recognize opportunities for making conscientious decisions for themselves about the community around them.	I am better able to make conscientious decisions for myself about the community around me.
		I am better able to weigh the different dimensions of an issue before making decisions.

Knowledge Acquisition	Be able to comprehend information presented to them and communicate this information in a coherent and concise manner.	I comprehend information better.  I am better able to communicate information in a coherent and concise manner.
Integration and Application	Be able to relate how information they are learning connects to their college experiences.	I am better able to relate how information I am learning connects to my college experiences.  I am better able to apply the information I have learned to my college experiences.
Understanding Group Dynamics	Be able to solve problems effectively and make decisions that advance the objectives of a group.	I am better able to solve problems effectively.  I am better able to make decisions that advance the objectives of the group.



Table 3

*Descriptive Statistics of the Student Leadership Learning Outcomes Assessment (SLLOA) Scale and Subscales*

Scale	1	2	3	4	5	6	7	SLLOA
1. Self-Awareness	1							
2. Cognitive Complexity/Systems Thinking	.78	1						
3. Multicultural Competence	.62	.62	1					
4. Civic Engagement	.69	.76	.66	1				
5. Knowledge Acquisition	.72	.80	.58	.75	1			
6. Integration & Application	.75	.77	.57	.77	.81	1		
7. Understanding Group Dynamics	.77	.81	.55	.75	.78	.77	1	
SLLOA	.87	.90	.79	.89	.89	.89	.88	1
N	317	315	315	302	302	302	292	317
Mean	3.41	3.41	3.32	3.36	3.36	3.38	3.41	3.37
SD	0.40	0.42	0.58	0.47	0.46	0.49	0.42	0.41
Range	2.00	1.69	2.33	2.18	2.29	2.14	1.93	1.88
Cronbach's $\alpha$	.89	.89	.91	.89	.83	.91	.90	

Note.  $p < .05$ . All correlations are significant at the .01 level.

Table 4

*Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) between Number of Prior Leadership Positions and Learning Outcomes as Measured by the SLLOA*

Variable	No Prior Positions		One Prior Position		Two Prior Positions		Three Prior Positions		Four Prior Positions		More than Four Prior Positions		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (5,311)	$\eta^2$
SLLOA	3.26	0.41	3.27	0.45	3.33	0.39	3.45	0.39	3.42	0.24	3.58	0.32	5.73***	.08

\*\*\* $p < .001$

Table 5

*Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) between Types of Organizations and Learning Outcomes as Measured by the SLLOA*

Variable	Sports Recreation or Athletic		Cultural		Greek Letter		Academic/ Professional/ Honor		Programming		Resident Assistant		Service		Campus/ Student Governance		Religious		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (8,306)	$\eta^2$
SLLOA	3.10	0.47	3.53	0.29	3.40	0.35	3.29	0.44	3.56	0.33	3.33	0.40	3.50	0.37	3.38	0.42	3.30	0.42	3.48**	.08

\*\**p* < .01

Table 6

*Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) between Roles within an Organization and Learning Outcomes as Measured by the SLLOA*

Variable	President/ Chairperson/ Captain		Vice President/ Vice Chairperson		Treasurer		Secretary		Resident Assistant		Senator		Other		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (6,306)	$\eta^2$
SLLOA	3.42	0.40	3.46	0.38	3.16	0.42	3.31	0.41	3.34	0.41	3.31	0.50	3.39	0.37	2.61*	.05

\**p* < .05

Table 7

*Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) between Age and Roles within Organizations*

Variable	President/ Chairperson/ Captain		Vice President/ Vice Chairperson		Treasurer		Secretary		Resident Assistant		Senator		Other		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (6,287)	$\eta^2$
Age	22.2	0.92	21.5	1.08	21.7	1.16	21.1	1.03	22.1	0.97	22.3	1.21	21.4	1.34	6.38***	.12

\*\*\**p* < .001

Table 8

*Means, Standard Deviations, and One-Way Analysis of Variance (ANOVA) between Ethnicity and Learning Outcomes as Measured by the SLLOA*

Variable	African American		Asian		European (white, non-Hispanic)		Hispanic		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (3,256)	$\eta^2$
SLLOA	3.48	0.35	3.41	0.36	3.33	0.40	3.47	0.39	2.66*	.03

\* $p < .05$

Appendix A

Initial E-Mail to Participants

Dear (Student's First Name),

Within the Division of Student Affairs at the University of Miami we continuously strive to enhance and improve the undergraduate experience. Because of your involvement as a student leader you are being asked to participate in a study to help us understand better the possible benefits of holding a leadership position at the University of Miami. This study will enable the University of Miami to ascertain a more detailed picture of the benefits, or lack thereof, to students who participate in leadership roles while an undergraduate at the University.

We value your input and opinion so please take a few minutes to complete the student leader survey by clicking on the link below:

LINKXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Thank you for participating!

Richard Walker  
Assistant Vice President for Student Affairs

Appendix B

Follow-up E-Mail to Participants

Dear (Student's First Name),

You recently received an e-mail regarding participation in a University of Miami student leader survey. This survey will enable the University of Miami to ascertain a more detailed picture of the benefits, or lack thereof, to students who participate in leadership roles while an undergraduate at the University.

We value your input and opinion so please take a few minutes to complete the student leader survey by clicking on the link below:

LINKXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Thank you for participating!

Richard Walker  
Assistant Vice President for Student Affairs



## Appendix C

### *Learning Reconsidered* - Student Learning Outcomes

Student Outcomes	Dimensions of Outcomes
Cognitive Complexity	Critical thinking, reflective thinking, effective reasoning, intellectual flexibility, emotion/cognition integration, identity/cognition integration
Knowledge acquisition, Integration, and application	Understanding knowledge in a range of disciplines (acquisition); connecting knowledge to other knowledge, ideas, and experiences (integration); relate knowledge to daily life (application); pursuit of lifelong learning; career decidedness; technology competence
Humanitarianism	Understanding and appreciation of human differences; cultural competency; social responsibility
Civic Engagement	Sense of civic responsibility; commitment to public life through communities of practice; engage in principled dissent; effective in leadership

Interpersonal and intrapersonal Competence	Realistic self appraisal and self understanding; personal attributes such as identity, self esteem, confidence, ethics and integrity, spiritual awareness, personal goal setting; meaningful relationships; interdependence; collaboration; ability to work with people different from self
Practical Competence	Effective communication; capacity to manage one's affairs; economic self-sufficiency and vocational competence; maintain health and wellness; prioritize leisure pursuits; living a purposeful and satisfying life
Persistence and Academic Achievement	Manage college experience to achieve academic and personal success; academic goal

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*Note.* From “Learning Reconsidered: A Campus-Wide Focus on the Student Experience,” by R.P. Keeling, 2004, Washington DC: National Association of Student Personnel Administrators and American College Personnel Association. Copyright 2004 by the National Association of Student Personnel Administrators and American College Personnel Association.

## Appendix D

### Student Leadership Learning Outcomes Assessment Learning Outcomes within the Seven Constructs

#### **CONSENT TO PARTICIPATE IN A RESEARCH STUDY**

Influence of Student Leadership Experiences on Learning Outcomes

**The following information describes the research study in which you are being asked to participate. Please read the information carefully.**

#### **PURPOSE:**

The purpose of this study is to understand better the possible benefits of holding a leadership position at the University of Miami.

You are being asked to participate in the study because you have held a student leadership position at the University of Miami during the 2007-2008 academic year. Participation is strictly voluntary and you may withdraw at any time during the study.

#### **PROCEDURES:**

You are being asked to complete a questionnaire containing statements regarding your leadership role at the University of Miami. It should take 15-20 minutes to complete.

#### **RISKS AND/OR DISCOMFORTS:**

We do not anticipate you will experience any personal risk or discomfort from taking part in this study. You may skip any question you do not wish to answer.

#### **BENEFITS:**

It is possible that you will benefit from this study by becoming aware of how much you have learned, and grown personally from your leadership position. This study will enable the University of Miami to ascertain a more detailed picture of the benefits, or lack thereof, to students who participate in leadership roles while an undergraduate at the University of Miami.

#### **CONFIDENTIALITY:**

Your responses and participation are confidential. Data will be stored on a secured server. Access to data by the study investigator will be through a login credential and password only. The data will be confidential and will be linked only to the individual. The company hosting the questionnaire BUT NO ONE AT UM can link your responses to your e-mail address.

#### **COSTS:**

There are no costs associated with your participation in this study.

#### **COMPENSATION:**

At the completion of the study you will be eligible to enter a random drawing to win an iPhone.

#### **CONTACT INFORMATION:**

Richard Walker, Assistant Vice President for Student Affairs, at (305) 284-1313, will gladly answer any questions you may have concerning the purpose, procedures, and outcome of this project. If you have questions about your rights as a research subject you may contact Human Subjects Research Office at the University of Miami, at (305) 243-3195.

**PARTICIPANT AGREEMENT:**

By checking the button below, you are giving your consent to participate in this study and authorize the Investigator(s) to access your responses to the questionnaire.

I have read the consent form and agree to participate.

I do not agree to participate.

2. How many leadership positions did you hold in high school?

0

1

2

3

4

More than 4

3. Prior to the 2007-2008 academic year, how many leadership positions have you held at the University of Miami?

0

1

2

3

4

More than 4

4. Please select what you consider to be the **primary organization** where you hold or have held a leadership role this academic year (2007-2008). (This may be based on position held, number of hours devoted to the organization per week, etc.)

**Sports Recreation or Athletic Group** (e.g., SCRIF organizations, intercollegiate sports)

**Cultural Group** (e.g., COISO, FEC, UBS, Indian Students Association)

**Greek Letter Group** (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)

**Academic/Professional/Honor Group** (e.g., ODK, Society of Women Engineers, Beta Beta Beta)

**Programming Board/Group** (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)

**Resident Assistant**

**Service Group** (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)

**Campus/Student Governance Group** (e.g., Student Government, SAFAC, COSO)

**Religious Group** (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)

5. What leadership position do you hold or have held in the organization selected above?

President/Chairperson/Captain

Vice President/Vice Chairperson

Treasurer

Secretary

Resident Assistant

Senator

Other (please specify)

6. If you are involved in or have been involved in more than one leadership role during this academic year (2007-2008), please identify your **secondary organization** where you currently hold a leadership role.

**I only hold one leadership position on campus.**

**Sports Recreation or Athletic Group** (e.g., SCRIF organizations, intercollegiate sports)

**Cultural Group** (e.g., COISO, FEC, UBS, Indian Students Association)

**Greek Letter Group** (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)

**Academic/Professional/Honor Group** (e.g., ODK, Society of Women Engineers, Beta Beta Beta)

**Programming Board/Group** (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)

**Resident Assistant**

**Service Group** (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)

**Campus/Student Governance** (e.g., Student Government, SAFAC, COSO)

**Religious Group** (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)

7. What leadership position do you hold in the secondary organization selected on the previous question?

President/Chairperson/Captain

Vice President/Vice Chairperson

Treasurer

Secretary

Resident Assistant

Senator

Other (please specify)

8. If you were involved in a leadership role during the **2006-2007** academic year, please identify the **primary\_organization** where you held a leadership role.

**I did not hold a leadership role during the 2006-2007 academic year.**

**Sports Recreation or Athletic Group** (e.g., SCRIF organizations, intercollegiate sports)

**Cultural Group** (e.g., COISO, FEC, UBS, Indian Students Association)

**Greek Letter Group** (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)

**Academic/Professional/Honor Group** (e.g., ODK, Society of Women Engineers, Beta Beta Beta)

**Programming Board/Group** (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)

**Resident Assistant**

**Service Group** (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)

**Campus/Student Governance** (e.g., Student Government, SAFAC, COSO)

**Religious Group** (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)

9. What leadership position did you hold in the primary organization selected on the previous question?

President/Chairperson/Captain

Vice President/Vice Chairperson

Treasurer

Secretary

Resident Assistant

Senator

Other (please specify)

Not applicable

Contained in this questionnaire are statements regarding your student leadership role at the University of Miami. Please answer each statement based on your **primary leadership role** indicated previously for the **2007-2008** academic year by using the scale provided.

4 – Strongly Agree

3 – Agree

2 – Disagree

1 – Strongly Disagree

Please indicate your level of agreement with the following statements:

***As a result of my leadership experience at the University of Miami...***

Question on Student Leader Self-Evaluation	Correlating Outcome
	<b>Self Awareness</b>
<p>10- I have developed a better understanding of who I am as a leader.</p> <p>11- I have learned additional skills that have allowed me to be effective in leading others.</p>	01- Challenge themselves to develop an understanding for who they are and how to be most effective.
<p>12- I am more comfortable interacting with others in <b>social</b> settings.</p> <p>13- I am more comfortable interacting with others in <b>professional</b> settings.</p>	02- Develop strategies to be more comfortable interacting with others in both social and professional settings.
<p>14- I have a better sense of my personal <b>strengths</b>.</p> <p>15- I have a better sense of my personal <b>weaknesses</b>.</p> <p>16- I have developed a better sense of my personal values and ethics.</p> <p>17- I have developed an improved understanding of how my strengths and weaknesses as well as my values influence my interactions with others.</p> <p>18- I am NOT able to define success within the context of my abilities and values.</p>	03- Be able to identify/articulate their strengths and weaknesses, their values and ethics, and how these influence their interactions with others and their self-defined level of success.
<p>19- I am better able to analyze and clarify my values and use this skill as a foundation to make better ethical decisions.</p> <p>20- I am better able to make moral choices.</p>	04- Be able to analyze and clarify their values and continuously modify the application of their values as they deem appropriate based on experiences in order to make ethical decisions and consistent moral choices.
<p>21- I have developed a better understanding of the importance of healthy relationships.</p> <p>22- I am confident that I have the ability to foster healthy relationships with others.</p>	05- Develop an understanding of the importance of healthy relationships and design ways in which they will foster healthy relationships with others.
<p>23- I am better able to describe my career interests.</p> <p>24- I am better able to make future career choices.</p>	06- Be able to describe their interests and make appropriate choices related to their future career.
	<b>Cognitive Complexity/Systems Thinking</b>
<p>25- I am better able to create a <b>curricular</b> plan that has an organized sense of purpose for my college education.</p> <p>26- I am better able to create a <b>co-curricular</b> plan that has an organized sense of purpose for my college education.</p>	07- Formulate an intentional curricular and co-curricular plan for their collegiate journey in order to have a defined sense of purpose for their educational experience.

<p>27- I know how to better utilize campus resources if I have <b>learning related</b> needs (e.g., tutoring, study skills).</p> <p>28- I know how to better utilize campus resources to support my <b>personal</b> needs (e.g., career, financial, psychological).</p>	<p>08- Learn to use campus resources to support their learning (e.g., tutoring, study skills) and personal needs (e.g., career, financial, psychological)</p>
<p>29- I am better able to see the big picture regarding societal issues on the collegiate, local, national, and global level.</p>	<p>09- Be able to recognize and analyze the connection between collegiate, local, national, and global communities – in short, the ability to see the big picture</p>
<p>30- I am better able to conceptualize and combine relevant information from multiple sources.</p> <p>31- I am better able to integrate information into more general contexts.</p> <p>32- I am LESS able to apply information to new or broader contexts.</p>	<p>10- Be able to demonstrate the ability to conceptualize and combine relevant information from multiple sources, to integrate information into more general contexts, and to apply information to new or broader contexts</p>
<p>33- I am better able to handle multiple responsibilities simultaneously.</p> <p>34- I am better able to develop timelines for goal completion.</p>	<p>11- Demonstrate the ability to simultaneously handle multiple responsibilities and develop timelines to work towards the completion of a goal</p>
<p>35- I am better able to create standards of accountability for myself and others.</p> <p>36- I am better able to hold people accountable for their actions.</p> <p>37- I am more comfortable accepting responsibility for my actions.</p>	<p>12- Be able to demonstrate the ability to create standards of accountability for themselves and others and hold people and themselves accountable for their actions.</p>
	<b>Multicultural Competence</b>
<p>38- I have become more culturally aware.</p> <p>39 - I am better able to describe my own cultural identity.</p>	<p>13- Become more culturally aware and be able to describe their own cultural identity, as well as develop a better understanding of how that impacts their experience in the larger community.</p>
<p>40- I am better able to recognize opportunities that will allow me to celebrate my own culture(s).</p>	<p>14- Be able to recognize opportunities to celebrate their own culture(s).</p>
<p>41- I am better able to appreciate individual differences such as race, religion, nationality, ethnicity, language, sexual orientation, skin color, disability and socio-economic status.</p>	<p>15- Develop an appreciation for others without regard to differences - which include race, religion, nationality, ethnicity, language, sexual orientation, skin color, disability, and socio-economic status.</p>
<p>42- I have a greater awareness of the culturally-inspired arts and humanities (e.g., literature, dance, music, and art).</p> <p>43- I am more likely to attend cultural events different from my own culture.</p>	<p>16- Be aware of and take advantage of opportunities for exposure to various culturally-inspired humanities such as literature, dance, music, and art.</p>
<p>44- I am more likely to participate in conversations that include different perspectives and opinions.</p>	<p>17- Participate in conversations inclusive of a wide range of diverging perspectives and opinions and</p>



<p>45- I am more likely to appreciate the opinions and views of others.</p> <p>46- I am LESS likely to listen to points of view that are different from my own.</p>	<p>develop an appreciation for others' opinions and views.</p>
	<b>Civic Engagement</b>
<p>47 – I am more aware of local and global issues.</p> <p>48 - I am more able to inform the campus and/or surrounding community about local and global issues.</p>	<p>18- Engage in activities to inform the campus and surrounding community about local and global issues.</p>
<p>49 - I have become more involved in campus activities such as clubs and organizations, Greek life, etc.</p> <p>50- I have become more involved in community service.</p> <p>51- I have a better understanding of the importance of <b>campus</b> involvement to my college experience.</p> <p>52- I have a better understanding of the importance of <b>community</b> involvement to my college experience.</p>	<p>19- Be involved on campus and in the community and develop an understanding of the importance of campus and community involvement to their college experience.</p>
<p>53- I am better able to make conscientious decisions for myself about the community around me.</p> <p>54- I am better able to weigh the different dimensions of an issue before making decisions.</p>	<p>20 – Recognize opportunities for making conscientious decisions for themselves about the community around them.</p>
<p>55- I have a better understanding how to examine the root causes of social and political issues.</p> <p>56- I have NOT developed opinions about social and political issues.</p> <p>57 – I have chosen to become more actively involved with social and political issues.</p>	<p>21- Understand how to examine the root causes for, determine their opinion about, and actively be involved with social and political issues.</p>
	<b>Knowledge Acquisition</b>
<p>58- I am better able to identify appropriate sources from which to attain information in order to be successful on campus.</p>	<p>22- Be able to identify appropriate sources from which to attain information to be successful on campus.</p>
<p>59- I am better able to recognize different learning styles.</p> <p>60- I do NOT have a better understanding of the learning style most effective for me.</p>	<p>23- Recognize different types of learning styles and be able to identify the most effective style for their individual learning.</p>
<p>61- I comprehend information better.</p> <p>62- I am better able to communicate information in a coherent and concise manner.</p>	<p>24- Be able to comprehend information presented to them and communicate this information in a coherent and concise manner.</p>

63- My verbal communication skills have improved. 64- I communicate more effectively through my writing.	25- Be able to implement effective communication skills, both written and verbal.
	<b>Integration &amp; Application</b>
65- I am better able to apply theories and concepts learned to practical everyday situations.	26- Be able to utilize theories and concepts learned in practical situations.
66- I am better able to utilize appropriate sources from which to obtain information.	27- Be able to utilize appropriate sources from which to obtain information.
67- I am better able to relate how information I am learning connects to my college experiences. 68- I am better able to apply the information I have learned to my college experiences.	28- Be able to relate how information they are learning connects to their college experiences.
69- I am LESS confident in my ability to make informed decisions about possible career paths. 70- I have developed a better understanding of how the general knowledge I have learned applies to my daily life. 71- I am better able to make decisions based on the knowledge I have learned.	29- Be able to relate knowledge learned to daily life, possible career paths, and decision making.
	<b>Understanding Group Dynamics</b>
72- I better understand the importance of fostering and mentoring future leaders. 73- I can better develop and implement strategies for ensuring successful transitions from one leader to the next.	30- Be able to develop and implement strategies for generative leadership – a philosophy where leaders see it as their responsibility to foster leaders as opposed to followers to ensure successful transitions and growth for years to come.
74 – I am better able to solve problems effectively. 75 – I am better able to make decisions that advance the objectives of a group.	31- Be able to solve problems effectively and make decisions that advance the objectives of a group.
76- I have learned to better identify the roles that each member plays within a group. 77- I am more confident in my ability to assess the <b>strengths</b> of each member's role within a group. 78- I am more confident in my ability to assess the <b>weaknesses</b> of each member's role within a group. 79- I am LESS comfortable in my capability of facilitating action toward accomplishing the goals of the group.	32- Be able to identify roles in a group and determine the strengths and weaknesses associated with those roles and facilitate action towards the group's goals.
80 - I am more aware of how my <b>oral</b> communication skills contribute <b>positively</b> to the functioning of a group and my individual success within a group.	33- Be aware of the pros and cons of their oral and written communication skills in relation to the functionality of a group and individual success within a group.

<p>81 - I am more aware of how my <b>oral</b> communication skills contribute <b>negatively</b> to the functioning of a group and my individual success within a group.</p> <p>82 – I am more aware of how my <b>written</b> communication skills contribute <b>positively</b> to the functioning of a group and my individual success within a group.</p> <p>83 – I am more aware of how my <b>written</b> communication skills contribute <b>negatively</b> to the functioning of a group and my individual success within a group.</p>	
<p>84- I have further developed the ability to set goals for myself that are SMART (specific, measurable, attainable, realistic and time-specific).</p> <p>85- I am better able to implement SMART (Specific, Measurable, Attainable, Realistic, Time-Specific) goals as a basis for practical decision making.</p>	<p>34- Be able to develop and implement SMART goals (Specific, Measurable, Attainable, Realistic, Time-Specific) in order to demonstrate practical decision-making skills.</p>
<p>86- I am more comfortable taking the steps necessary to resolve a conflict without seeking outside assistance.</p>	<p>35- Be willing to take steps to resolving conflicts without seeking outside assistance.</p>

**To help us understand our campus leaders please respond to the following questions.**

**87. Academic Classification:**

Freshman  
 Sophomore  
 Junior  
 Senior

**88. Housing:**

On-campus (including University Village)  
 Off-campus with Parents/Parental Figures  
 Off-Campus without Parents/Parental Figures

**89. Age:**

18  
 19  
 20  
 21  
 22  
 23+

90. **Sex:**
- Male
  - Female
91. **Nationality:**
- U.S. Citizen/U.S. Permanent Resident
  - Non-U.S. Citizen
92. **Country of Origin:** \_\_\_\_\_ (please specify)
93. **Ethnicity (check all that apply):**
- Black or African American
  - American Indian
  - Asian
  - European (white, non-Hispanic)
  - Hispanic
  - Middle Eastern
  - Pacific Islander
  - Other (please specify)

## Appendix E

### Computer Display Version – Student Leadership Learning Outcomes Assessment

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#### Q1 CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Influence of Student Leadership Experiences on Learning Outcomes

**The following information describes the research study in which you are being asked to participate. Please read the information carefully.**

**PURPOSE:**

The purpose of this study is to understand better the possible benefits of holding a leadership position at the University of Miami.

You are being asked to participate in the study because you have held a student leadership position at the University of Miami during the 2007-2008 academic year. Participation is strictly voluntary and you may withdraw at any time during the study.

**PROCEDURES:**

You are being asked to complete a questionnaire containing statements regarding your leadership role at the University of Miami. It should take 15-20 minutes to complete.

**RISKS AND/OR DISCOMFORTS:**

We do not anticipate you will experience any personal risk or discomfort from taking part in this study. You may skip any question you do not wish to answer.

**BENEFITS:**

It is possible that you will benefit from this study by becoming aware of how much you have learned, and grown personally from your leadership position. This study will enable the University of Miami to ascertain a more detailed picture of the benefits, or lack thereof, to students who participate in leadership roles while an undergraduate at the University of Miami.

**CONFIDENTIALITY:**

Your responses and participation are confidential. Data will be stored on a secured server. Access to data by the study investigator will be through a login credential and password only. The data will be confidential and will be linked only to the individual. The company hosting the questionnaire BUT NO ONE AT UM can link your responses to your e-mail address.

**COSTS:**

There are no costs associated with your participation in this study.

**COMPENSATION:**

At the completion of the study you will be eligible to enter a random drawing to win an iPhone.

**CONTACT INFORMATION:**

Richard Walker, Assistant Vice President for Student Affairs, at (305) 284-1313, will gladly answer any questions you may have concerning the purpose, procedures, and outcome of this project. If you have questions about your rights as a research subject you may contact Human Subjects Research Office at the University of Miami, at (305) 243-3195.

**PARTICIPANT AGREEMENT:**

By checking the button below, you are giving your consent to participate in this study and authorize the Investigator(s) to access your responses to the questionnaire.

I have read the consent form and agree to participate. [Code = 1]

I do not agree to participate.[Code = 2] (Go To End)

Required answers: 0

Allowed answers: 1

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Q2 How many leadership positions did you hold in high school?

0[Code = 1]

1[Code = 2]

2[Code = 3]

3[Code = 4]

4[Code = 5]

More than 4[Code = 6]

Required answers: 0 Allowed answers: 1

Q3 Prior to the 2007-2008 academic year, how many leadership positions have you held at the University of Miami?

0[Code = 1]

1[Code = 2]

2[Code = 3]

3[Code = 4]

4[Code = 5]

More than 4[Code = 6]

Required answers: 0 Allowed answers: 1

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Q4 Please select what you consider to be the **primary organization** where you hold or have held a leadership role this academic year (2007-2008). (This may be based on position held, number of hours devoted to the organization per week, etc.)**Sports Recreation or Athletic Group** (e.g., SCRIF organizations, intercollegiate sports)[Code = 1]**Cultural Group** (e.g., COISO, FEC, UBS, Indian Students Association)[Code = 2]**Greek Letter Group** (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)[Code = 3]**Academic/Professional/Honor Group** (e.g., ODK, Society of Women Engineers, Beta Beta Beta)[Code = 4]**Programming Board/Group** (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)[Code = 5]**Resident Assistant**[Code = 6]**Service Group** (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)[Code = 7]**Campus/Student Governance Group** (e.g., Student Government, SAFAC, COSO)[Code = 8]**Religious Group** (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)[Code = 9]

Required answers: 0 Allowed answers: 1

Q5 What leadership position do you hold in the primary organization selected above?

President/Chairperson/Captain[Code = 1]

Vice President/Vice Chairperson[Code = 2]

Treasurer[Code = 3]

Secretary[Code = 4]

Resident Assistant[Code = 5]

Senator[Code = 6]

Other (please specify)[Code = 7] [TextBox]

Required answers: 0 Allowed answers: 1

Q6 If you are involved in or have been involved in more than one leadership role during this academic year (2007-2008), please identify your **secondary organization** where you currently hold a leadership role.

I only hold one leadership position on campus.[Code = 1]
<b>Sports Recreation or Athletic Group</b> (e.g., SCRIF organizations, intercollegiate sports)[Code = 2]
<b>Cultural Group</b> (e.g., COISO, FEC, UBS, Indian Students Association)[Code = 3]
<b>Greek Letter Group</b> (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)[Code = 4]
<b>Academic/Professional/Honor Group</b> (e.g., ODK, Society of Women Engineers, Beta Beta Beta)[Code = 5]
<b>Programming Board/Group</b> (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)[Code = 6]
<b>Resident Assistant</b> [Code = 7]
<b>Service Group</b> (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)[Code = 8]
<b>Campus/Student Governance Group</b> (e.g., Student Government, SAFAC, COSO)[Code = 9]
<b>Religious Group</b> (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)[Code = 10]
<i>Required answers: 0      Allowed answers: 1</i>

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Q7 What leadership position do you hold in the secondary organization selected on the previous question?
President/Chairperson/Captain[Code = 1]
Vice President/Vice Chairperson[Code = 2]
Treasurer[Code = 3]
Secretary[Code = 4]
Resident Assistant[Code = 5]
Senator[Code = 6]
Other (please specify)[Code = 7] [TextBox]
<i>Required answers: 0      Allowed answers: 1</i>
Display if NOT Q6='I only hold one leadership position on campus.'

Q8 If you were involved in a leadership role during the <b>2006-2007</b> academic year, please identify the <b>primary organization</b> where you held a leadership role.
I did not hold a leadership role during the 2006-2007 academic year.[Code = 1]
<b>Sports Recreation or Athletic Group</b> (e.g., SCRIF organizations, intercollegiate sports)[Code = 2]
<b>Cultural Group</b> (e.g., COISO, FEC, UBS, Indian Students Association)[Code = 3]
<b>Greek Letter Group</b> (e.g., fraternities, sororities, IFC, NPHC, LGC, Panhellenic)[Code = 4]
<b>Academic/Professional/Honor Group</b> (e.g., ODK, Society of Women Engineers, Beta Beta Beta)[Code = 5]
<b>Programming Board/Group</b> (e.g., Hurricane Productions, Homecoming, ACS, SpectrUM)[Code = 6]
<b>Resident Assistant</b> [Code = 7]
<b>Service Group</b> (e.g., LINK, Alternative Breaks, FunDay, Earth Alert)[Code = 8]
<b>Campus/Student Governance Group</b> (e.g., Student Government, SAFAC, COSO)[Code = 9]
<b>Religious Group</b> (e.g., JSO, Baptist Collegiate Ministries, Muslim Students Organization)[Code = 10]
<i>Required answers: 0      Allowed answers: 1</i>

Q9 What leadership position did you hold in the primary organization selected on the previous question?
President/Chairperson/Captain[Code = 1]
Vice President/Vice Chairperson[Code = 2]
Treasurer[Code = 3]
Secretary[Code = 4]
Resident Assistant[Code = 5]
Senator[Code = 6]
Other (please specify)[Code = 7] [TextBox]
Not applicable[Code = 9]

Required answers: 0 Allowed answers: 1

Next Page: Sequential

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Contained in this questionnaire are statements regarding your student leadership role at the University of Miami. Please answer each statement based on your **primary leadership role** indicated previously for the **2007-2008** academic year by using the scale provided.

Required answers: 0 Allowed answers: 0

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q10 I have developed a better understanding of who I am as a leader.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q11 I have learned additional skills that have allowed me to be effective in leading others.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q12 I am more comfortable interacting with others in **social** settings.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q13 I am more comfortable interacting with others in **professional** settings.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q14 I have a better sense of my personal **strengths**.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1



Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q16 I have developed a better sense of my personal values and ethics.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q17 I have developed an improved understanding of how my strengths and weaknesses as well as my values influence my interactions with others.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q18 I am NOT able to define success within the context of my abilities and values.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q19 I am better able to analyze and clarify my values and use this skill as a foundation to make better ethical decisions.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q20 I am better able to make moral choices.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q21 I have developed a better understanding of the importance of healthy relationships.
---

Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Q22 I am confident that I have the ability to foster healthy relationships with others.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Q23 I am better able to describe my career interests.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Q24 I am better able to make future career choices.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q25 I am better able to create a <b>curricular</b> plan that has an organized sense of purpose for my college education.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Q26 I am better able to create a <b>co-curricular</b> plan that has an organized sense of purpose for my college education.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	Required answers: 0      Allowed answers: 1

Q27 I know how to better utilize campus resources if I have <b>learning related</b> needs (e.g., tutoring, study skills).	
---	--

Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q28 I know how to better utilize campus resources to support my <b>personal</b> needs (e.g., career, financial, psychological).
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q29 I am better able to see the big picture regarding societal issues on the collegiate, local, national, and global level.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q30 I am better able to conceptualize and combine relevant information from multiple sources.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q31 I am better able to integrate information into more general contexts.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q32 I am LESS able to apply information to new or broader contexts.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Q33 I am better able to handle multiple responsibilities simultaneously.
Strongly agree[Code = 4]
Agree[Code = 3]
Disagree[Code = 2]
Strongly disagree[Code = 1]
<i>Required answers: 0      Allowed answers: 1</i>

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q34 I am better able to make timelines for goal completion.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q35 I am better able to create standards of accountability for myself and others.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q36 I am better able to hold people accountable for their actions.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q37 I am more comfortable accepting responsibility for my actions.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q38 I have become more culturally aware.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q39 I am better able to describe my own cultural identity.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q40 I am better able to recognize opportunities that will allow me to celebrate my own culture(s).

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

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Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q41 I am better able to appreciate individual differences such as race, religion, nationality, ethnicity, language, sexual orientation, skin color, disability and socio-economic status.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

*Required answers: 0      Allowed answers: 1*

Q42 I have a greater awareness of the culturally-inspired arts and humanities (e.g., literature, dance, music, and art).

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

*Required answers: 0      Allowed answers: 1*

Q43 I am more likely to attend cultural events different from my own culture.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

*Required answers: 0      Allowed answers: 1*

Q44 I am more likely to participate in conversations that include different perspectives and opinions.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

*Required answers: 0      Allowed answers: 1*

Q45 I am more likely to appreciate the opinions and views of others.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

*Required answers: 0      Allowed answers: 1*

Q46 I am LESS likely to listen to points of view that are different from my own.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q47 I am more aware of local and global issues.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q48 I am more able to inform the campus and/or surrounding community about local and global issues.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q49 I have become more involved in campus activities such as clubs and organizations, Greek life, etc.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q50 I have become more involved in community service.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q51 I have a better understanding of the importance of **campus** involvement to my college experience.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q52 I have a better understanding of the importance of **community** involvement to my college

Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q53 I am better able to make conscientious decisions for myself about the community around me.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q54 I am better able to weigh the different dimensions of an issue before making decisions.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q55 I have a better understanding how to examine the root causes of social and political issues.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q56 I have NOT developed opinions about social and political issues.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q57 I have chosen to become more actively involved with social and political issues.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q58 I am better able to identify appropriate sources from which to attain information in order to be successful on campus.	
--	--

Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Q59 I am better able to recognize different learning styles.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Q60 I do NOT have a better understanding of the learning style most effective for me.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Q61 I comprehend information better.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q62 I am better able to communicate information in a coherent and concise manner.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Q63 My verbal communication skills have improved.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0    Allowed answers: 1</i>

Q64 I communicate more effectively through my writing.	
Strongly agree[Code = 4]	
Agree[Code = 3]	



Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q65 I am better able to apply theories and concepts learned to practical everyday situations.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q66 I am better able to utilize appropriate sources from which to obtain information.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q67 I am better able to relate how information I am learning connects to my college experiences.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q68 I am better able to apply the information I have learned to my college experiences.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

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Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q69 I am LESS confident in my ability to make informed decisions about possible career paths.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q70 I have developed a better understanding of how the general knowledge I have learned applies to my daily life.

Strongly agree[Code = 4]

Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q71 I am better able to make decisions based on the knowledge I have learned.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q72 I better understand the importance of fostering and mentoring future leaders.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q73 I can better develop and implement strategies for ensuring successful transitions from one leader to the next.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q74 I am better able to solve problems effectively.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Q75 I am better able to make decisions that advance the objectives of a group.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	
	<i>Required answers: 0      Allowed answers: 1</i>

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q76 I have learned to better identify the roles that each member plays within a group.	
Strongly agree[Code = 4]	
Agree[Code = 3]	
Disagree[Code = 2]	
Strongly disagree[Code = 1]	

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q77 I am more confident in my ability to assess the **strengths** of each member's role within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q78 I am more confident in my ability to assess the **weaknesses** of each member's role within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q79 I am LESS comfortable in my capability of facilitating action toward accomplishing the goals of the group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q80 I am more aware of how my **oral** communication skills contribute **positively** to the functioning of a group and my individual success within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q81 I am more aware of how my **oral** communication skills contribute **negatively** to the functioning of a group and my individual success within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q82 I am more aware of how my **written** communication skills contribute **positively** to the functioning of a group and my individual success within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q83 I am more aware of how my **written** communication skills contribute **negatively** to the functioning of a group and my individual success within a group.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Please indicate your level of agreement with the following statements:

**As a result of my leadership experience at the University of Miami...**

Q84 I have further developed the ability to set goals for myself that are SMART (specific, measurable, attainable, realistic and time-specific).

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q85 I am better able to implement SMART (specific, measurable, attainable, realistic and time-specific) goals as a basis for practical decision making.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

Q86 I am more comfortable taking the steps necessary to resolve a conflict without seeking outside assistance.

Strongly agree[Code = 4]

Agree[Code = 3]

Disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 0 Allowed answers: 1

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To help us understand our campus leaders, please respond to the following questions.

Required answers: 0 Allowed answers: 0

Q87 Academic classification:

Freshman[Code = 1]

Sophomore[Code = 2]

Junior[Code = 3]

Senior[Code = 4]

Required answers: 0 Allowed answers: 1

Q88 Housing:	
On-campus (including University Village) [Code = 1]	
Off-campus with parents/parental figures [Code = 2]	
Off-campus without parents/parental figures [Code = 3]	
	Required answers: 0      Allowed answers: 1

Q89 Age:	
18 [Code = 1]	
19 [Code = 2]	
20 [Code = 3]	
21 [Code = 4]	
22 [Code = 5]	
23+ [Code = 6]	
	Required answers: 0      Allowed answers: 1

Q90 Sex:	
Male [Code = 1]	
Female [Code = 2]	
	Required answers: 0      Allowed answers: 1

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Q91 Nationality:	
U.S. Citizen/U.S. Permanent Resident [Code = 1]	
Non-U.S. Citizen [Code = 2]	
	Required answers: 0      Allowed answers: 1

Q92 Country of origin:	
[Code = 1] [TextBox]	
	Required answers: 0      Allowed answers: 1

Q93 Ethnicity: (Check all that apply)	
Black or African American [Code = 1]	
American Indian [Code = 2]	
Asian [Code = 3]	
European (white, non-Hispanic) [Code = 4]	
Hispanic [Code = 5]	
Middle Eastern [Code = 6]	
Pacific Islander [Code = 7]	
Other (please specify) [Code = 8] [TextBox]	
	Required answers: 0      Allowed answers: 8

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## Appendix F

### Item Level Statistics

		v10	v11	v12	v13	v14	v15	v16	v17	v18
N	Valid	317	317	315	316	316	317	316	312	308
	Missing	54	54	56	55	55	54	55	59	63
	Mean	3.65	3.66	3.58	3.58	3.53	3.53	3.40	3.45	1.83
	Median	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.00	2.00
	Std. Deviation	.521	.526	.572	.555	.565	.582	.681	.598	.691
	Skewness	-1.112	-1.176	-.975	-.877	-.722	-.880	-.947	-.653	.588
	Std. Error of Skewness	.137	.137	.137	.137	.137	.137	.137	.138	.139
	Kurtosis	.155	.354	-.043	-.268	-.501	.323	.673	-.019	.496
	Std. Error of Kurtosis	.273	.273	.274	.273	.273	.273	.273	.275	.277
	Minimum	2	2	2	2	2	1	1	1	1
	Maximum	4	4	4	4	4	4	4	4	4

		v19	v20	v21	v22	v23	v24	v25	v26	v27
N	Valid	309	314	311	313	313	312	312	310	315
	Missing	62	57	60	58	58	59	59	61	56
	Mean	3.25	3.11	3.43	3.54	3.12	3.20	3.19	3.25	3.28
	Median	3.00	3.00	3.00	4.00	3.00	3.00	3.00	3.00	3.00
	Std. Deviation	.601	.714	.607	.548	.809	.774	.708	.691	.740
	Skewness	-.161	-.262	-.658	-.616	-.524	-.659	-.342	-.425	-.742
	Std. Error of Skewness	.139	.138	.138	.138	.138	.138	.138	.138	.137
	Kurtosis	-.519	-.661	-.047	-.737	-.520	-.168	-.764	-.623	-.009
	Std. Error of Kurtosis	.276	.274	.276	.275	.275	.275	.275	.276	.274
	Minimum	2	1	1	2	1	1	1	1	1
	Maximum	4	4	4	4	4	4	4	4	4







		v80	v81	v82	v83	v84	v85	v86
N	Valid	289	289	291	290	292	290	290
	Missing	82	82	80	81	79	81	81
	Mean	3.54	3.15	3.30	2.91	3.35	3.36	3.42
	Median	4.00	3.00	3.00	3.00	3.00	3.00	3.00
	Std. Deviation	.546	.826	.677	.893	.694	.692	.602
	Skewness	-.739	-.804	-.716	-.432	-.833	-.856	-.519
	Std. Error of Skewness	.143	.143	.143	.143	.143	.143	.143
	Kurtosis	.233	.179	.483	-.587	.445	.501	-.625
	Std. Error of Kurtosis	.286	.286	.285	.285	.284	.285	.285
	Minimum	1	1	1	1	1	1	2
	Maximum	4	4	4	4	4	4	4

## v10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	1.9	2.2	2.2
	3	96	25.9	30.3	32.5
	4	214	57.7	67.5	100.0
	Total	317	85.4	100.0	
Missing	System	54	14.6		
Total		371	100.0		

## v11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	2.2	2.5	2.5
	3	93	25.1	29.3	31.9
	4	216	58.2	68.1	100.0
	Total	317	85.4	100.0	
Missing	System	54	14.6		
Total		371	100.0		

## v12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	13	3.5	4.1	4.1
	3	107	28.8	34.0	38.1
	4	195	52.6	61.9	100.0
	Total	315	84.9	100.0	
Missing	System	56	15.1		
Total		371	100.0		

v13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	10	2.7	3.2	3.2
	3	113	30.5	35.8	38.9
	4	193	52.0	61.1	100.0
	Total	316	85.2	100.0	
Missing	System	55	14.8		
Total		371	100.0		

v14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	3.0	3.5	3.5
	3	125	33.7	39.6	43.0
	4	180	48.5	57.0	100.0
	Total	316	85.2	100.0	
Missing	System	55	14.8		
Total		371	100.0		

v15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	11	3.0	3.5	3.8
	3	125	33.7	39.4	43.2
	4	180	48.5	56.8	100.0
	Total	317	85.4	100.0	
Missing	System	54	14.6		
Total		371	100.0		

v16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.3	1.3
	2	23	6.2	7.3	8.5
	3	131	35.3	41.5	50.0
	4	158	42.6	50.0	100.0
	Total	316	85.2	100.0	
Missing	System	55	14.8		
Total		371	100.0		

v17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	14	3.8	4.5	4.8
	3	142	38.3	45.5	50.3
	4	155	41.8	49.7	100.0
	Total	312	84.1	100.0	
Missing	System	59	15.9		
Total		371	100.0		

v18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	97	26.1	31.5	31.5
	2	171	46.1	55.5	87.0
	3	34	9.2	11.0	98.1
	4	6	1.6	1.9	100.0
	Total	308	83.0	100.0	
Missing	System	63	17.0		
Total		371	100.0		

v19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	27	7.3	8.7	8.7
	3	179	48.2	57.9	66.7
	4	103	27.8	33.3	100.0
	Total	309	83.3	100.0	
Missing	System	62	16.7		
Total		371	100.0		

v20

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	.5	.6	.6
	2	59	15.9	18.8	19.4
	3	157	42.3	50.0	69.4
	4	96	25.9	30.6	100.0
	Total	314	84.6	100.0	
Missing	System	57	15.4		
Total		371	100.0		

v21

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	16	4.3	5.1	5.5
	3	141	38.0	45.3	50.8
	4	153	41.2	49.2	100.0
	Total	311	83.8	100.0	
Missing	System	60	16.2		
Total		371	100.0		

v22

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	2.2	2.6	2.6
	3	129	34.8	41.2	43.8
	4	176	47.4	56.2	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		

v23

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2.2	2.6	2.6
	2	61	16.4	19.5	22.0
	3	128	34.5	40.9	62.9
	4	116	31.3	37.1	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		

v24

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	1.9	2.2	2.2
	2	47	12.7	15.1	17.3
	3	134	36.1	42.9	60.3
	4	124	33.4	39.7	100.0
	Total	312	84.1	100.0	
Missing	System	59	15.9		
Total		371	100.0		

v25

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	51	13.7	16.3	16.7
	3	148	39.9	47.4	64.1
	4	112	30.2	35.9	100.0
	Total	312	84.1	100.0	
Missing	System	59	15.9		
Total		371	100.0		

v26

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	42	11.3	13.5	13.9
	3	147	39.6	47.4	61.3
	4	120	32.3	38.7	100.0
	Total	310	83.6	100.0	
Missing	System	61	16.4		
Total		371	100.0		

v27

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.3	1.6	1.6
	2	39	10.5	12.4	14.0
	3	133	35.8	42.2	56.2
	4	138	37.2	43.8	100.0
	Total	315	84.9	100.0	
Missing	System	56	15.1		
Total		371	100.0		

v28

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	38	10.2	12.1	13.0
	3	131	35.3	41.6	54.6
	4	143	38.5	45.4	100.0
	Total	315	84.9	100.0	
Missing	System	56	15.1		
Total		371	100.0		

v29

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	14	3.8	4.4	4.8
	3	126	34.0	40.0	44.8
	4	174	46.9	55.2	100.0
	Total	315	84.9	100.0	
Missing	System	56	15.1		
Total		371	100.0		

v30

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	22	5.9	7.0	7.3
	3	127	34.2	40.3	47.6
	4	165	44.5	52.4	100.0
	Total	315	84.9	100.0	
Missing	System	56	15.1		
Total		371	100.0		

v31

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	18	4.9	5.8	6.1
	3	146	39.4	46.8	52.9
	4	147	39.6	47.1	100.0
	Total	312	84.1	100.0	
Missing	System	59	15.9		
Total		371	100.0		

v32

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	141	38.0	45.3	45.3
	2	153	41.2	49.2	94.5
	3	14	3.8	4.5	99.0
	4	3	.8	1.0	100.0
	Total	311	83.8	100.0	
Missing	System	60	16.2		
Total		371	100.0		

v33

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	2.2	2.6	2.6
	3	96	25.9	30.7	33.2
	4	209	56.3	66.8	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		

v34

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	20	5.4	6.4	6.7
	3	128	34.5	40.8	47.5
	4	165	44.5	52.5	100.0
	Total	314	84.6	100.0	
Missing	System	57	15.4		
Total		371	100.0		

v35

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	17	4.6	5.4	5.4
	3	124	33.4	39.6	45.0
	4	172	46.4	55.0	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		

v36

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	28	7.5	8.9	9.2
	3	126	34.0	40.1	49.4
	4	159	42.9	50.6	100.0
	Total	314	84.6	100.0	
Missing	System	57	15.4		
Total		371	100.0		

v37

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	3.0	3.5	3.5
	3	116	31.3	36.9	40.4
	4	187	50.4	59.6	100.0
	Total	314	84.6	100.0	
Missing	System	57	15.4		
Total		371	100.0		

v38

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	35	9.4	11.1	11.5
	3	106	28.6	33.8	45.2
	4	172	46.4	54.8	100.0
	Total	314	84.6	100.0	
Missing	System	57	15.4		
Total		371	100.0		

v39

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	3.0	3.5	3.5
	2	75	20.2	24.0	27.5
	3	102	27.5	32.6	60.1
	4	125	33.7	39.9	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		

v40

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	3.2	3.8	3.8
	2	72	19.4	23.0	26.8
	3	104	28.0	33.2	60.1
	4	125	33.7	39.9	100.0
	Total	313	84.4	100.0	
Missing	System	58	15.6		
Total		371	100.0		



v41

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	31	8.4	10.3	11.3
	3	102	27.5	34.0	45.3
	4	164	44.2	54.7	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

v42

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	2.7	3.3	3.3
	2	46	12.4	15.3	18.6
	3	121	32.6	40.2	58.8
	4	124	33.4	41.2	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v43

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.3	1.7	1.7
	2	52	14.0	17.3	19.0
	3	113	30.5	37.7	56.7
	4	130	35.0	43.3	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

v44

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	22	5.9	7.3	8.3
	3	119	32.1	39.5	47.8
	4	157	42.3	52.2	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v45

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	19	5.1	6.3	6.6
	3	111	29.9	36.9	43.5
	4	170	45.8	56.5	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v46

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	190	51.2	62.9	62.9
	2	96	25.9	31.8	94.7
	3	12	3.2	4.0	98.7
	4	4	1.1	1.3	100.0
	Total	302	81.4	100.0	
Missing	System	69	18.6		
Total		371	100.0		

v47

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	30	8.1	9.9	10.9
	3	137	36.9	45.4	56.3
	4	132	35.6	43.7	100.0
	Total	302	81.4	100.0	
Missing	System	69	18.6		
Total		371	100.0		

v48

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.3	1.3
	2	32	8.6	10.6	11.9
	3	120	32.3	39.7	51.7
	4	146	39.4	48.3	100.0
	Total	302	81.4	100.0	
Missing	System	69	18.6		
Total		371	100.0		

v49

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	21	5.7	7.0	7.9
	3	94	25.3	31.1	39.1
	4	184	49.6	60.9	100.0
	Total	302	81.4	100.0	
Missing	System	69	18.6		
Total		371	100.0		

v50

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	48	12.9	15.9	16.9
	3	105	28.3	34.9	51.8
	4	145	39.1	48.2	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v51

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	.5	.7	.7
	2	7	1.9	2.3	3.0
	3	106	28.6	35.2	38.2
	4	186	50.1	61.8	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v52

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.3	1.3
	2	22	5.9	7.3	8.6
	3	108	29.1	35.9	44.5
	4	167	45.0	55.5	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v53

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	20	5.4	6.7	7.0
	3	125	33.7	41.7	48.7
	4	154	41.5	51.3	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

v54

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	17	4.6	5.7	6.0
	3	137	36.9	45.7	51.7
	4	145	39.1	48.3	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

v55

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.3	1.3
	2	39	10.5	12.9	14.2
	3	137	36.9	45.4	59.6
	4	122	32.9	40.4	100.0
	Total	302	81.4	100.0	
Missing	System	69	18.6		
Total		371	100.0		

v56

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	138	37.2	45.8	45.8
	2	132	35.6	43.9	89.7
	3	25	6.7	8.3	98.0
	4	6	1.6	2.0	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

**v57**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2.2	2.7	2.7
	2	60	16.2	20.0	22.7
	3	146	39.4	48.7	71.3
	4	86	23.2	28.7	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

**v58**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	15	4.0	5.0	5.3
	3	144	38.8	47.8	53.2
	4	141	38.0	46.8	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

**v59**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	.5	.7	.7
	2	29	7.8	9.6	10.3
	3	137	36.9	45.5	55.8
	4	133	35.8	44.2	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

**v60**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	126	34.0	41.9	41.9
	2	148	39.9	49.2	91.0
	3	27	7.3	9.0	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v61

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	.8	1.0	1.0
	2	43	11.6	14.3	15.3
	3	159	42.9	52.8	68.1
	4	96	25.9	31.9	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v62

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	10	2.7	3.3	3.3
	3	130	35.0	43.2	46.5
	4	161	43.4	53.5	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v63

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	14	3.8	4.7	5.0
	3	106	28.6	35.2	40.2
	4	180	48.5	59.8	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v64

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1.3	1.7	1.7
	2	41	11.1	13.6	15.3
	3	138	37.2	45.8	61.1
	4	117	31.5	38.9	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v65

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	.5	.7	.7
	2	27	7.3	9.0	9.6
	3	152	41.0	50.5	60.1
	4	120	32.3	39.9	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v66

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	17	4.6	5.6	6.0
	3	152	41.0	50.5	56.5
	4	131	35.3	43.5	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v67

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	21	5.7	7.0	7.0
	3	142	38.3	47.3	54.3
	4	137	36.9	45.7	100.0
	Total	300	80.9	100.0	
Missing	System	71	19.1		
Total		371	100.0		

v68

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	17	4.6	5.6	5.6
	3	130	35.0	43.2	48.8
	4	154	41.5	51.2	100.0
	Total	301	81.1	100.0	
Missing	System	70	18.9		
Total		371	100.0		

v69

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	149	40.2	51.0	51.0
	2	133	35.8	45.5	96.6
	3	6	1.6	2.1	98.6
	4	4	1.1	1.4	100.0
	Total	292	78.7	100.0	
Missing	System	79	21.3		
Total		371	100.0		

v70

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	18	4.9	6.2	6.2
	3	168	45.3	57.5	63.7
	4	106	28.6	36.3	100.0
	Total	292	78.7	100.0	
Missing	System	79	21.3		
Total		371	100.0		

v71

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	16	4.3	5.5	5.5
	3	154	41.5	53.1	58.6
	4	120	32.3	41.4	100.0
	Total	290	78.2	100.0	
Missing	System	81	21.8		
Total		371	100.0		

v72

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	6	1.6	2.1	2.4
	3	100	27.0	34.6	37.0
	4	182	49.1	63.0	100.0
	Total	289	77.9	100.0	
Missing	System	82	22.1		
Total		371	100.0		



v73

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	.5	.7	.7
	2	11	3.0	3.8	4.5
	3	116	31.3	40.1	44.6
	4	160	43.1	55.4	100.0
	Total	289	77.9	100.0	
Missing	System	82	22.1		
Total		371	100.0		

v74

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	3.0	3.8	3.8
	3	128	34.5	44.1	47.9
	4	151	40.7	52.1	100.0
	Total	290	78.2	100.0	
Missing	System	81	21.8		
Total		371	100.0		

v75

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	1.9	2.4	2.4
	3	119	32.1	40.8	43.2
	4	166	44.7	56.8	100.0
	Total	292	78.7	100.0	
Missing	System	79	21.3		
Total		371	100.0		

v76

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	5	1.3	1.7	2.1
	3	114	30.7	39.2	41.2
	4	171	46.1	58.8	100.0
	Total	291	78.4	100.0	
Missing	System	80	21.6		
Total		371	100.0		

v77

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	.5	.7	.7
	3	137	36.9	47.1	47.8
	4	152	41.0	52.2	100.0
	Total	291	78.4	100.0	
Missing	System	80	21.6		
Total		371	100.0		

v78

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	10	2.7	3.4	3.4
	3	141	38.0	48.5	51.9
	4	140	37.7	48.1	100.0
	Total	291	78.4	100.0	
Missing	System	80	21.6		
Total		371	100.0		

v79

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	143	38.5	49.0	49.0
	2	133	35.8	45.5	94.5
	3	11	3.0	3.8	98.3
	4	5	1.3	1.7	100.0
	Total	292	78.7	100.0	
Missing	System	79	21.3		
Total		371	100.0		

v80

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.3	.3	.3
	2	4	1.1	1.4	1.7
	3	122	32.9	42.2	43.9
	4	162	43.7	56.1	100.0
	Total	289	77.9	100.0	
Missing	System	82	22.1		
Total		371	100.0		

v81

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	3.8	4.8	4.8
	2	38	10.2	13.1	18.0
	3	128	34.5	44.3	62.3
	4	109	29.4	37.7	100.0
	Total	289	77.9	100.0	
Missing	System	82	22.1		
Total		371	100.0		

v82

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.4	1.4
	2	24	6.5	8.2	9.6
	3	144	38.8	49.5	59.1
	4	119	32.1	40.9	100.0
	Total	291	78.4	100.0	
Missing	System	80	21.6		
Total		371	100.0		

v83

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	21	5.7	7.2	7.2
	2	67	18.1	23.1	30.3
	3	120	32.3	41.4	71.7
	4	82	22.1	28.3	100.0
	Total	290	78.2	100.0	
Missing	System	81	21.8		
Total		371	100.0		

v84

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.4	1.4
	2	25	6.7	8.6	9.9
	3	129	34.8	44.2	54.1
	4	134	36.1	45.9	100.0
	Total	292	78.7	100.0	
Missing	System	79	21.3		
Total		371	100.0		

**v85**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.1	1.4	1.4
	2	24	6.5	8.3	9.7
	3	127	34.2	43.8	53.4
	4	135	36.4	46.6	100.0
	Total	290	78.2	100.0	
Missing	System	81	21.8		
Total		371	100.0		

**v86**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	17	4.6	5.9	5.9
	3	133	35.8	45.9	51.7
	4	140	37.7	48.3	100.0
	Total	290	78.2	100.0	
Missing	System	81	21.8		
Total		371	100.0		

## Appendix G

### Factor Analysis Results

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.936
Bartlett's Test of Sphericity	Approx. Chi-Square
	16151.308
	df
	2926.000
	Sig.
	.000

#### Communalities

	Initial	Extraction
v10	.666	.512
v11	.637	.479
v12	.663	.442
v13	.643	.510
v14	.712	.594
v15	.623	.475
v16	.667	.538
v17	.598	.489
v19	.687	.550
v20	.701	.501
v21	.679	.377
v22	.655	.404
v23	.818	.405
v24	.828	.434
v25	.721	.438
v26	.729	.409
v27	.566	.324
v28	.574	.316
v29	.669	.459
v30	.711	.521
v31	.733	.497
v33	.608	.485
v34	.707	.483

v35	.764	.579
v36	.708	.506
v37	.694	.470
v38	.690	.581
v39	.792	.669
v40	.804	.711
v41	.713	.626
v42	.737	.661
v43	.725	.636
v44	.767	.650
v45	.744	.590
v47	.677	.473
v48	.665	.428
v49	.623	.483
v50	.582	.360
v51	.744	.618
v52	.685	.508
v53	.787	.621
v54	.773	.627
v55	.688	.525
v57	.563	.406
v58	.647	.446
v59	.706	.573
v61	.651	.482
v62	.738	.547
v63	.744	.496
v64	.603	.373
v65	.749	.584
v66	.797	.697
v67	.875	.665
v68	.879	.720
v70	.738	.612
v71	.825	.712
v72	.751	.561

v73	.706	.544
v74	.795	.633
v75	.778	.655
v76	.685	.518
v77	.749	.518
v78	.704	.441
v80	.671	.512
v81	.746	.516
v82	.731	.527
v83	.792	.738
v84	.877	.594
v85	.882	.586
v86	.643	.480
V69R	.543	.354
V18R	.390	.201
V32R	.610	.399
V46R	.535	.325
V56R	.594	.419
V60R	.625	.457
V79R	.480	.311

Extraction Method: Principal Axis

Factoring.

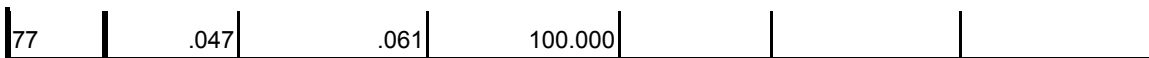
#### Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	29.331	38.092	38.092	28.866	37.488	37.488
2	3.579	4.649	42.741	3.174	4.122	41.610
3	2.454	3.187	45.928	1.958	2.542	44.152
4	2.269	2.947	48.874	1.778	2.310	46.462
5	1.925	2.500	51.375	1.458	1.893	48.355
6	1.705	2.215	53.590	1.213	1.575	49.930
7	1.649	2.141	55.731	1.125	1.461	51.391
8	1.585	2.058	57.789			

9	1.385	1.799	59.588
10	1.339	1.739	61.327
11	1.294	1.681	63.008
12	1.222	1.587	64.595
13	1.134	1.473	66.068
14	1.066	1.384	67.452
15	1.006	1.306	68.758
16	.984	1.278	70.036
17	.952	1.237	71.273
18	.931	1.209	72.482
19	.846	1.099	73.581
20	.822	1.068	74.649
21	.799	1.038	75.687
22	.770	.999	76.687
23	.734	.954	77.640
24	.713	.926	78.566
25	.707	.918	79.484
26	.666	.865	80.349
27	.650	.844	81.194
28	.628	.815	82.009
29	.602	.782	82.791
30	.583	.758	83.549
31	.580	.753	84.302
32	.544	.707	85.008
33	.525	.681	85.690
34	.495	.642	86.332
35	.481	.625	86.957
36	.463	.601	87.558
37	.456	.592	88.150
38	.435	.565	88.715
39	.416	.541	89.256
40	.415	.539	89.795
41	.387	.503	90.297
42	.376	.488	90.785

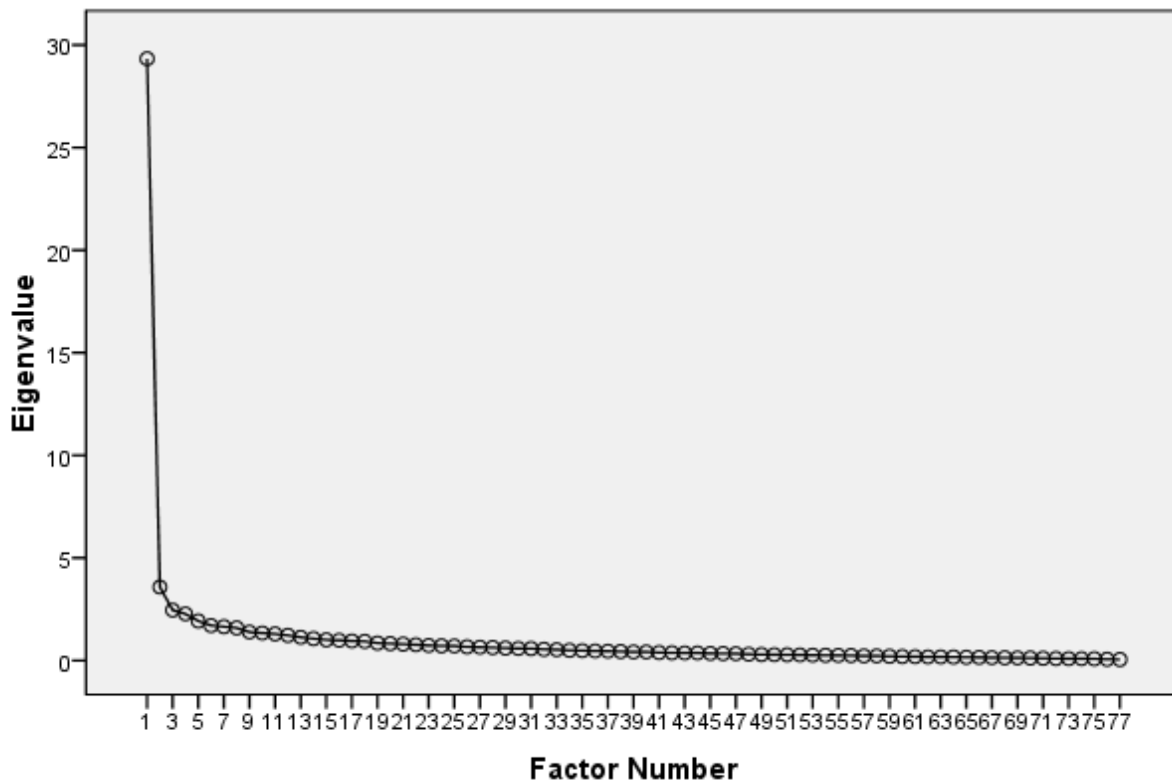


43	.372	.483	91.268
44	.364	.473	91.741
45	.346	.450	92.191
46	.336	.436	92.627
47	.331	.430	93.057
48	.304	.395	93.452
49	.290	.377	93.828
50	.283	.368	94.196
51	.276	.358	94.555
52	.274	.356	94.910
53	.258	.335	95.246
54	.251	.326	95.572
55	.244	.316	95.888
56	.240	.311	96.199
57	.225	.292	96.491
58	.220	.285	96.776
59	.203	.263	97.040
60	.194	.252	97.291
61	.187	.243	97.534
62	.174	.226	97.760
63	.172	.223	97.983
64	.166	.216	98.199
65	.157	.204	98.403
66	.152	.198	98.601
67	.134	.174	98.775
68	.130	.169	98.944
69	.127	.165	99.108
70	.118	.153	99.262
71	.108	.141	99.403
72	.094	.122	99.525
73	.090	.117	99.641
74	.085	.111	99.752
75	.084	.109	99.861
76	.060	.078	99.939



Extraction Method: Principal Axis Factoring.

### Scree Plot



Factor Matrix<sup>a</sup>

	Factor						
	1	2	3	4	5	6	7
v71	.801						
v54	.780						
v74	.773						
v53	.767						
v68	.764					-.303	
v67	.749					-.248	
v66	.748					-.254	
v70	.745						

v85	.737					
v59	.731					
v75	.721	-.291		.202		
v84	.710					-.226
v62	.699	-.219				
v51	.698			.271		
v72	.696			.204		
v65	.685		-.220			
v73	.685	-.216				
v30	.677					
v19	.675					
v45	.674	.273	.218			
v82	.669					
v31	.666					
v86	.661					
v55	.661		-.224			
v44	.661	.374				
v80	.659	-.229				
v52	.653					
v63	.652	-.211				
v37	.646					
v35	.643				.299	
v77	.641					
v29	.637					.200
v17	.628					
v38	.619	.395				
v14	.618		.260			.229
v36	.615				.209	
v16	.614			-.274		
v20	.613			-.215	-.255	
v33	.611	-.234				
v34	.610					.269
v13	.609	-.213				
v61	.601		-.260			

v58	.597					
v76	.588		.246		.269	
v78	.588					
v21	.587					
v22	.587					
v48	.582			.217		
v12	.581					
v39	.579	.547				
v26	.571					
v49	.566			.343		
v15	.565		.240			.203
v25	.554		-.261			
v47	.547	.343				
v43	.546	.531				
v24	.545		-.222			
v10	.540	-.221	.300		-.257	
v64	.534					
v11	.533		.376			
v41	.532	.521	.247			
v27	.525					
v28	.523					
v50	.518			.241		
V60R	.518		-.237			.291
v23	.509		-.236			
V69R	.486		-.204	.209		
V32R	.457			.208		.286
v57	.448		-.308			.210
V79R	.446			.245		
V56R	.435		-.223	.233		.287
V46R	.396					.315
V18R	.261				.206	.244
v40	.535	.620				
v42	.504	.606				
v83	.366			-.479	.537	.260

v81	.253	-.210		-.395	.408	.265
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Extraction Method: Principal Axis Factoring.

a. 7 factors extracted. 10 iterations required.