# Leadership Attitudes and Beliefs of Incoming First-Year College Students

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## Abstract

Due to limited resources available for leadership development programming at colleges and universities, there is a need to better understand the leadership attitudes and beliefs of incoming first-year students in order to most efficiently develop effective leadership. The purpose of this study was to examine the leadership attitudes and beliefs of incoming first-year college students within the context of ecological leadership in order to determine if gender or ethnic differences in the leadership attitudes and beliefs exist. Implications for leadership development programs are discussed.

## Introduction

The quality of leadership in American society has been eroding in recent years as evidenced by ongoing social problems such as race relationships, growing economic gaps, weakening public school systems, and declining citizen

involvement (Astin & Astin, 2000; Bordas, 2007). Individuals in positions of leadership appear to make decisions that affect society as a whole without adequate input from those affected by the decisions or with expertise to improve the quality of the decision (Allen, Stelzner, & Wielkiewicz, 1998; Wielkiewicz & Stelzner, 2005). Institutions of higher learning are positioned to address these social issues through the promotion of effective leadership within both curricular and co-curricular programs (Astin & Astin, 2000). However, few resources are being invested in leadership development at colleges and universities (Astin & Astin, 2000). Therefore, a better understanding of the leadership attitudes and beliefs of incoming first year students may allow colleges and universities to more efficiently use allocated resources in developing effective leadership programs.

Our world is rapidly changing and, as a result, organizations are faced with a multitude of interrelated adaptive challenges. These challenges, including an evolving global economy, new technology that is transforming communication and access to information, the growing recognition of our current unsustainable use of natural resources, and the increasing tension between individual rights and the common good, have significant implications for leadership (Allen, Stelzner & Wielkiewicz, 1998). Traditional models of leadership that assume an individual can effectively direct an organization to long-term success are inadequate (Allen, Stelzner & Wielkiewicz, 1998; Wielkiewicz, 2000; Wielkiewicz, 2002; Wielkiewicz & Stelzner, 2005). In order for an organization to be successful long-term in this dynamic and complex world, it must incorporate concepts of ecological theory.

The ecological model of leadership posits that collaboration within and between organizations is imperative for the long-term success of the organization (Wielkiewicz & Stelzner, 2005). Effective leadership facilitates the organization's ability to adapt by the valuing of social responsibility, a reverencing of all persons and all creation, and a nurturing community where all voices are heard and respected (Astin & Astin, 2000; Wielkiewicz & Stelzner, 2005). Collaboration is the process by which effective leadership is manifested in contemporary organizations (Astin & Astin, 2000; Eagly, 2007). A collaborative approach to leadership empowers every individual as a potential leader through a shared vision, respectful dialogue, interdependence, and personal development (Chin, 2004; Heifetz, 1994; Astin & Astin, 2000). Furthermore, the ecological model of leadership is based on the premise that leadership is an *emergent process.* That is, leadership emerges from the interaction of people with diverse ideas, attitudes and beliefs. Within the ecological model, leadership facilitates and is facilitated by the collaboration of many people working together to make decisions (Allen, Stelzner & Wielkiewicz, 1998; Wielkiewicz & Stelzner, 2005). Therefore, the coalescing of diverse ideas, facilitated by collaborative leadership, allows organizations to better adapt to conditions of accelerated technology growth, the globalization of

businesses, and the increasingly diverse workforce that characterize contemporary society (Eagly, 2007).

The ecological model of leadership does not deny the importance of positional leaders. Wielkiewicz and Stelzner (2005) argue that, in contrast to traditional theories of leadership, the value of the positional leader should not be determined by the decisions of the leader alone. Rather, the effectiveness of the leader should be based on the way the decision emerges from the genuine sharing of ideas by the members within the organization and enhances the organization's ability to adapt. However, when the collaborative efforts of the members do not result in a consensus, an executive decision must be made. Failure to make an executive decision in a timely manner will inhibit the organization's ability to adapt. Long-term, the over reliance on collaborative leadership will lead to disintegration of the organization. Therefore, within the ecological model of leadership, the leader's role is to optimize the tension between the hierarchical (traditional top-down decision-making) and collaborative forms of leadership (Wielkiewicz & Stelzner, 2005).

The Leadership Attitudes and Beliefs Scale (LABS-III) is an instrument which assesses leadership attitudes and beliefs from the perspective of an ecological model of leadership (Wielkiewicz, 2000; Wielkiewicz, 2002). The LABS-III is made up of two scales: the Hierarchical Thinking Scale and the Systemic Thinking Scale. The Hierarchical Thinking Scale consists of 14 questions tailored to the belief that organizational leadership should be allocated by position. Moreover, an organization's success or failure is due to the positional leader's ability to direct and motivate. The Systemic Thinking Scale also consists of 14 questions tailored to the idea that organizational leadership should be every individual's responsibility. Furthermore, it reflects on the idea that open communication and adaptability provide a stronger chance for an organization's success (Wielkiewicz, 2000; Wielkiewicz, 2002; Wielkiewicz, Prom, & Loos, 2005). The LABS-III aims to provide an understanding of leadership attitudes and beliefs independent of the individual's experience in leadership positions (Wielkiewicz et al., 2005; Wielkiewicz, 2002). Theoretically, a skilled leader would be characterized by low Hierarchical Thinking and Systemic Thinking scores, thereby embracing both hierarchical and systemic forms of leadership (Wielkiewicz & Stelzner, 2005).

Leadership is a social construct (Eagly et al, 2000; Astin & Astin, 2000). Therefore, in order to examine the leadership attitudes and beliefs of college students, other social constructs, notably gender and ethnicity, need to be taken into consideration (Eagly & Johnson, 1990).

Societies' gender role expectations influence an individual's leadership attitudes and beliefs (Kezar & Moriarty, 2000; Peters, Kinsey, & Malloy, 2004; Chin

2004). Studies have found that descriptors such as cooperative, participatory, interpersonal, and relationship-oriented are thought of as primarily feminine styles of leadership. These descriptors, in turn, de-emphasize hierarchical relationships (Kezar & Moriarty, 2004; Chin 2004; Eagly & Johnson, 1990). Descriptions such as task-oriented and competitive are thought of as masculine styles (Murphy, Eckstat, & Parker, 1994; Chin 2004), which promote hierarchical relationships. A study by Murphy, Eckstat and Parker (1994) reiterated these stereotypes. Perceived successful leaders were considered to have a masculine style. That is, they valued being task-oriented. Moreover, female managers, more than their male counterparts, were found to have a more humanistic and relationship-oriented leadership style in regards to their correction and rewards tactics. Wielkiewicz and Stelzner (2005) agreed with these discoveries. They noted individuals holding top leadership jobs are often masculine, aggressive, rational, self-confident, competitive, and dominant as well as task-oriented.

Research utilizing the LABS-III has revealed gender differences in college students' beliefs regarding the systemic and hierarchical nature of leadership. Wielkiewicz (2000; 2002) found that males at a single sex institution had a greater affinity for hierarchal thinking in regards to leadership while females at a single sex institution endorsed significantly stronger systemic leadership beliefs.

Diversity, notably ethnic diversity, is also believed to contribute to perceived leadership effectiveness in the workplace and the undergraduate environment. Several publications have noted the importance of understanding ethnic diversity and leadership in the workplace. For example, researchers have found that Asian Americans tend to be group-oriented, and value hierarchical versus systemic relationships among individuals (Xin & Tsui, 1996). However, other authors disagree. Jung, Bass, and Sosik (1995) stated there may be a connection between leadership beliefs and cultural values. They posit that a collaborative approach to leadership is more likely in a nation with a collectivistic oriented society, rather than an individualistic society. The inference that can be made is that Western Cultures value a hierarchical approach to leadership, given that many Western Cultures value individualism. Moreover, various studies give evidence for the assumption that preferred leadership approaches vary by culture (Koopman, Hartog, Konrad, et. al., 1999).

Few studies have examined ethnic differences in the leadership beliefs of first year college students. Armino et al. (2000), using a phenomenological interview method, examined the value orientations of a diverse group of students of color at two public universities in the United States. The authors found that most students of color did not self-identify as a leader and that a collaborative form of leadership was preferred.

# Purpose

The purpose of this study was to determine if gender or ethnic differences in the leadership attitudes and beliefs exist among incoming first year college students. The information attained through this study will also be used to guide future studies and to inform decisions regarding future leadership development programming.

# Method

## Participants

Incoming first-year students at two private, Catholic, single-sex, liberal arts institutions were surveyed regarding their leadership beliefs and attitudes as part of a longitudinal study designed to assess the efficacy of the leadership development programs at the two institutions. The incoming students were asked to complete the questionnaire during an orientation session prior to the start of the academic year and prior to any formal discussion of leadership within the orientation session. The questionnaire took approximately 10 minutes to complete. No participation incentives were provided to the students.

## Instruments

The questionnaire included the LABS-III (Wielkiewicz, 2000) and demographic questions. The LABS-III (Wielkiewicz, 2000) consists of 28 statements related to leadership and organizational adaptability. It has two orthogonal subscales, Hierarchical Thinking (14 items) and Systemic Thinking (14 items) with alpha coefficients of .88 and .84, respectively (Wielkiewicz, 2000). Response options included "strongly agree" (1 point), "agree,"" neither agree nor disagree," "disagree," and "strongly agree" (5 points). Consequently, lower scores in Systemic Thinking and Hierarchical Thinking are associated with stronger beliefs in each area. The convergent and discriminative validity of the Systemic and Hierarchical Thinking scales have been established (Wielkiewicz, 2002). The complete survey appears in Wielkiewicz (2000, Table 5, p. 343).

Students were placed into one of four categorical groups based on their Hierarchical Thinking and Systemic Thinking scores (Wielkiewicz, 2000). The following is a description of the four categories.
- Low Hierarchical-Low Systemic (LH-LS): Students in this group are characterized by Hierarchical Thinking and Systemic Thinking scores less than the aggregate mean for each form of leadership thinking. This category is associated with the leadership attitudes and beliefs most closely associated with a skilled leader (Wielkiewicz & Stelzner, 2005).

- High Hierarchical-Low Systemic (HH-LS): Students in this group are characterized by Hierarchical Thinking scores greater than the aggregate mean and Systemic Thinking scores less than the aggregate mean.
- Low Hierarchical-High Systemic (LH-HS): Students in this group are characterized by Hierarchical Thinking scores less than the aggregate mean and Systemic Thinking scores greater than the aggregate mean.
- High Hierarchical-High Systemic (HH-HS): Students in this group are characterized by Hierarchical Thinking and Systemic Thinking scores greater than the aggregate mean for each form of leadership thinking.

## Statistical Analysis

Statistical analysis was performed using SPSS 16.0 for Windows with alpha set at .05. Reliability of the Hierarchical Thinking and the Systemic Thinking measures were determined using Cronbach's alpha. Descriptive statistics and independent-sample t-tests were used to compare the data based on gender, while descriptive statistics and a one-way analysis of variance were used to compare the data based on ethnic classification. Crosstabulation with Pearson chi-square was used to compare distribution of gender and ethnic groups to the expected distribution within the four leadership categories.

## Results

### Demographic Information

908 of the 1055 students (86% of the incoming first-year class) completed and returned the questionnaire. The sample consisted of 427 male and 481 female students. There were 46 International students, 45 Students of Color (non-international), and 812 White students. Five students did not answer the question regarding ethnicity.

### Reliability of Measures

Cronbach's alpha was used to determine the reliability of the Hierarchical Thinking and Systemic Thinking measures used in this study. The reliability of the measures for Hierarchical Thinking and Systemic Thinking was .827 and .795, respectively (see Table 1).

Table 1
Scale Means, Scale Standard Deviations, Number of Items, and Coefficient Alphas
for the Two Scales

| Scale | M | SD | N of item | Alpha |
|---|---|---|---|---|
| Systemic | 27.52 | 5.905 | 14 | .827 |
| Hierarchical | 38.77 | 6.936 | 14 | .795 |

**Analysis of Scores by Gender**

An independent-samples two-tailed $t$-test compared the mean Systemic Thinking and Hierarchical Thinking scores for males and females (see Table 2). The test revealed a statistically significant difference between the males' and females' Hierarchical Thinking [$t$ (906) = -5.915, p = <.001] scores. The effect size of d = .39 for Hierarchical Thinking was interpreted to be low to moderate (Cohen, 1988). No difference was found in comparing males' and females' Systemic Thinking scores [$t$ (906) = -.556, p = .579].

Table 2
Comparison of Mean Scores - Male and Female First-Year Students
Comparison of leadership scores by gender
(Statistical method: Independent t-test, confidence interval at 95%)

| Measure | Males (n=427) | | Females (n=481) | | | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | P value* | Effect Size |
| SYST | 27.41 | 6.019 | 27.63 | 5.807 | .579 | .04 |
| HIER | 37.35 | 6.924 | 40.04 | 6.756 | <.001 | .39 |
| *P value for two-tailed independent t-test comparing males and females* | | | | | | |
| Note: SYST = Systemic Thinking; HIER = Hierarchical Thinking | | | | | | |

Cross-tabulation with Pearson *chi*-square revealed a significant difference in the distribution of males and females within the four leadership categories compared to the expected distribution within the categories [$\chi^2$ (3, N=908) = 21.69, p < .001]. (see Table 3)

Table 3
Distribution of Males and Females within Leadership Categories

| Category | LH-LS | HH-LS | LH-HS | HH-HS |
|---|---|---|---|---|
| Males | 137 (32.1%) | 86 (20.1%) | 96 (22.5%) | 108 (25.3%) |
| Females | 105 (21.8%) | 127 (26.4%) | 84 (17.5%) | 165 (34.3%) |
| Total | 242 (26.7%) | 213 (23.5%) | 180 (19.8%) | 273 (30.1%) |

**Analysis of Scores by Ethnicity**

A one-way analysis of variance compared the mean Systemic Thinking and Hierarchical Thinking scores for the three ethnic groups; International students, Students of Color – non-international, and White students (see Table 4). The test revealed a statistically significant difference between the groups' Systemic Thinking scores [$F_{(2, 900)} = 6.680$, $p = .001$] and the groups' Hierarchical Thinking scores [$F_{(2, 900)} = 5.918$, $p = .003$]. *Post hoc* comparisons using the Tukey's honestly significant difference test indicated the Systemic Thinking scores for the Students of Color (M = 24.6, SD = 5.491) were significantly lower (p = .002) than the scores for the White student group (M = 27.73, SD = 5.917). Tukey's honestly significant difference test also indicated the Hierarchical Thinking scores for the Students of Color (M = 35.89, SD = 7.767) were significantly lower (p = .008) than the scores for the White student group (M = 39.05, SD = 6.963). However, the International student group did not significantly differ in Systemic Thinking scores (M = 26.57, SD = 5.512) or Hierarchical Thinking scores (M = 37.07, SD = 5.385) compared to the Students of Color and the White student groups. The effect size of d = .53 for Systemic Thinking and d = .45 for Hierarchical Thinking in comparing the Students of Color group and the White student group were interpreted to be low to moderate (Cohen, 1988).

Table 4
Comparison First-Year Student Scores

Comparison of leadership scores by ethnicity
(Statistical method: One-way analysis of variance, confidence interval at 95%)

| Measure | INTER (n=46) | | SOC (n=45) | | White (n=812) | | |
|---------|------|------|------|------|------|------|----------|
|         | M    | SD   | M    | SD   | M    | SD   | P value* |
| SYST    | 26.57 | 5.512 | 24.60 | 5.491 | 27.73 | 5.971 | .001 |
| HIER    | 37.07 | 5.385 | 35.89 | 7.767 | 39.05 | 6.963 | .003 |

*P value for on-way analysis of variance comparing ethnic groups*
Note: INTER = International; SOC = Students of Color; SYST = Systemic Thinking; HIER = Hierarchical Thinking

Cross-tabulation with Pearson *chi*-square revealed a significant difference in the distribution of International students, Students of Color, and White students within the four leadership categories compared to the expected distribution within the categories X = [$\chi^2_{(6, N=903)} = 15.00$, $p = .02$] (see Table 5).

Table 5
Distribution of International Students, Students of Color, and White Students within Leadership Categories

| Category | LH-LS | HH-LS | LH-HS | HH-HS |
|---|---|---|---|---|
| INTER | 16 (34.8%) | 9 (19.6%) | 14 (30.4%) | 7 (15.2%) |
| SOC | 16 (35.6%) | 13 (28.9%) | 10 (22.2%) | 6 (13.3%) |
| White | 209 (25.7%) | 191 (23.5%) | 154 (19.0%) | 258 (31.8%) |
| Total | 241 (26.7%) | 213 (23.6%) | 178 (19.7%) | 271 (30.0%) |

Note: INTER = International; SOC = Students of Color

# Comments

Our findings indicate that the incoming male college students, overall, had a significantly higher affinity for hierarchical leadership compared to incoming female students. This finding also supports the claim made by other authors that males tend to be more hierarchical in their leadership style (Blackmore, 1989; Book, 2000; Eagly & Johnson, 1990; Rosener, 1995; Helgesen, 1990; Wielkiewicz, 2000; Wielkiewicz, 2002). However, our data also revealed no significant gender difference in the Systemic Thinking scores, which appears to run contrary to the claims that women's leadership tends to be more cooperative, collaborative, and empowering in style compared to men's leadership (Blackmore, 1989; Book, 2000; Eagly & Johnson, 1990; Rosener, 1995; Helgesen, 1990; Wielkiewicz, 2000; Wielkiewicz, 2002).

The unique characteristics of the male students included in this study may provide insight into the similarity in systemic thinking scores of the male and female students. The authors speculate that a unique type of student would be attracted to college life at a private, Catholic, single-sex, liberal arts institution. One of the unique qualities of the male students at the two institutions is the relatively high rate of volunteering and community service. According to the 2007 senior survey, 55% of male students engaged or were planning to engage in volunteering and community service prior to their graduation (Hammond, 2008). This compares to a national volunteer rate of 33% for female college students and 26.8% for male college students (Corporation for National and Community Service, 2006). The relatively high rate of volunteering among males at the sample institutions is important because engagement in service activities is associated with greater improvements in ability to work cooperatively, interpersonal skills, conflict resolution and ability to get along with people from different races and cultures compared to students who do not engage in service activities (Astin & Sax, 1998). The qualities positively associated service participation are also qualities positively associated with systemic leadership.

A second unique quality of the male students at the two institutions is the relatively high rate at which the students participate in study abroad. According to Bhandari and Chow (2008), the national participation rate in study abroad for academic credit from Fall 2006 through Summer 2007 was 9.4%. During that same time period, 495 undergraduate students (203 males and 292 females) at the sample institutions studied abroad for academic credit (College of Saint Benedict and Saint John's University, 2008a). Using the methods reported by Bhandari and Chow (2008), the authors of this study divided the number of male students reported to study abroad for academic credit (n=203) by the number of undergraduate degrees conferred to the male students in 2006 (n=407) to calculate the study abroad rate for the men at the participating institutions. The study abroad rate for the men was determined to be 49.9%, considerably higher then the national rate of 9.4% for men and women combined. The relatively high rate of study abroad for the males at the sample institutions is important because the outcomes associated with international education are similar to the qualities associated with systemic leadership. These qualities include improved communication and leadership skills, greater awareness and appreciation of other cultures, an interest in learning about another culture, greater empathy, and greater interest in community involvement (Hammer, 2005; Stephenson, 1999; Thorpe, 2007; Watson, 2003).

While examining the Hierarchical Thinking and Systemic Thinking scores separately revealed some interesting gender differences, within the ecological model of leadership, it is the *tension between* the hierarchical and systemic leadership attitudes and beliefs that is important (Wielkiewicz & Stelzner, 2005). When the students were placed into one of four categories based on their Hierarchical and Systemic Thinking scores, a significant difference in the distribution of male and female students was found (p< .001). A greater percentage of the males (32.1%) compared to females (21.8%) were located in the Low Hierarchical/Low Systemic category indicating that, according to the ecological model of leadership, a greater percentage of incoming male first year students possess the leadership attitudes and beliefs associated with effective leadership. The reason for this finding is unclear. The authors speculate that the recent call for developing collaborative leadership (Astin & Astin, 2000; Bordas, 2007) may be changing the way leadership is taught and understood within formal and informal leadership development programs and experiences. These changes may be influencing young males toward embracing the attitudes and beliefs associated with systemic leadership. At the same time, much of societal structure continues to reinforce the attitudes and beliefs associated with masculine, hierarchical leadership. Thus, the males are learning to value both systemic and hierarchical leadership. For young women, however, leadership development that emphasizes collaboration reinforces society's expectations for female leaders without helping women to embrace the value of hierarchical leadership in certain situations, such as those identified within the ecological model of leadership. The

authors believe that the finding of this study suggests that leadership development for female incoming first year students should emphasize programming to facilitate the development of the attitudes and beliefs associated with hierarchical leadership. However, at the same time, women's leadership development should also facilitate and reinforce systemic leadership attitudes and beliefs because effective leadership within the ecological model is characterized by a strong affinity for both systemic and hierarchical leadership. Men's leadership development should continue to facilitate and reinforce systemic and hierarchical leadership attitudes and beliefs, particularly recognizing when each form of leadership is most effective.

Analysis of the data within the context of ethnicity revealed significant differences in the mean scores for Systemic Thinking and Hierarchical Thinking. Post-hoc analysis indicated significant differences in mean Systemic Thinking and Hierarchical Thinking scores between the Students of Color and White student groups. Students of Color were found to have a greater affinity for both systemic and hierarchical leadership beliefs. In addition, when students were placed into one of four categories based on their Hierarchical and Systemic Thinking scores, a significant ethnic difference in the distribution was found ($p = .02$). A greater percentage of the International students (34.8%) and Students of Color (35.6%) were located in the Low Hierarchical/Low Systemic category compared to White students (25.7%). This finding appears to indicate that, according to the ecological model of leadership, a greater percentage of incoming International and Students of Color possess the leadership attitudes and beliefs associated with effective leadership.

## Limitations

In evaluating the results of this study, several limitations must be taken into consideration. First, the uniqueness and homogeneity of the student population in regards to demographics raises doubts as to the ability to generalize the findings of this study. At the two institutions student enrollment applications are evaluated, in part, on the student's leadership experiences. In addition, a substantial number of the Students of Color (approximately 32%) are enrolled as part of the Intercultural Leadership, Education and Development (I-LEAD) Fellowship Program. Participants in the I-LEAD Fellowship Program had to be born in the USA, be high academic achievers, be first generation college students, attended an urban high school, have demonstrated leadership, be active in high school and community programs. Therefore, the population surveyed for this study may represent a select type of first year student with unique leadership experiences not representative of students at other institutions. A replication of this study that includes students enrolling at both single-sex and coeducational institutions, at different types of colleges and universities (i.e., community colleges, large land-

grant institutions, etc) and in different geographic locations may provide greater insight into the leadership attitudes and beliefs of incoming first year students.

Second, clustering of non-White students into two broad categories, the International and Student of Color ethnic groups, limits the ability to generalize the findings of this study. Since the exact ethnic makeup of students surveyed for this study is unknown, the ability to generalize the findings to a specific ethnic group (example: Asian Americans) or to another group with diverse ethnic backgrounds is be limited. Future studies should seek to examine the leadership attitudes and beliefs of incoming first year students within specific ethnic groups, as opposed to the broad grouping used in this study. The small number of students within both the International and Students of Color ethnic groups must also be considered when interpreting the results, particularly the small percentage of these students within the larger data set. Future studies should also seek to include much larger sample sizes in each of the ethnic groups.

Other limitations of this study include the reliance on self-report measures regarding leadership attitudes and beliefs. Other sources of information, such as peer or faculty assessment of leadership style, may provide additional insights into this area of study. Lastly, this study examined data collected at the very beginning of the students' college experience. Longitudinal studies may be beneficial in understanding the changes in leadership attitudes and beliefs over time and in identifying factors that influence those attitudes and beliefs.

## Conclusion

According to the ecological model of leadership, effective leadership involves a tension between hierarchical and systemic approaches to leadership. Systemic leadership provides members of the organization the freedom and feedback loops necessary to explore new ideas that will facilitate the organization's ability to adapt to changes in the environment. Hierarchical leadership provides structure to the organization and keeps the members focused on tasks associated with achieving the organization's goals. Therefore, effective leaders within organizations need to possess the attitudes and beliefs necessary to act as both a systemic leader and a hierarchical leader. The leader must also possess the knowledge necessary to decide which form of leadership will facilitate the adaptations necessary to promote the wellbeing of the organization.

The results of this study indicate that gender differences in Hierarchical Thinking exist among incoming first year college students. It also appears that a greater percentage of incoming male students possess the optimal affinity for both hierarchical and systemic leadership compared to incoming female students. Female incoming first year students possess the attitudes and belief associated with embracing the role of a systemic leader, but not hierarchical leadership roles.

In comparison, male incoming first year students appear better prepared to embrace roles as systemic leader and hierarchical leader.

The information presented in this study suggests that the institutions of higher learning included in this study might become more efficient in developing leadership if gender specific leadership development programs were to be established, at least in the early stages of leadership development. Because of the unique characteristics of the students included in this study, the generalizability of the findings of this study is in doubt. Initial leadership development programs should be designed to develop leaders who recognize and value both hierarchical and systemic forms of leadership and be tailored to the unique leadership attitudes and beliefs of incoming first year men and women. Women's leadership development programs should help women understand and value the important role that hierarchical leadership plays in facilitating the adaptation and long-term survival of an organization while, at the same time, not devaluing the importance women place on systemic leadership. Women's leadership programs should help women recognize that organizations within American society typically employ a hierarchical leadership structure and that in order to succeed women must recognize the value of hierarchical leadership and be willing to embrace the role of hierarchical leadership when necessary.

Men's leadership programs should emphasize the valuable role systemic leadership plays in facilitating the long-term adaptability of an organization, while at the same time, helping men recognize when situations demand decisive action associate with hierarchical leadership. The programs should also facilitate the development of knowledge and skills necessary for men to nurture respectful, open, collaborative interactions between all members of the organization.

The results also indicate that ethnic differences in the leadership attitudes and beliefs of incoming first year college students may also exist. More research is needed to examine the ethnic difference between specific ethnic groups and between males and females within specific ethnic groups. Due to the relatively small number of non-White students participating in this study and, as a result, the way the students were clustered into three board ethnic groups, the authors do not believe it appropriate to draw conclusions or make recommendation for leadership programming. Rather, the authors intend for this study to encourage further research in the area of gender and ethnicity as they relate to leadership attitudes and beliefs. The authors suggest that future studies involve students at a variety of colleges and universities in different geographical locations and that leadership attitudes and beliefs are examined within and between specific ethnic groups. Information gathered through further study could facilitate greater efficiency in developing effective leadership in college students.

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