

## **Leadership skills of first-year students at public universities in Jordan**

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The purpose of this study was to examine the pre-college leadership skills of first-year students and examine differences by gender on eight distinct scales. The Student Leadership Outcomes Inventory defined these eight scales. A total of 296 participants were chosen to participate in the study from a population of all first-year students at a public university in Jordan. Participants reported moderate levels of leadership skills on all eight scales. However, differences by gender were found on the technology scale of the instrument. Overall, it would seem that students matriculate with some intact leadership skills. Administrators might use this baseline skill level when designing leadership development opportunities for students.

**Keywords:** leadership; leadership skills; students; public universities; Jordan

### **Introduction**

Colleges and universities are focusing on graduating students who will succeed in careers (Braxton et al. 1991; Erwin 1991; Quinn 2004). Colleges and universities have recognised that most high-paying jobs require a college degree and they have adjusted their curricula to reflect the skills needed to earn these jobs (Carnevale 2001). To accomplish this, institutions have explored what skills and experiences employers value so that they can provide those skill sets and experiences for students. To some degree the skills and experiences employers seek vary by study. Nevertheless, employers seem to seek certain skills across disciplines such as reading, writing, creative thinking, personal management, group effectiveness, organisational effectiveness and leadership (Attinasi 1992a; Grogger and Eide 1994; Kerka 1990; Mittelhauser 1998). In general, employers look for students who have completed a bachelor's degree and possess a broad skill set (Aksoy 1998).

Many employers specifically seek leadership skills among the graduates they hire (Gale 2002; Gerber 2003; Kerka 1990; Stronge 1998; Santosus 2003). In general, employers are more interested in students who are leaders (van Linden and Fertman 1998). A study at Florida State University also found that employers feel it is important for graduates to have leadership experience (Reardon et al. 1998).

The literature on leadership skills has also focused on college students (Chambers 1992; Cooper et al. 1994; Cox and Miranda 2003; Cress et al. 2001; Graham and Cockriel 1997; Romero-Aldaz 2001; Skeat 2000; Striffolino and Saunders 1988; Turrentine 2001). This has been due in great part to the belief that the development of leadership skills is one responsibility of higher education.

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Students themselves believe several skills should be developed during their college careers. Time management skills, reading skills, and public-speaking skills were among those identified by students as key to success in college (Gallagher et al. 1992). With students being more savvy consumers, institutions are becoming even more conscious of providing what their consumers want, whether that consumer is the student or the employer.

As a result, colleges and universities have introduced programmes for students designed to promote those leadership skills. These skills have been categorised. Technical skills reflect the specialised knowledge, tools and techniques that leaders either possess or employ (Stronge 1998). Conceptual skills are thought of as intelligence, judgement, ability to see the big picture, and to envision change (Stronge 1998). Finally, human skills encompass the ability to work with and through others (Stronge 1998). More specifically, the top four characteristics desired in business leaders are honesty, the ability to inspire, the ability to enable others to act, and the ability to encourage the heart (Kouzes and Posner 1995).

It has been documented that participation in leadership activities had more of an impact on student development than affective measurements of the students' commitment to their personal and social development in college (Graham and Cockriel 1997). Involvement in leadership activities, and therefore leadership development, has been associated with gains in practical and interpersonal competence (Kuh 1993), intellectual development (Baxter Magolda 1992), development of altruism (Pascarella et al. 1988), and commitment to common social purposes (Boyer 1987). Additionally, leadership development programmes have become a major part of the holistic student-development goals of student affairs divisions (Council for the Advancement of Standards, 1997; Miller and Jones 1981; as cited in Arminio et al. 2000).

Programmes to promote leadership development have taken both curricular (Burch 1984; Freeman et al. 1994; Riggio et al. 2003) and cocurricular (Freeman et al. 1994; Posner and Brodsky 1993) forms. Other work has been done to combine these two areas into a comprehensive leadership development programme (Hovest and Vinton 1993).

Whether curricular or cocurricular, leadership development programmes have been established with an end goal in mind: to provide students with the necessary leadership skills so that they can compete for jobs offered by employers looking for those qualities.

In addition, a holistic learning experience has been identified as a second goal. Achieving this outcome assumes that campuses can move students from a starting point with respect to leadership skills to an ending point at which they have acquired the skills that employers seek and experiential learning expects. The end point seems to be clearly delineated in the literature: research has revealed what skill sets employers seek in job applicants (Grogger and Eide 1994; Kerka 1990; Santosus 2003). Research on the starting point, however, is scarce. What leadership skills and experiences do students bring with them to college? Such information would seem essential when designing leadership development programmes.

Overall, research shows that involvement in student organisations appears to have positive effects on students' total academic experience (Cooper et al. 1994). 'Early leadership experiences provide individuals with the tools they need to succeed academically, in the workforce, and in other social arenas' (Kimbrough and Hutcheson 1998, 96). Despite this, student leaders remain an understudied group of college students (Kimbrough and Hutcheson 1998). One means of assessing those positive effects is through gains in leadership skills.

In Jordanian universities, taking care of the university student's personality at all levels: physically, mentally, socially and psychologically is done by the Deanship of Student Affairs. In this, it shapes and develops the student's personality and prepares him/her to be an active leader in the future and to be equipped with both confidence and ability, and thus achieves the principle of good citizenship. It organises and supervises all social and cultural activities. Additionally, it is in charge of establishing students' councils, associations, and

clubs and monitoring their activities. The Deanship of Student Affairs established a number of students' associations and clubs including: Public Service Association, Cultural Club, Political Department Club, Music and Singing Club, Cultural Traditions Club, Theater Club, Scientific Research Club, Plastic Art Club, Special Needs Activity Club (The Hashemite University 2007).

The leadership skills of college students were examined using the eight subgroups of the Student Leadership Outcomes Inventory (SLOI). These were: (a) self-management, (b) interpersonal skills, (c) problem-solving and decision-making, (d) cognitive development and critical analysis, (e) organisation and planning, (f) self-confidence, (g) diversity awareness, and (h) technology.

In the area of self-management as measuring of leadership skills, research indicates that leadership experiences in college lead to positive impacts on personal growth and development among college students (Striffolino and Saunders 1988). Student leaders in colleges and universities show a greater willingness to take risks and perform under pressure (Cress et al. 2001).

Interpersonal skills are another means of measuring leadership skills. Participation in campus and recreational activities is connected with more intimate interpersonal relationships (Hood 1984; as cited in Cooper et al. 1994). Student leaders also show a higher degree of positive mature interpersonal relationships (Cooper et al. 1994).

A third measure of leadership skills involves problem-solving and decision-making. Students who have participated in leadership activities are shown to have greater conflict resolution skills than non-participants (Cress et al. 2001).

Another way of measuring leadership skills is through the cognitive development and critical analysis demonstrated by the student. Student leaders display greater decision-making abilities than non-leaders. Additionally, those involved in leadership development display more cooperative and less authoritative behavior and hold more ethical views of leadership (Cress et al. 2001).

The organisation and planning that students show is also a way of measuring their leadership skills. Student leaders have a greater ability to set goals and deal with complexity, uncertainty, and ambiguity (Cress et al. 2001). Additionally, student leaders show increased life management skills (Cooper et al. 1994).

Self-confidence in students is a major factor in establishing leadership skills. Students who participate in a leadership activity demonstrate a greater understanding of self and clarity of personal values (Cress et al. 2001). It was also discovered that the undergraduate experience, including leadership skills, has a significant impact on humanitarian values among students (Pascarella et al. 1988).

An overall awareness and understanding of issues related to diversity and multiculturalism is important when measuring leadership skills. Students who participate in leadership activities and gain leadership skills have been shown to have increased cultural participation and tolerance (Cooper et al. 1994).

Lastly, a grasp of current technology issues and ideas can provide insight into students' leadership skills. An extensive search of the literature revealed no studies on this topic. However, it would seem that research addressing the technology skills of student leaders might be merited.

With regard to males and females in terms of leadership skills, the results of many studies appear to be contradictory. In some instances, there is little support for any sort of relationship between gender and leadership (Posner and Brodsky 1994). These scholars argue that findings pertaining to gender and leadership skills generally reveal no difference in skill levels between men and women. Gender fails to account for differences between the leadership behaviours of men and women (Bass 1991; Komives 1991; Powell 1989).

Other studies, however, reveal skills that are more developed in women. The ability to enable others to act was identified as a highly developed leadership skill among women, even those with relatively little overall leadership experience (Komives 1994). Women also emphasise building relationships more than men do. Females learn through trial and error and observation, as well as other hands-on approaches to acquiring leadership skills. Women acquire a wide range of leadership skills that include an increased comfort with public speaking and interpersonal skills, as well as an understanding of the importance of motivation and preparedness. Women leaders also gain skills in conflict management and an increased self-awareness (Romano 1996).

In one study, men and women both described leadership differences between genders, 'providing examples such that men came immediately to the point and down to business, while women liked to process and talk more about issues' (Arminio et al. 2000, 504). One female RA described male RAs as more disciplinarians and female RAs as those more likely to interact and build relationships with residents (Arminio et al. 2000).

In summary, the body of literature surrounding leadership skills is extensive. General leadership (Bolton 1988; Huber and Kiegelmann 2002; Sergiovanni 1994; Wheatley 1992) has been studied extensively. Out of that research has emerged a body of knowledge on important leadership skills. Building personal relationships, the ability to communicate ideas and values, listening and problem-solving skills, and inspiring a shared vision were just a few of the skills that researchers have focused on.

There is a substantial body of literature concerning leadership among college students that each of the eight scales indicates moderately high leadership skills in each of these areas of support (Cooper et al. 1994; Cress et al. 2001; Pascarella et al. 1988; Strifflino and Saunders 1988). Prior studies show student leaders reported higher levels of growth and development (Strifflino and Saunders 1988). In addition, Cress et al. (2001) reported that student leaders had a greater willingness to take risks and perform under pressure. Additional research indicates that students develop more mature interpersonal relationships (Cooper et al. 1994). Cress et al. (2001) found students possess increased conflict resolution skills.

There is an extensive body of literature that reports no differences in leadership skills by gender (Bass 1991; Komives 1991; Posner and Brodsky 1994; Powell 1989). Literature supporting differences in technology are also extensive (Bronson 1998; Corston and Colman 1996; Litchman 1998; Reinen and Plomp 1997; Shashaani 1997; Spotts et al. 1997).

However, other studies actually reveal increased leadership skills in women (Komives 1994). More specifically, increased levels of interpersonal skills and problem-solving abilities have been seen in women (Romano 1996).

Leadership in college (Cooper et al. 1994; Cox and Miranda 2003; Cress et al. 2001; Graham and Cockriel 1997; Romero-Aldaz 2001; Skeat 2000; Strifflino and Saunders 1989; Turrentine 2001) has also been studied extensively. Researchers have shown that involvement in student organisations has a positive effect on the students' overall academic experience (Cooper et al. 1994). In addition, leadership skills in areas such as self-management, interpersonal skills, problem-solving ability, and cognitive development have all been shown.

These topics are all important to consider when discussing leadership education. However, an investigation into the leadership skills of first-year college students is missing from this body of knowledge. In order to provide leadership education for incoming students and meet the needs and goals of institutions, it is important to have a baseline from which to initiate leadership development. That is the gap in the existing body of work on leadership that this study was designed to address.

In summary, outcome assessment has become increasingly important in higher education (Attinasi 1992b; Braxton et al. 1991; Cress et al. 2001; Erwin 1991; Love 1995). One component of this assessment has examined what skills employers seek in college graduates

(Grogger and Eide 1994; Kerka 1990; Santosus 2003). One common skill employers cite is leadership abilities (Gale 2002; Gerber 2003; Kerka 1990; Stronge 1998; Santosus 2003; van Linden and Fertman 1998). Those who hire college graduates have identified for institutions the leadership skills they would like to see in graduates (Kerka 1990; Stronge 1998; Santosus 2003). In response, colleges and universities have established leadership development programmes to promote these skills among their students (Cress et al. 2001; Hovest and Vinton 1993; Outcalt et al. 2001; Strifflino and Saunders 1988; Turrentine 2001). However, little research has been conducted to look at the baseline leadership skills that students entering college possess. This study addressed that gap in the literature on leadership development among college students at the Hashemite University.

### **Purpose of the study**

The purpose of this study was to examine the pre-college leadership skills of first-year students as measured by the Student Leadership Outcomes Inventory (SLOI). More specifically, this study sought to determine the pre-college skills in eight distinct subgroups related to leadership: self-management, interpersonal, problem-solving/decision-making, cognitive development/critical analysis, organisation and planning, self-confidence, diversity awareness, and technology. A modified version of the SLOI (Vann 2000, 2004) was administered to measure participants' pre-college leadership skills among first-year student at the Hashemite University.

Specifically, this study was designed to answer the following research questions:

- (1) What are the pre-college leadership skills of first-year students?
- (2) Are there differences in pre-college leadership skills of first-year students by gender?

### **Importance of the study**

This study was important for future practice, research and policy in higher education in Jordan. The results of this study provided faculty members who work with first-year students with data about the pre-college leadership skills of first-year students. Faculty might use these data to design academic programmes and services to promote leadership development that are appropriate given students' pre-college experiences.

The results provided Student affairs professionals with a better understanding of the leadership skill sets that first-year students possess. This may enable them to assess the cocurricular leadership programmes they manage.

First-year students might also benefit from the findings. The results provided them with a better understanding of the leadership skills typical students possess upon matriculation. This information might enable them to assess where they are, and to identify goals for themselves, in terms of leadership education.

In addition to that, this study was significant for future policy. The results provided institutional policymakers with information about the pre-college leadership skills and behaviours of first-year students. Policymakers might use this information to suggest curricular policies regarding leadership skills.

### **Methodology**

#### ***Population and sample***

The target population for the study included all first-year students enrolled in one of the university elective courses, as part of their degree programme in the Hashemite University

during the first semester of academic year 2006/2007. A sample of 320 students was chosen with a total of 296 students completing the survey with a response rate of 93%. The result sample included 156 females and 140 males. Students were told that participation was voluntary, and were assured that their responses were anonymous.

### ***Instrumentation***

The instrument that was used to collect data on pre-college leadership skills was a modified version of the Student Leadership Outcomes Inventory (SLOI) (Vann 2000, 2004). The original focus of the SLOI was to measure outcomes associated with leadership experiences of college students. While the SLOI was created to measure the leadership experiences of college students at a particular institution, modifications were made to reflect the pre-college leadership experiences of the students at the institution where this study was performed.

The modified SLOI consisted of 60 items distributed to eight scales. Each scale asked participants to respond using a Likert-type scale between 1 and 4, 1 being Strongly Disagree, and 4 being Strongly Agree. The first scale examined the self-management skills of participants. The nine items in this section asked participants to think about the abilities they gained in various self-management skill areas. The interpersonal skills of participants were the focus of the second scale. This section included 13 items. Participants were asked to report the extent to which their high school leadership experience affected various abilities.

The third scale was entitled Problem-solving/decision-making and included four items. This section gathered information about the problem-solving and decision-making skills gained from the participant's high school leadership experience.

In the fourth scale of the SLOI, cognitive development and critical analysis skills were examined. The seven items in this section looked at how the participants' high school leadership experience affected their cognitive development and critical analysis skills.

The fifth scale examined organisation and planning on the part of participants. There were 16 items in this section. Each item dealt with an ability related to organisation and planning.

The sixth scale of the SLOI dealt with the self-confidence of participants. The five items in this section addressed self-confidence in social skills, as well as being assertive. Other items examined the degree to which high school leadership experiences helped clarify personal values and establish personal codes of ethics.

Diversity awareness was the focus of the seventh scale. To elicit this information, the four items asked participants about their sensitivity to, respect for, and appreciation of others.

The eighth scale dealt with the participants' knowledge of technology. The two items in this section addressed the ability to use computer software and locate resources on the Internet.

### ***Instrument translation process***

To ensure equivalence of meaning of the items and constructs between the Arabic and English versions of the SLOI, a rigorous translation process was used that included forward and backward translation, subjective evaluations of the translated items, and pilot testing. The goal of the translation process was to produce an Arabic version of the SLOI with items that were equivalent in meaning to the original English version. The Arabic version of the SLOI was then pilot tested with a group of 50 students to collect feedback about instrument content and usage. The feedback from students emphasised that the instrument has both face and content validity.

### ***Instrument standardisation***

The Arabic version of the SLOI was tested with a sample of 50 students different than that of the study but withdrawn from the same population (the Hashemite University students). Reliability coefficients for the SLOI established for the eight scales as follows: self-management (0.87), interpersonal skills (0.81), problem-solving and decision-making (0.79), cognitive development and critical analysis (0.85), organisation and planning (0.77), self-confidence (0.75), diversity awareness (0.74), and technology (0.87). Based on the translation process and the reliability estimates, the Arabic-translated version of the SLOI seemed to be valid and a reliable measure for use with a Jordanian population.

### ***Data collection***

With the permission of the instructor, the questionnaire was administered to students at regular class periods during the first semester of academic year 2006/2007. The students received written instructions that specified the purpose of the study and explained the procedures to be followed in responding to the items. They were told that there were no right or wrong responses. Students were asked to return the survey to the class instructor, who in turn returned it to the researchers. The questionnaire took approximately 20 minutes to complete.

### ***Data analysis procedures***

Data were analysed using SPSS. First, the data were coded. Second, respondents were asked to report their age, and then turn to the research questions posed in the study. Following this the mean scores for each group on each scale were calculated. Next, a series of independent *t*-tests were conducted to examine if there were significant differences in mean scores among groups on the scales. All *t*-tests were conducted at the  $p < 0.05$  level of significance.

## **Results**

### ***Question one: What are the pre-college leadership skills of first-year students?***

The first research question sought to identify the pre-college leadership skills of first-year students at the Hashemite University. In order to address this question, the researchers calculated descriptive statistics for the overall scores in each of the eight scales represented on the SLOI. The results are summarised in Table 1. The data indicated that the participants scored highest on the Problem-solving/decision-making scale ( $M = 2.99$ ), and lowest on the Self-management scale ( $M = 2.13$ ), followed by the Interpersonal skills scale ( $M = 2.25$ ).

### ***Question two: Are there differences in pre-college leadership skills of first-year students by gender?***

The second research question presented in the study asked if there were any differences by gender in the pre-college leadership skills of participants. A *t*-test was run on each of the eight scales. A summary by gender of each scale is shown in Table 2. A significant difference ( $p < 0.05$ ) was found on the Technology scale. Men reported a significantly greater degree of leadership skills related to technology than women did. Although neither finding is statistically significant, these probabilities are close enough to merit further research.

Table 1. Pre-college leadership skills of first-year students.

Scale	M	SD
Self-management	2.13	0.77
Interpersonal skills	2.25	0.73
Problem-solving/decision-making	2.99	0.91
Cognitive development/critical analysis	2.82	0.83
Organisation and planning	2.45	0.81
Self-confidence	2.66	0.77
Diversity	2.58	0.72
Technology	2.71	0.81

Table 2. Results of *t*-tests on differences in pre-college leadership skills by gender.

Scale	Gender of participants	<i>n</i>	M	SD	df	<i>F</i>	<i>p</i>
Self-management	Male	140	2.19	0.79	294	1.346	0.17
	Female	156	2.07	0.74			
Interpersonal skills	Male	140	2.77	0.85	294	1.971	0.19
	Female	156	2.65	0.77			
Problem-solving/decision-making	Male	140	3.01	0.92	294	0.452	0.65
	Female	156	2.96	0.88			
Cognitive development/critical analysis	Male	140	2.83	0.82	294	0.300	0.76
	Female	156	2.80	0.84			
Organisation and planning	Male	140	2.52	0.84	294	1.580	0.115
	Female	156	2.37	0.77			
Self-confidence	Male	140	2.70	0.77	294	1.007	0.31
	Female	156	2.61	0.75			
Diversity	Male	140	2.62	0.72	294	0.953	0.34
	Female	156	2.54	0.72			
Technology	Male	140	2.33	0.72	294	1.291	0.05*
	Female	156	2.17	0.72			

\*Significant at  $p < 0.05$ .

## Discussion

The present study addressed a gap in the literature by seeking to determine the pre-college leadership skills of first-year students as a means of developing more effective leadership education programmes on college campuses. The first research question posed in this study explored the pre-college leadership skills of first-year students. To address this question, the researcher examined the means and standard deviations of the responses to the eight separate scales of the SLOI. For each item, students were requested to respond as to the extent to which they agree or disagree with the item. Respondents used a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree).

As a result, 2.5 was the mid-point of the response range. That is, mean scores over 2.5 suggest respondents had achieved the skill to some extent, whereas mean scores below 2.5 suggest they had not achieved the skill to any great degree. Among the scales, means ranged from a high score in the area of Problem-solving/decision-making ( $M = 2.99$ ) to a low score in the area of Self-management ( $M = 2.13$ ).

These findings are interesting for several reasons. First, the grouping of mean scores was very close. Mean scores for all eight of the scales were around 2.50, which points to the

midpoint. This would suggest that those in the study had achieved some level of leadership skills prior to coming to college. This seems to contradict any assumption that students enter college without any leadership skills.

However, equally interesting were the standard deviations on each of the scales measured by the SLOI. These standard deviations ranged from a low of 0.72 (diversity) to a high of 0.91 (problem-solving/decision-making), which would seem to suggest a far greater range of leadership skills among participants than mean scores would indicate. That is, although leadership skills were moderately midpoint among participants, there was a wide range of skills based on experience. For example, on the diversity awareness and Problem-solving/decision-making scales, some students responded to items with a 1.00, suggesting they had not learned diversity awareness or technology skills in high school to any great extent at all, while others reported scores as high as 4.00, implying a fairly sophisticated understanding of these skills.

The findings related to each of the eight scales indicate moderately mid level leadership skills in each of these areas. There is a substantial body of literature concerning leadership among college students that these findings contradict (Cooper et al. 1994; Cress et al. 2001; Pascarella et al. 1988; Strifflino and Saunders 1988). Prior studies show student leaders reported higher levels of growth and development (Strifflino and Saunders 1988). Developing self-management and organisational skills suggest higher levels of development, which this study contradicts. In addition, Cress et al. (2001) reported student leaders had a greater willingness to take risks and perform under pressure. The findings of this study show respondents had moderately mid levels of problem-solving and decision-making skills, which contradict the claims of Cress et al. (2001).

Additional research indicates that students develop more mature interpersonal relationships (Cooper et al. 1994). Cress et al. (2001) found students possess increased conflict resolution skills. This research contradicts the findings of these previous studies that indicate respondents have average interpersonal skills and problem-solving skills.

The present study also addressed the question of differences in leadership skills by gender. First, the findings suggest that, overall, male and female students possess the same degree of leadership skills when they matriculate. However, the findings do indicate differences in the area of leadership skills related to technology, but no differences on the other seven scales. There is an extensive body of literature that reports no differences in leadership skills by gender (Bass 1991; Komives 1991; Posner and Brodsky 1994; Powell 1989). Literature supporting differences in technology are also extensive (Bronson 1998; Corston and Colman 1996; Litchman 1998; Reinen and Plomp 1997; Shashaani 1997; Spotts et al. 1997).

However, other studies actually reveal increased leadership skills in women (Komives 1994). More specifically, increased levels of interpersonal skills and problem-solving abilities have been seen in women (Romano 1996). This research finding does not confirm these previous results, as the only difference by gender in my study related to technology skills. More research is needed to further investigate the issues of leadership and gender.

However, a significant difference was found between male and female students on the technology scale. Scores on this scale indicated that male respondents indicated a significantly higher degree of leadership skills related to technology than female respondents did.

The significant difference found in the technology scale would seem to provide more evidence as to the widening technology gap between men and women (Bauer 2000; Bronson 1998; Corston and Colman 1996; Litchman 1998; Reinen and Plomp 1997; Sax et al. 2003; Shashaani 1997; Spotts et al. 1997). This is important to note as institutions of higher education address these issues on their campuses.

Extensive research exists that indicates females have a lower level of technology skills than their male counterparts do. A 1997 study in higher education revealed that female college students were less interested, confident and experienced with regards to computers than males (Shashaani 1997). Even when extended to an international stage, research reveals that females have lower skill levels and interest in technology (Reinen and Plomp 1997). Additionally, male college faculty members have been shown to rate themselves higher regarding technology skills than their female counterparts (Spotts et al. 1997).

However, this significant difference should also be analysed within the context of the entire study. The area of leadership skills related to technology was the only area in which significant differences by gender were found. Many people assume that men are more assertive and become leaders more frequently, as well as care more about being seen as leaders and educating themselves on leadership topics.

## Conclusion

In conclusion, the findings of the present study reveal moderate levels of leadership skills among first-year college students. However, these skills vary fairly dramatically within one standard deviation, indicating that some students come to college having gained far more leadership skills than others.

In institutions of higher education today, claims of leadership as an outcome of graduation are abundant. This is in part as a result of employers urging colleges and universities to ensure students graduate with leadership skills. As a result, developing leadership skills and workshops, through Student affairs departments, are springing up all over the colleges and universities are claiming to educate leaders. However, a gap in the research on leadership exists. Assessment is not done at the primary and secondary level, and then again upon graduation from college. This study addressed that gap and suggests that students matriculate with moderate levels of leadership skills.

Since students are entering college with these skills, colleges need to capitalise on these abilities and look for ways to develop them further. Assessment at the beginning and then again at the conclusion of the educational experience might provide evidence of the value that leadership workshops, programmes and services provide. In doing so, colleges and universities will be able to better support their claim of graduating students with leadership skills.

To this point, no research had existed that addressed the pre-college leadership skills of first-year students. This study fills that gap and helps make the connection between high school leadership ability and leadership ability upon graduation from college. A leadership skills baseline has now been established for first-year students. This is especially important as more and more institutions promise students leadership skills when they graduate. Therefore, as outcome assessment continues to include leadership skills, support for leadership development among college students is increasing.

It is vital that institutions of higher education take note of this study and support future studies that expand on its findings. Doing so will ensure that leadership is not merely a common promise in higher education, but a common practice.

## Implications

### *Implications for practice*

The findings have several implications for those who teach classes in leadership, leadership workshops and programmes coordinators, and other administrators. For instructors of leadership classes at institutions of higher education, the findings suggest they can challenge

students more and not make assumptions about having to begin at a basic level when providing leadership education. The results of the study reveal a mean score at the midpoint on every scale of the SLOI. This suggests students are entering college with less developed leadership skills than is often assumed, and dispelling this assumption might lead instructors to become more effective in their educational endeavors.

This study supported prior research that indicates a technology gap between male and female students. Prior research also indicates that females buy into technology more when they are able to understand how it relates to their interests or tasks (Brunner 1997). Leadership educators could thus make a more concerted effort to relate their leadership lessons to the interests and tasks of the students they serve as a means of closing the gender gap related to technology.

Leadership programme coordinators may also benefit from the results of this study. The present study revealed moderate scores on the eight leadership scales measured. This would suggest that students coming to college already possess these skills to a moderate degree. Leadership programme coordinators might focus more of their attention on a wider range of leadership skills. Topics such as community development, service learning, ethics and morality, and global leadership are all areas that programme coordinators could focus more attention on in the future.

In terms of policy, several constituencies may benefit from the results of this study. College administrators who advocate leadership as one outcome of their institution may use the findings. If colleges wish to graduate students with high degrees of leadership skills, they should properly evaluate and manage the funding and provide support for more involved leadership classes, programmes, and opportunities. Administrators need to assess leadership skills upon entering college and then upon exiting college in order to assure that the funds being allocated are producing the desired outcome: increased leadership skills.

College administrators might also consider setting a higher standard of leadership education and have the confidence that students are able to meet that standard. This study suggests that students are entering college with moderate leadership skills so if administrators wish to graduate students with higher levels of leadership skills, they should challenge students in all areas of their college experience. This can be done by challenging those responsible for educating students to engage students in leadership endeavors and to reward those who do engage students.

Additionally, college administrators might encourage evaluation and assessment among institutions of higher education. With so many colleges and universities claiming leadership skills as an outcome of graduation, simply assessing leadership skills within the institution may not be going far enough. Administrators from different colleges and universities might work together to compare outcomes and accurately assess the leadership skills attained by students as they graduate. Financial support and other resources could also be dedicated to this endeavour so that it does not become another unfulfilled mandate.

Furthermore, administrators now have more evidence advocating the need to narrow the gender gap in technology. This study has shown leadership skills related to technology to be significantly less developed among female students than male students. As a result, administrators need to assess the effectiveness of policies that require students to purchase or rent computers upon matriculation, manage coursework online, and also assess how technology is being incorporated into the curricula in all disciplines, not just the science and technology fields. An assessment of leadership skills at matriculation and graduation should address technology skills, as well as how the use of technology was incorporated into the curricular and cocurricular experiences of students.

### ***Implications for future research***

This study measured leadership skills on eight scales. Future studies could expand on these eight scales to incorporate additional leadership skill areas. This would provide a more complete look at the pre-college leadership skills that first-year students possess.

Future studies could expand on these data to examine the pre-college leadership skills of first-year students at other institutional types (e.g. community colleges, high and basic schools). This would provide a more complete picture of the overall leadership skills of matriculating students.

Additionally, although the respondents in this study consisted of both men and women, it is possible that the questions on the instrument favored stereotypically male leadership characteristics. For example, items asked respondents about the ability to offer constructive criticism, influence others, and take calculated risks. These are all characteristics that might be interpreted as male-oriented. Future studies could seek to identify women's leadership characteristics and identify any differences that may emerge by gender. This would provide a more complete definition of leadership skills from which to assess students.

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### **References**

- Aksoy, H.H. 1998. Relationship between education and employment: how do employers use educational indicators in hiring? (Results from a participatory observation.) Paper presented at World Council for Curriculum and Instruction Region VI. North American Chapter Interdisciplinary Education Conference Theme: Educational Networking: Making Connections for the 21st Century, October 1–3, in Ottawa, Ontario, Canada.
- Arminio, J.L., S. Carter, S.E. Jones, K. Kruger, N. Lucas, J. Washington, N. Young, and A. Scott. 2000. Leadership experiences of students of color. *NASPA Journal* 37, no. 3: 496–509.
- Attinasi, L.C. Jr. 1992a. *1992 employer assessments of recent Pima Community College graduates*. Tucson, AZ: Pima Community College.
- . 1992b. Rethinking the study of the outcomes of college attendance. *Journal of College Student Development* 33: 61–70.
- Bass, B.M. 1991. *Bass and Stogdill's handbook of leadership: a survey of theory and research*. New York: Free Press.
- Bauer, J.F. 2000. A technology gender divide: perceived skill and frustration levels among female preservice teachers. Paper presented at MSERA Annual Conference, November 15, in Bowling Green, KY.
- Baxter Magolda, M. 1992. *Knowing and reasoning in college: gender-related patterns in students' intellectual development*. San Francisco, CA: Jossey-Bass.
- Bolton, E.B. 1988. Personal and organizational development through a leadership development program. Paper presented at the Annual Meeting of the American Association for Adult and Continuing Education, November 1–5, in Tulsa, OK.

- Boyer, E.L. 1987. *College: the undergraduate experience in America*. New York: Harper and Row.
- Braxton, J.M., J.C. Smart, and W.S. Thieke. 1991. Peer groups of colleges and universities based on student outcomes. *Journal of College Student Development* 32: 302–09.
- Bronson, M. 1998. The impact of psychological gender, gender-related perceptions, significant others, and the introducer of technology upon computer anxiety among students. *Journal of Educational Computing Research* 18, no. 1: 63–78.
- Brunner, C. 1997. Opening technology to girls. *Electronic Learning* 16, no. 4: 55.
- Burch, P. 1984 (9 September). High grades from cram course. *Commercial Appeal*, H1.
- Carnevale, A.P. 2001. Help wanted ... college required. *2001 Business–Education Partnerships Conference*, Chicago: Educational Testing Service.
- Chambers, T. 1992. The development of criteria to evaluate college student leadership programs. *Journal of College Student Development* 33: 339–47.
- Cooper, D.L., M.A. Healy, and J. Simpson. 1994. Student development through involvement: specific changes over time. *Journal of College Student Development* 35: 98–102.
- Corston, R., and A. Colman. 1996. Gender and social facilitation effects on computer competence and attitudes towards computers. *Journal of Educational Computing Research* 14, no. 2: 171–83.
- Cox, L.S., and D. Miranda. 2003. Enhancing student leadership development in community settings. *Nurse Educator* 28, no. 3: 127–31.
- Council for the Advancement of Standards. 1997. *The book of professional standards for higher education*. Washington, DC: Author.
- Cress, C.M., H.S. Astin, K. Zimmerman-Oster, and J.C. Burkhardt. 2001. Developmental outcomes of college students' involvement in leadership activities. *Journal of College Student Development* 42, no. 1: 15–27.
- Erwin, T.D. 1991. *Assessing student learning and development: a guide to the principles, goals, and methods of determining college outcomes*. San Francisco, CA: Jossey-Bass.
- Freeman, F.H., K.B. Knott, and M.K. Schwartz, eds. 1994. *Leadership education 1994–1995: a source book*. Greensboro, NC: Center for Creative Leadership.
- Gale, S.F. 2002. Building leaders at all levels: Part 1 of 2. *Workforce Management*: 1 October.
- Gallagher, R.P., A. Golin, and K. Kelleher. 1992. The personal, career, and learning skills needs of college students. *Journal of College Student Development* 33: 301–9.
- Gerber, R. 2003. Mothers hone leadership skills on career breaks. *USA Today*, 9 January.
- Graham, S., and Cockriel, I. 1997. A factor structure for social and personal development outcomes in college. *NASPA Journal* 34, no. 3: 199–216.
- Grogger, J., and E. Eide. 1994. Changes in college skills and the rise in the college wage premium. *The Journal of Human Resources* 30: 280–310.
- The Hashemite University. 2007. Student Life – The Deanship of Student Affairs. <http://www.hu.edu.jo/Inside/StudentLife/StudentAffairs.asp> (accessed July 17, 2007).
- Hood, A.B. 1984. *Student development: does participation affect growth?* Bloomington, IN: Association of College Unions-International.
- Hovest, G.A., and D. Vinton. 1993. Combining curricular and co-curricular components for a comprehensive leadership development program. *Journal of College Student Development* 34: 307–8.
- Huber, G.L., and M. Kiegelmann. 2002. How do school principals acquire leadership skills? Paper presented at the 110th Annual Convention of the American Psychological Association, Division 15, symposium on *Learning and Teaching Beyond the Curriculum*. Chicago: APA.
- Kerka, S. 1990. Job-related basic skills. *ERIC Digest No. 94*, ED318912.
- Kimbrough, W.M., and P.A. Hutcheson. 1998. The impact of membership in Black Greek-letter organizations on Black students' involvement in collegiate activities and their development of leadership skills. *The Journal of Negro Education* 67, no. 2: 96–105.
- Komives, S.R. 1991. Gender differences in the relationship of hall directors' transformational and transactional leadership and achieving styles. *Journal of College Student Development* 32, no. 2: 155–65.
- Komives, S.R. 1994. Women student leaders: self-perceptions of empowering leadership and achieving style. *NASPA Journal* 31, no. 2: 102–11.
- Kouzes, J., and B. Posner. 1995. *The leadership challenge: how to get extraordinary things done in organizations*. 2nd ed. San Francisco, CA: Jossey-Bass.
- Kuh, G.D. 1993. In their own words: what students learn outside the classroom. *American Educational Research Journal* 30, no. 2: 277–304.
- Litchman, J. 1998. The cyber sisters club: using the internet to bridge the technology gap with inner city girls. *T H E Journal* 26, no. 5: 47–54.

- Love, P.G. 1995. Exploring the impact of student affairs professional on student outcomes. *Journal of College Student Development* 36, no. 2: 162–70.
- Miller, T.K., and J.D. Jones. 1981. Out-of-class activities. In *The modern American college*, ed. A. Chickering, and associates, 657–71. San Francisco, CA: Jossey-Bass.
- Mittelhauser, M. 1998. The outlook for college graduates, 1996–2006: prepare yourself. *Occupational Outlook Quarterly* 42, no. 2: 2–9.
- Outcalt, C.L., S.K. Faris, K.N. McMahon, P.M. Tahtakran, and C.B. Noll. 2001. A leadership approach for the new millennium: a case study of UCLA's Bruin Leaders Project. *NASPA Journal* 38, no. 2: 178–88.
- Pascarella, E., C. Ethington, and J. Smart. 1988. The influence of college on humanitarian/civic involvement values. *Journal of Higher Education* 59: 412–37.
- Posner, B.Z., and B. Brodsky. 1993. The leadership practices of effective RAs. *Journal of College Student Development* 34: 300–4.
- . 1994. Leadership practices of effective student leaders: gender makes no difference. *NASPA Journal* 31, no. 2: 113–20.
- Powell, G.N. 1989. *Women and men in organizations*. Newbury Park, CA: Sage.
- Quinn, C. 2004. Rise: want to run the show? Catherine Quinn reports on ways students can buff up their leadership skills. *The Guardian*, 21 February.
- Reardon, R., J.G. Lenz, and B. Folsom. 1998. Employer ratings of student participation in nonclassroom-based activities: findings from a campus survey. *Journal of Career Planning and Employment* 58, no. 4: 36–9.
- Reinen, L.J. and T. Plomp. 1997. Information technology and gender equality: a contradiction in terms? *Computers and Education* 28, no. 2: 65–78.
- Riggio, R.E., J. Ciulla, and G. Sorenson. 2003. Leadership education at the undergraduate level: a liberal arts approach to leadership development. In *The future of leadership development*, eds. S.E. Murphy and R.E. Riggio, 223–36. Mahwah, NJ: Lawrence Erlbaum Associates.
- Romano, C.R. 1996. A qualitative study of women student leaders. *Journal of College Student Development* 37, no. 6: 676–83.
- Romero-Aldaz, P.I. 2001. The leading edge: outcomes achieved by residence hall association leaders. Unpublished master's thesis, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- Santosus, M. 2003. CIOs in a class by themselves. *CIO Magazine*, 1 November.
- Sax, L.J., A.W. Astin, J.A. Lindholm, W.S. Korn, V.B. Saenz, and K.M. Mahoney. 2003. *The American freshman: national norms for fall 2003*. Los Angeles: University of California.
- Sergiovanni, T.J. 1994. The roots of school leadership. *Principal* 72, no. 2: 6–10.
- Shashaani, L. 1997. Gender differences in computer attitudes and use among college students. *Journal of Educational Computing Research* 16, no. 1: 37–52.
- Skeat, L.C. 2000. Cognitive development in student leaders, and non-leaders. Unpublished master's thesis, Virginia Polytechnic Institute and State University.
- Spotts, T.H., M.A. Bowman, and C. Mertz. 1997. Gender and use of instructional technologies: a study of university faculty. *Journal of Higher Education* 34: 421–36.
- Strifflino, P., and S.A. Saunders. 1988. Emerging leaders: students in need of development. *NASPA Journal* 27, no. 1: 51–7.
- Stronge, J.H. 1998. Leadership skills in school and business. *The School Administrator* 9, no. 55: 21–6.
- Turrentine, C.G. 2001. A comparison of self-assessment and peer assessment of leadership skills. *NASPA Journal* 38, no. 3: 261–71.
- van Linden, J.A., and C.I. Fertman. 1998. *Youth leadership: a guide to understanding leadership development in adolescents*. San Francisco: Jossey-Bass.
- Vann, M. 2000. Student Leadership Outcomes Inventory. (Available from Melinda Vann, University Unions and Student Activities, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, USA.)
- . 2004. Student Leadership Outcomes Inventory. (Available from Melinda Vann, Maryland Higher Education Commission, Annapolis, Maryland 21401, USA.)
- Wade, R.C., and K. Putnam. 1995. Tomorrow's leaders? Gifted students' opinions of leadership and service activities. *Roeper Review* 18: 150–51.
- Wheatley, M.J. 1992. *Leadership and the new science: learning about organization*. New York: Currency.

### Student Leadership Outcomes Inventory

**Demographic Information:**

**Gender:** ( ) Male ( ) Female  
**Age:** ( ) 18 ( ) 19

Please take about 15 minutes to complete this survey about your leadership experiences. Your individual responses will be kept confidential.

Please start by thinking about the leadership experiences you had in high school. Next, think about the skills and attributes you gained as a result of those leadership experiences in high school. Then, indicate your level of agreement with each item below. Choose from a scale of 1 to 4, where 1 = ‘Strongly Disagree’ and 4 = ‘Strongly Agree’.

As a result of my leadership experiences in high school, I increased my:

		Strongly Disagree	Disagree	Agree	Strongly Agree
1	Ability to perform under pressure	1	2	3	4
2	Ability to learn from my mistakes	1	2	3	4
3	Ability to manage personal stress	1	2	3	4
4	Ability to balance personal, academic and student life	1	2	3	4
5	Ability to manage personal time	1	2	3	4
6	Ability to establish priorities	1	2	3	4
7	Ability to identify personal strengths and weaknesses	1	2	3	4
8	Ability to understand the consequences of my actions	1	2	3	4
9	Ability to achieve active listening (Understanding feeling and content of conversation)	1	2	3	4
10	Ability to give constructive criticism to others	1	2	3	4
11	Ability to receive constructive criticism from others	1	2	3	4
12	Ability to express disagreement tactfully	1	2	3	4
13	Ability to understand what is important to others	1	2	3	4
14	Ability to influence others	1	2	3	4
15	Ability to supervise others	1	2	3	4
16	Ability to form professional working relationships with the opposite gender	1	2	3	4
17	Ability to speak in public	1	2	3	4
18	Written communication ability	1	2	3	4
19	Ability to work as part of a group	1	2	3	4
20	Ability to identify strengths and weaknesses of others	1	2	3	4
21	Ability to make formal presentations	1	2	3	4
22	Ability to speak extemporaneously (unrehearsed)	1	2	3	4
23	Ability to use diplomatic conflict resolution	1	2	3	4
24	Ability to negotiate for a desired outcome	1	2	3	4
25	Ability to use creative problem-solving	1	2	3	4
26	Ability to use good judgement	1	2	3	4
27	Ability to perform calculated risk taking	1	2	3	4
28	Ability to critically examine my mistakes	1	2	3	4
29	Ability to make ethical decisions	1	2	3	4

		Strongly Disagree	Disagree	Agree	Strongly Agree
30	Ability to make practical applications of knowledge/ information	1	2	3	4
31	Ability to develop compromises	1	2	3	4
32	Ability to assess the politics associated with issues	1	2	3	4
33	Ability to use critical thinking skills	1	2	3	4
34	Ability to build consensus within a group	1	2	3	4
35	Ability to delegate tasks to others	1	2	3	4
36	Ability to promote/market events	1	2	3	4
37	Ability to plan activities/events	1	2	3	4
38	Ability to develop organisation agendas	1	2	3	4
39	Ability to set deadlines	1	2	3	4
40	Ability to run effective meetings	1	2	3	4
41	Ability to manage organisation finances	1	2	3	4
42	Ability to manage multiple tasks	1	2	3	4
43	Ability to form a team to accomplish a goal	1	2	3	4
44	Ability to lead a group of people	1	2	3	4
45	Ability to motivate other people	1	2	3	4
46	Ability to organise tasks	1	2	3	4
47	Ability to set long-term goals	1	2	3	4
48	Ability to meet deadlines	1	2	3	4
49	Ability to understand organisational politics	1	2	3	4
50	Ability to have self-confidence in my social skills	1	2	3	4
51	Ability to have self-confidence in my abilities	1	2	3	4
52	Ability to be assertive in my interactions with others	1	2	3	4
53	Ability to clarify my personal values	1	2	3	4
54	Ability to establish my personal code of ethics	1	2	3	4
55	Ability to contribute positively to my overall high school experience	1	2	3	4
56	Ability to develop a sensitivity toward people who are different from me	1	2	3	4
57	Ability to develop respect for the rights of others	1	2	3	4
58	Ability to develop appreciation for different perspectives	1	2	3	4
59	Ability to increase my use of computer software (word processing, spreadsheets, etc.)	1	2	3	4
60	Ability to increase locating resources on the Internet	1	2	3	4