

Student Leadership Development and Orientation: Contributing Resources within the Liberal Arts

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Abstract Research in higher education on leadership development and attributes has primarily concentrated on students currently engaged in campus experiences and programs (e.g., student government, volunteerism) that emulate leadership positions and opportunities that carry over to societal equivalencies. Thus, students who are not active in leadership activities are rarely assessed regarding their leadership-related development, perspectives, or preferences. The central purpose of this study is to explore students' disposition regarding leadership etiquette, behavior, and method in the context of leadership process theory. Using the Leadership Attitudes and Beliefs Scale III[27], how students think about leadership, irrespective of their perceived experience in leadership-based activities or positions, will be examined within the context of contributing university resources.

Keywords: College students, leadership development, liberal arts

1. Introduction

Student engagement with various institutional-related activities and interactions has been noted for decades as a significant influence on the differential patterns of student learning and growth[11][16][17]. One important outcome from these engagements is the impact on students' attitudes and beliefs concerning leadership, which continues to be a prominent theme and objective in higher education[15][18][20][21][22][27][28][29].

The majority of research on student leadership development has focused on corporate-related models, which emphasize the impact of institutional experiences that parallel roles found in business or politics. Other commonly examined attributes include entering students' predisposition to leadership development, available institutional-related leadership resources, activities and opportunities, and the effects of formal leadership development programs[10][14][15][18][20][21][22][27][28][29]. Unfortunately, students not actively engaged in official leadership-based programs, roles or activities may be overlooked concerning their leadership growth, development and potential[8][26].

Attempting to capture and examine students' cognitive development towards leadership, without dependence on predispositions towards leadership-based activities or positions, Wielkiewicz[27] developed the Leadership Attitudes and Beliefs Scale-III (LABS-III). The LABS-III instrument consists of two scales representing divergent patterns of leadership attitudes and beliefs. One scale is based on a hierarchical pattern of thinking, which is characteristic of the traditional top-down leadership

structure. The Hierarchical Thinking scale emphasizes a tightly controlled decision-making process, with an authoritarian mode of operation and communication. A leader's effectiveness and efficiency are paramount to the success of the organization, which in turn, is strongly associated with one's maintenance and preservation of rank within that organization[3][6][13]. The second scale derives from Allen, Stelzner, & Wielkiewicz's[1] leadership process theory, which is based on a systemic pattern of thinking. The Systemic Thinking scale strongly emphasizes an organization's ability to adapt quickly to ever-changing environments. Employing the knowledge and wisdom of organizational members through high levels of communication and cooperation is paramount to a successful organization. In this manner, the effectiveness of a leader is dependent on one's ability to successfully facilitate and utilize a participative decision-making process. Allen et al.'s[1] theory asserts that the adoption of Systemic Thinking by individuals and organizations will yield greater levels of overall adaptability, cooperation, sustainability and success.

Although not extensive, there has been research exploring the development of students' leadership attitudes and beliefs within the context of Allen, et al.'s[1] theory, as well as its relationship to the differential patterns of student learning and growth. A study conducted by Wielkiewicz, et al.'s[28] in 2005 examined the uniqueness of the LABS-III as compared to Astin's[2] Student Leader type, a characterization based on attributes similar to traditional hierarchical-based roles or positions. Wielkiewicz found that students scoring highly on either the Hierarchical or Systemic Thinking scales on the LABS-III scored higher on Astin's Student Leader type. However, the majority of information gleaned from the

LABS-III was significantly distinctive from traditional position-based attributes and roles, which provided strong evidence concerning its utility in assessing student leadership development from a non-predisposed perspective. In addition, the relationship between the Systemic Thinking scale and students' academic engagement and development was also investigated. Wielkiewicz found that student engagement (e.g., class participation, reading outside of class), behavior (e.g., intellectual curiosity, study habits), and Systemic Thinking were interrelated, which provided evidence that an assortment of academic and co-curricular activities may facilitate student leadership development. Higher grade point averages, however, were not associated with Systemic Thinking, but they were associated with students who reported a lower preference towards Hierarchical Thinking leadership beliefs and values.

Another study utilized the Hierarchical and Systemic Thinking scales (LABS-III) to examine students' leadership attitudes and beliefs within the context of contributing institutional resources, entering standardized test scores and academic achievement[25]. Faculty, staff and peer interactions, as well as coursework experiences were identified as the strongest contributing resources, with internships and intercollegiate athletics making significant contributions as well. Group differences were also observed within the context of varying levels of Hierarchical and Systemic Thinking (high and low) based on students' scores above and below the mean scores respective to each scale. Of the contributing institutional resources noted above, students reporting high preferences for both Hierarchical and Systemic Thinking also reported significantly higher contributions towards those attitudes and beliefs from faculty, staff and peer interactions than those scoring below the mean of one or both scales. In contrast with Wielkiewicz, et al.'s[28] findings previously noted, the study also found that students who perceived themselves exclusively as high Systemic Thinkers tended to have higher college grade point averages. No significant differences were noted concerning the students' standardized test scores.

The present study will contribute to the above research on student leadership development within the context of Allen, et al.'s[1] leadership process theory. Similar to Wielkiewicz, et al.'s[28] and Thompson's[25] studies, attributed contributions from various institutional resources, as well as students' standardized test scores and grade point averages will be examined in relation to differences in leadership behavioral preferences. The present study will differ from previous research by examining students' leadership behavioral preferences based on the emphasis placed on multiple leadership behavioral values and beliefs (e.g., Hierarchical and Systemic Thinking). A number of studies in the leadership development literature have asserted that effective leadership requires the ability to utilize different orientations of leadership style[5][6][12][19][24]. Thus, the present study will examine the extent to which students are developing multiple perspectives of leadership-related attributes. In addition, the present study

will include an expanded number of institutional resource categories.

2. Methodology

2.1. Participants

This study was based on a sample of juniors and seniors at a private liberal arts institution with an approximate enrollment of 2,050 students located in the Midwest United States. Upper division students were selected for this study because of their length of exposure to institutional resources and opportunities.

Eight hundred and eighty-eight students were emailed to complete a Web-based version of the LABS-III. The instrument was administered in the spring semester and was available online for 30 days. An opportunity to win one of fifty \$10.00 campus bookstore gift certificates in a random drawing was offered as an incentive to participate. Three reminders were sent to the students.

Two hundred and sixty-three students participated, establishing the response rate at 30%. After adjusting the data elements by gender to better reflect the institution's population, the male population was doubled via weighting procedures, which have been noted as an effective tool in eliminating the influence of differential response rates[7][9]. Thus, the subsequent analyses were based on a weighted number of 323 participants (females = 63%; males = 37%), who provided full information on all variables. Approximately 12% of the participants were students of color, 2% international, 82% white, and 4% unknown - relatively consistent with the overall university percentage for each group. Fifty-seven percent of the participants were seniors, while 43% were juniors.

2.2. Instruments

The LABS-III contained two 14-item scales representing Hierarchical and Systemic Thinking. The alphas for the scales were .76 and .79, respectively. Based on a 4-point scale (4 = strongly agree to 1 = strongly disagree), the mean score for the Hierarchical Thinking scale was 35.9, with a standard deviation of 4.7, while the Systemic Thinking scale had a mean score of 46.9, with a standard deviation of 4.2. The correlation between the scales was .12, indicating a modest 1.4% of shared variance, which was likely due to sample size.

2.3. Variables

As stated earlier, it has been asserted that effective leadership behavior requires the ability to utilize different orientations of leadership style. This notion of cognitive complexity amongst the two leadership perspectives was operationalized in this study by creating three LABS-III groups that indicated the degree to which students emphasized values and behaviors reflecting an integrative, discrete or ambiguous preference towards Hierarchical and Systemic Thinking. The following is a description of each of the three leadership preference groups used in the study.

1. Integrative Thinking. Students in this category scored above the mean on both Hierarchical and Systemic Thinking scales, indicating an equal preference for each perspective's salient attributes. A total of 90 respondents (27.9%) preferred this leadership behavioral perspective.

2. Discrete Thinking. Students in this category scored above the mean on one of the Hierarchical and Systemic Thinking scales, indicating a preference for the salient attributes of a single perspective. A total of 101 respondents (31.3%) preferred this leadership behavioral perspective.

3. Ambiguous Thinking. Leadership behavior in this category scored below the mean on both Hierarchical and Systemic Thinking scales, indicating an indistinct preference for the salient attributes of either perspective. A total of 132 respondents (40.9%) preferred this leadership behavioral perspective.

Identified from previous studies[14][25][26][27], 11 university resource categories were created which asked students to what extent they agreed that each resource contributed to their attitudes and beliefs regarding leadership. Each category is based on a 4-point scale (4 = strongly agree to 1 = strongly disagree). The following is a list of the 11 resource categories:

- 1) Arts, Entertainment or Music Group
- 2) Coursework Experiences
- 3) Faculty Interactions
- 4) Greek Organizations
- 5) Intercollegiate Athletics
- 6) Internships-Field Experiences
- 7) Off-campus Study (abroad or domestic)
- 8) Political Organizations
- 9) Staff-Administrator Interactions
- 10) Student-Peer Interactions
- 11) Volunteer Organizations-Service

American College Test Scores (ACT) and institutional grade point averages (GPA) were merged with each case file by matching email addresses obtained from student records, when volunteered by the students during the survey administration.

2.4. Research Procedures

Multivariate analysis of variance (MANOVA) procedures[23] were used to assess the extent to which there were differences in the level of institutional resource contribution, ACT scores and GPA between the three LABS-III groups described above. The independent variables in the MANOVA design were the students' LABS-III group (integrative, discrete, ambiguous). The dependent variables were the 11 institutional resource categories, ACT scores and GPA. Univariate effect sizes were calculated to determine the strength of significant LABS-III group differences when the multivariate F ratios were statistically significant.

3. Results

The F ratio for the three LABS-III groups was statistically significant ($F = 1.97$; $df = 26, 564$, $p < .01$). However, only three univariate F ratios from the 11 institutional resource categories were statistically significant ($p < .05$ to $p < .01$), indicating significant differences among the LABS-III groups in contributions attributed to faculty and staff-administrator interactions and coursework experiences. The group differences on the three significant resource categories reveal that students who perceive themselves as Integrative Thinkers reported greater levels of contribution towards that end than students perceiving themselves as Ambiguous Thinkers (see Table 1). This was also true when comparing Integrative and Discrete Thinkers concerning contributions from faculty interactions alone. The Discrete Thinking group also reported greater levels of contribution from coursework experiences than students perceiving themselves as Ambiguous Thinkers. The univariate F ratios for ACT and GPA were statistically significant ($p < .05$ to $p < .01$). Students who perceived themselves as Ambiguous Thinkers had higher entering standardized test scores and institutional grade point averages than students who perceived themselves as Integrated Thinkers. Effect sizes for each significant univariate test are reported in Table 2.

Table 1. Means and Standard Deviations of the LABS-III Groups

Variables	LABS-III Groups						Univariate F Ratio
	Ambiguous		Discrete		Integrated		
	Mean	SD	Mean	SD	Mean	SD	
Arts, Entertainment, or Music Group	2.30	1.05	2.58	1.03	2.63	0.98	1.45
Coursework Experiences	2.68	0.79	2.98	0.71	3.21	0.70	6.56**
Faculty Interactions	2.77	0.83	2.97	0.66	3.26	0.68	7.64**
Greek Organizations	2.20	1.07	2.26	1.16	2.36	1.26	0.07
Intercollegiate Athletics	2.18	1.06	2.21	1.08	2.30	1.03	0.39
Internships-Field Experiences	2.93	1.01	3.06	0.90	3.21	0.87	0.38
Off-campus Study (Abroad or Domestic)	2.53	1.05	2.50	1.10	2.83	1.04	1.65
Political Organizations	2.11	0.94	2.15	0.96	2.49	0.97	2.30
Staff-Administrator Interactions	2.55	0.86	2.69	0.73	2.93	0.73	3.83*
Student-Peer Interactions	3.18	0.85	3.36	0.72	3.46	0.75	0.79
Volunteer Organizations /	2.73	1.02	2.82	0.97	3.11	0.85	2.81

Service							
ACT	29.5	2.84	28.9	2.95	28.4	2.28	5.15**
GPA	3.48	0.33	3.38	0.38	3.31	0.37	5.09**

df = (26, 564).

* $p < .05$, ** $p < .01$.

Table 2. Effect Sizes for Significant Univariate Tests

Comparison	Effect Size
BY LEADERSHIP PATTERN	
Coursework Experiences	
Ambiguous and Discrete	- 0.42***
Ambiguous and Integrated	- 0.76***
Faculty Interactions	
Ambiguous and Integrated	- 0.71***
Discrete and Integrated	- 0.42***
Staff-Administrator Interactions	
Ambiguous and Integrated	- 0.52**
ACT	
Ambiguous and Integrated	0.49*
GPA	
Ambiguous and Integrated	0.44**

* $p < .05$, ** $p < .01$, *** $p < .001$.

4. Discussion

The findings of the present study provide further evidence concerning the potential of the LABS-III in contributing to our understanding of student leadership behavioral preferences and development within the context of Allen et al.'s [1] leadership process theory. The LABS-III is a valuable instrument for practitioners who wish to assess the impact of institutional resources and activities on student leadership values and beliefs.

Similar to Thompson's [25] previously noted findings, faculty interactions were reported as the strongest contributing institutional resource towards students' belief system concerning leadership. Staff-administrator interactions contributed in a significant manner as well, which is also consistent with Thompson's assessment, although faculty and staff interaction was a single resource category for that examination. The significant contributions of coursework experiences are noted in both the 2006 and present study ($F = 6.56$; $p < .01$), which reaffirms the strong positive impact of student engagement with various institutional-related activities and interactions noted for decades as a significant influence on the differential patterns of student learning and growth.

Interestingly, none of the institutional resource categories that typically provide leadership positions and opportunities that parallel roles found in business or politics (e.g., internships, political and volunteer organizations) were significantly different within the

context of the student leadership behavioral preference groups. However, students within the Integrative Thinking group did report greater levels of engagement with resources attributed to the arts, politics, Greek organizations, athletics, internships, off-campus study, volunteering, and peer interactions, albeit modest. These reported higher levels of engagement across all of the University resource variables lend evidence to the assertions concerning the cooperation, effort and effectiveness of those who embrace Systemic Thinking and a multi-dimensional perspective of leadership. If one would expect higher degrees of appliance and performance as attributes from a more balanced orientation of leadership behavioral values and beliefs, these expectations were confirmed in the present study.

The findings of the present study also contribute significant evidence concerning the importance of student engagement and should provide a richer understanding to student affairs practitioners, as well as all personnel in higher education institutions who have direct and indirect contact with students, of the role and strong impact relationships may play in students' leadership behavioral preference development. For example, by encouraging greater engagement in formal (e.g., advising, mentoring) and informal (e.g., conversations outside of class, social gatherings) interactions with institutional personnel (e.g., faculty, staff), student affairs practitioners are cultivating an environment conducive to students' cognitive development towards leadership. The exposure and quality of communication with campus leaders may

provide diverse perspectives that broaden and enhance students' leadership values and beliefs.

Previous research findings concerning the differential patterns of students' leadership development and its relationship to GPAs are mixed at best. Allen et al.'s[1] leadership process theory asserts that individuals with high levels of Systemic Thinking are more adaptable, cooperative, open to new ideas, and thus successful. Thompson's[25] findings concerning the higher GPAs of students who perceived themselves exclusively as high Systemic Thinkers supported this assertion, while Wielkiewicz et al.[28] found no correlation between GPA and Systemic Thinking, but did note a relationship between higher GPAs and less Hierarchical Thinking. The results of the present study, in which significantly higher GPAs were found amongst students scoring below the mean in both the Hierarchical and Systemic Thinking scales (i.e., Ambiguous Thinkers), provides some support to Wielkiewicz et al.'s[28] findings concerning the nature of the relationship between leadership process development and GPA.

In sum, the evidence from the present study suggests that the LABS-III may serve as an effective assessment tool in evaluating students' leadership behavioral preferences and may assist and enhance the efforts of student affairs practitioners and institutions in facilitating leadership development. Given the importance of leadership development in higher education, institutions will benefit to periodically identify and assess the resources that contribute to such efforts. Knowledge concerning institutional resources and their impact on students may facilitate more effective communication amongst campus constituencies concerning allocations and prioritization towards students' leadership growth and development via their undergraduate experiences.

Finally, the results of the present study, as well as other examinations using Allen et al.'s[1] leadership process theory, provide clear illustrations that students, regardless of their predisposition to leadership-related attitudes and beliefs, have tangible thoughts and ideas concerning leadership behavior. How these thoughts and ideas are shaped is a great, and perhaps relatively untapped, opportunity for faculty and staff in higher education institutions. If student leadership development is a prominent theme and objective in higher education, not to mention a common mission-driven attribute, institutions should be more mindful and better equipped to reach out to ALL students, but especially those not predisposed to leadership-related activities, interactions and integrations that promote and enhance the student experience, as well one's character.

5. Limitations

The institution utilized for the present study is a private baccalaureate liberal arts university located in the Midwestern United States and serves a diverse and predominately residential student population. The applicability of the findings to other campus settings is unknown. However, the instrument utilized for the present

study, the LABS-III, has been employed in assessing leadership process development in both private and state-supported universities[25][27][28]. Further research utilizing the LABS-III is warranted to assess the degree of validity across other types of educational institutions.

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