JSLHE Journal of Service-Learning in Higher Education

 The Journal of Service-Learning in Higher Education is an online, international, peer-reviewed journal for the dissemination of original research regarding effective institutional-community partnerships. Our primary emphasis is to provide an outlet for sharing the methodologies and pedagogical approaches that lead to effective community-identified outcomes. The Journal of Service-Learning in Higher Education is a subscription-free journal with a review board made up of various academic disciplines of the member institutions of the University of Louisiana System as well as other nationally and internationally accredited colleges and universities and affiliated organizations.

Table of Contents

Foreword

Articles

Undergraduate Honors Service-Learning & Effects on Locus of Control

Trae Stewart

ABSTRACT

Research examining service-learning in honors undergraduate education is scarce, and there have been no empirical studies that examine the effect of service-learning participation on honors undergraduates' locus of control. The current study aimed to determine whether 119 first-year undergraduate honors students experienced significant changes in their internal and external locus of control after completing required service-learning projects in Title 1 elementary schools. Paired-samples t-tests showed that participants' locus of control was significantly changed over time on two of the three dependent variables (i.e., internal, powerful others).

Locus of control is a psychological construct that captures the extent to which we can control events in our lives. One can either have an internal or external locus of control. Internal locus means that individuals believe that they have control over their life and that their own behavior and actions result in the events that they experience. An external locus means that individuals believe that fate or powerful others have control.

For service-learning and other community engagement activities, understanding changes in students' locus of control after participating could be useful. For example, individuals with a high internal locus of control would arguably assume that their efforts will be successful, work more deliberately at the task by seeking information, are more likely to influence other people, and perhaps even continue with the task/activities after the end of the project as they have better control over their behavior. In essence, they perceive themselves as responsible for certain occurrences and, as a result, see their actions as having a direct bearing on the result. Those with greater external locus of control may shy away from participating in activities for which they do not feel their efforts matter.

While locus of control has been studied extensively in psychology, the field of service-learning has yet to broadly address this particular construct. In those studies that have been conducted, findings on the effects of service-learning are overall positive, yet inconclusive (Billig, 2005; Drane, 2001; McCarty & Hazelkorn, 2001; Myers-Lipton, 1998; Stevick & Addleman, 1995). Empirical studies on service-learning in undergraduate honors education have not included locus of control as a dependent variable.

The current study aims to fill a gap in the literature by examining the extent to which postsecondary honors students' engagement in a mandatory service-learning program, linking a course on the "Evolution of Community" to direct volunteerism in struggling schools, affects their locus of control. The theoretical construct of locus of control frames the analysis pre-/post-surveys administered to 119 participants. A discussion on the major findings in relation to previous research is provided with implications for further study.

Review of Relevant Literature

Social Learning Theory & Locus of Control

In social learning theory, Rotter (1966) posited that individuals' expectations are established and strengthened via reinforcements. Rotter (1966) emphasized that behavior is influenced not only by the reinforcement itself, but more importantly by the individual's perception of the relationship between his/her behavior and the reinforcement. "Locus of control," therefore, refers to whether an individual can acquire a reinforcement through his/her own abilities and efforts (i.e., internals), or if it flows from uncontrollable external factors (i.e., externals).

> When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceived that the event is contingent upon his own behavior or his own relative permanent characteristics, we have termed this a belief in internal control. (Rotter, 1966, p. 1)

Under Rotter's (1966) original conceptualization, locus of control is bipolar and unidimensional, meaning that an individual has either one or the other locus of control. Other scholars have argued that locus of control is actually multidimensional, distinguishing between externals who attribute causation to chance/fate or powerful others (Hirsch & Scheibe, 1967; Joe, 1971; Levenson, 1974, 1975; Murels, 1970; Reid & Ware, 1973), and a continuum along which we may vary throughout life.

Key here is the relationship between one's locus of control and behavior. In particular, it is understood that one's perceived locus of control influences his/her specific goal expectancy in each situation (Weiner, 1992). For internals who believe individual skills and efforts determine outcomes, their selection to engage in, and their efforts during, future activities is correlated directly with if s/he perceived success or failure in previously similar activities (Rotter, 1975; Rotter, Chance, & Phares, 1972; Rotter & Hochreich, 1975; Rotter, Seeman, & Liverant, 1962). On the other hand, when individuals believe a situation will be determined by chance (i.e., external control), success and failure are beyond their control and expectancies change little following success or failure. Regardless, no persistent effort will be made by the individual.

Rotter postulated that understanding and predicting behavior is best accomplished by examining three factors in the social environment that affect various choices of behavior available to the individual. These factors are expectancy, reinforcement value, and the psychological situations. Expectancy and reinforcement value are based on the notion that

behaviors are goal-directed to attain or avoid particular outcomes, and that people will engage in behaviors for which they expect goals to be realized. Expectancy was defined by Rotter (1954) as the "probability held by the individual that a particular reinforcement will occur as a function of the specific behavior on his part in a specific situation or situations" (p. 107). That is, "behaviors determined by the degree to which people expect that their behavior will lead to goals" (Phares, 1976, p. 13). Reinforcement value refers to the degree of preference given to a stimulus that affects behavior, indicates preference for particular reinforcement, and is dependent on the "needs" of the individual at a time various reinforcements are available. The psychological situation refers to the environment in which the individual makes decisions. From this perspective, situational cues - other people present, social interaction, time of day, familiarity - and other factors will help determine the impact of expectancies and reinforcers.

Internal & External Locus of Control Characteristics

From the many studies on locus of control that have been conducted over the past 50 years, a set of characteristics attributed to individuals with either an internally- or externally-oriented locus of control has emerged. Findings overall characterize internals as independent, resourceful, and goal-directed high-achievers who exhibit control over themselves and their environments. They tend to be more psychologically healthy, reporting less anxiety, greater ability to cope, and more motivation and assertiveness. Select findings from some of the most well-known studies are listed below.

- Control, not only over their own impulses (Joe, 1971; Lefcourt, 1976), but over their environments (Phares, 1976)
- Efficient learners and discerners of information (Lefcourt, 1966; Nowiki & Barnes, 1973; Seaman, 1963; Seaman & Evans, 1962)
- Goal-directed, higher aspirations, number of activities engaged in, and take greater initiative to attain goals, even if means deferring short term rewards (Joe, 1971; Miller, 1978; Nowiki & Barnes, 1973; Robinson & Shaver, 1973)
- Ability to deal with frustration and a willingness to remedy personal problems (Tolor & Reznikoff, 1967)
- Achievement-oriented (Freeman, Anderson, Kairey, & Hunt, 1982)
- Self-confidence and reduced anxiousness (Deery, 1983; Nunn, 1988)
- Leadership tendencies and performance (Anderson & Schneier, 1978; McCullough, Ashbridge, & Pegg, 1994)
- Actively work to improve their environment (Deery, 1983)
- Responsible for own actions and independent (Nunn, 1988)
- Positive relationship adjustment (Nowicki & Duke, 1983; Nunn, 1987)

In contrast, individuals with an external locus of control appear to function less effectively in society. More specifically, externally-oriented individuals often are less likely to report good mental health or emotional well-being. Externals tend to be anxious (Leung, Salili, & Baber, 1986; Tolor & Reznikoff, 1967), have lower global self-esteem (Hunter, J. & Csikszentmihalyi, 2003), and report greater depression (Lester, 1989; Siegel & Griffin, 1984; Topol & Reznikoff, 1982).

Service-Learning, Experiential Education & Locus of Control

Studies of locus of control and service-learning are few and inconclusive. Myers-Lipton (1998) concluded that community service-learning groups gained significantly in their locus of control, while non-service-learning groups' scores stayed the same or declined. Drane (2001) found a statistically significant higher level of locus of control among college-aged students who participated in service-learning courses compared to students who have not participated. And, in a monograph for the National Service-learning Partnership on using research knowledge to advance service-learning, Billig (2005) found that students who participated in high-quality service-learning projects report greater internal locus of control than their nonparticipating peers. Qualifying the potential impact of service-learning on locus of control, McCarty and Hazelkorn (2001) reported that including a reflection component was the key to increasing locus of control between groups of service-learners, not just the service-learning activity itself. In contrast, Stevick and Addleman (1995) found no significant differences in pre-post locus of control between control and treatment groups following a short-term volunteer experience.

Related to service-learning, yet distinct in their design, implementation, and outcome expectations, are other experiential education programs. Similarly, few research studies have been conducted over the past 30 years on experiential education programs and locus of control. The available studies highlight that participation in experiential education programs resulted in more internally-oriented participants when compared to the control group (Newbarry & Lindsay, 2000). Three meta-analyses on the impacts of experiential education programs on participants' locus of control have been conducted. Reporting effect sizes of .30 (Cason & Gillis, 1994; Hattie et al., 1997) and .38 (Hans, 2000) evidences that "subjects across studies become significantly more internal as a result of participation" (Hans, 2000, p. 33). When compared to residential (.40) and mixed residential/day programs (.53), however, Hans (2000) did find that day program participants, those most similar to the participants in the current study, reported the lowest effect size (.20).

Research Question

To what extent does mandatory participation in a service-learning program, a combination of enrollment in a symposium on the "Evolution of Community" and direct service in local schools teaching Social Studies lessons, affect postsecondary honors students' internal and external locus of control?

Methods

Design & Sample

To investigate the impact of service-learning participation on locus of control, a one-group, quasi-experimental pretest-posttest research design was conducted with 119 freshman honors students enrolled in a service-learning program at a large public research-intensive university in the United States. There were 58 males (48.7%) and 61 females (51.3%) in the study sample. Seventy-eight percent (78%) of the student participants were Caucasian, 1% African American, 3% Asian American, and 12% Hispanic/Latino. Six percent of students represented other ethnic groups, including, but not limited to, Native American, Sub-Continent Indian, and Biracial. All students were over 18 years of age and consented to participating in the study per IRB guidelines.

Context: The Honors College

The Honors College (pseudonym) aims to provide a challenging academic program and a foundation for future achievement to the most academically talented students by combining the intimacy of a small liberal arts college with the benefits of a large, metropolitan research university.

The College strives to create a diverse learning community that fosters the pursuit of excellence, a sense of social and civic responsibility, and a passion for life-long learning. Students are asked to participate in the learning experience instead of merely observing it, thereby developing their intellects in a way that will enhance them as thoughtful, productive, and creative individuals. These aims are succinctly stated in the College's goals:

1. achieve national prominence in Honors education;
2. foster academic excellence, personal growth, and civic responsibility in our students;
3. be the premier program to foster intellectual curiosity, creativity, and undergraduate research; and,
4. become more inclusive and diverse.

The Honors Program provides a special course of study to the most promising undergraduate students at the university. The program is a four-year course of studies that requires a minimum of 21 hours of Honors courses. These courses include Honors sections of General Education courses, upper-level Honors courses, and interdisciplinary seminars. Students are also required to attend Honors Freshmen Symposium in the semester in which they are admitted. Students who successfully complete the program graduate with University Honors distinction on their diplomas and transcripts.

Context: Honors Symposium and Service-Learning Project

To prepare its graduates as socially responsible young women and men who fully understand the importance of being civically engaged, the Honors College requires that all first year students serve in public schools struggling to meet social studies standards. The Honors College therefore partnered with Junior Achievement which provides structured, standards-aligned lesson plans on the roles individuals, consumers, and workers play in an expanding cultural environment that extends from the self and family to global relations. Implicit in these lessons is that every student has the potential to succeed in life, regardless of his or her background or economic status. Junior Achievement maintains a database of K-12 teachers that have requested a volunteer and, therefore, could facilitate placement and training.

To prepare honors students for their service activities, representatives from Junior Achievement provided an orientation to the organization and training workshop on the curricula for the honors students during the third week of classes. At that time, honors students were walked through each of the five lessons in their curricular packets, so that any misunderstandings could be addressed at that time.

Honors students made six visits. The first visit was to orient the volunteers to the school and hosts, and the K-12 students to their service provider. The remaining five visits were to teach social studies lessons. Total volunteer time was 15 hours and included the teaching of the lessons, visits to the schools, and preparation.

Volunteer experiences were linked to "Evolution of Community" symposium. In this required first-semester course, students examine the historical, cultural and psychosocial development of "community" with a particular emphasis on how traditional notions of community

have been defined and redefined in the context of American history. All students meet once per week in a lecture class for two hours with the course instructor and team leaders. The role of group leaders was to help incoming students adjust to campus and college life, facilitate post-lecture discussions, encourage student involvement, and to lead meaningful reflective activities about service experiences. For the first hour, all students meet for a lecture by a guest faculty member. Students then divide into their small group led by an upper class honors team leader. Thirty minutes of the small group meetings are used to discuss the preceding lecture and connect it to service-learning experiences and course readings. The remaining time is then devoted to first-year orientation topics (e.g., services on campus, wellness issues, study habits). Group leaders present topics as well as answer questions from students. To facilitate the socialization process at the beginning of the semester, each group went on a field trip exclusive of course content.

Several assignments were related to service-learning activities. Throughout the semester, students had to complete service-learning reflection reports. Each report stemmed from a different prompt that required students to reflect critically on their experiential activities vis-à-vis course readings. At the end of the semester, students were to complete a summative reflection paper that synthesized their experiences, reactions, and readings across the entire semester and tie these conclusions to civic engagement and school reform. To ensure students' understanding of class readings, weekly online reaction postings to selected readings were required. These reactions were to enable students to move to a more critical discussion of their service-learning experiences in the reaction reports.

Instrument

To measures students' locus of control, the Multidimensional Locus of Control Scale (MLCS; Levenson, 1973) was used. The MLCS is composed of three separate scales: Internal, Chance, and Powerful Others. Each scale has eight items. All items are presented to participants as one unified attitude scale of 24 items in a seven-point Likert format - from strongly disagree to strongly agree (from -3 to +3, including in the point of zero). A score on each scale is obtained by adding up points of the corresponding items and then adding a constant +24 to the total to eliminate negative values. An individual could, therefore, score high or low on all three dimensions simultaneously. High ratings on either the Powerful Others scale or the Chance scale indicate a strong external locus of control. If you rate high on the Powerful Others scale, you typically believe that your fate is controlled by other people; if you rate high on the Chance scale, you believe your fate is controlled by chance. High scores on the Internal scale indicate that respondents expect to have a high degree of control over their own lives.

The MLCS has acceptable-to-good reliability and validity evidence. Levenson (1974) found the test-retest reliability for this instrument to be .64 for the internal scale, .77 for the powerful other scale, and .78 for the chance scale. The current study found similar reliability alphas: .60 for the internal scale, .80 for the chance scale, and .79 for the powerful others scale. While the alpha of .60 for the internal scale, in particular, is concerning, the reliability estimate of the scores produced by the instrument is similar to those found in previous studies. As Gulliksen (1987) and DeVellis (2003) note, the reliability of scores is directly related to the number of items on the test, the quality of the items, and the magnitude of the item intercorrelations comprising the instrument.

In order to increase the reliability of .60 to .80 on the internal scale without changing or revising the items, the number of items on the instrument would have to be multiplied by 2.5

times (i.e. to 25 items). To this end, the low reliability estimates observed in this study (and others) appears to be an artifact of the instrument items rather than the sample. Regardless of these issues, and acknowledging that additional work is arguably necessary to develop a more reliable measure of locus of control, Luckner (1989) has noted that this instrument has among the highest reliability and validity evidence of all locus of control tests.

Procedures

During the second class meeting, students over the age of 18 years were asked to complete an informed consent form that had been approved by the University's Institutional Review Board. Students were not required to participate, and their results were not connected to the instructor evaluations of students or student evaluations of instructional teams. Those willing to participate were asked to complete an online survey by the second week of class.

Participating students completed the same surveys during the penultimate class meeting. This was to ensure that students had completed all of their required service-learning hours and accompanying assignments. Pre- and post-responses on surveys were then matched by the last four digits of a student personal identification number (i.e., not social security number). Incomplete surveys and surveys without a pre- or post-match (less than 5% of total number of participants) were removed from the sample, leaving a final sample of 119. Responses were then coded following the coding instructions of the instrument, including reverse coding and summed totals.

Data Analysis

Descriptive analyses were conducted to determine general information about the data. The descriptive statistics included measures of cental tendency (e.g., means) and measures of dispersion (e.g., standard deviations) of the pre-test and post-test scores of the variables. To answer the research questions, paired-samples t-tests were calculated to determine overtime changes on each sub-scale measure of the MLOC. Cohen's d (1988) statistic was also calculated for effect sizes between the pre- and post-means on the DVs.

While MANOVA may be used to examine means between samples with multiple DVs simultaneously, it is not ideal when working with those variables whose pairwise correlations are > |.6| or < |.3| (Tabachnick & Fidell, 2007). Pearson correlation coefficients were, therefore, computed to assess the relationship between the DVs. Intercorrelations among the DVs across pre- and post-test measures ranged between -.217 and .594. These results support not using MANOVA as the analytic method.

Results

Descriptives

Participants' scores on the Internal Power subscale decreased by 4.87 points from pre-test (M=31.95) to post-test (M=27.08). Powerful Others scores also increased by 2.13 from pre-test (M=18.26) to post-test (M=20.39). Pre-test Chance scores (M=17.45) increased by 0.97 points over time (M=18.42).

Paired-Samples t-Tests

Paired-samples t-tests (Table 1) reveals a highly significant difference and large practical effect (Cohen's *d*) between the pre- and post-tests scores on the internal DV, $t(118)=8.33$, p = 0.0005, $d = 1.53$. The powerful others DV also showed a very significant overtime changes, $t(118)=-3.15$, p = 0.002, $d = .58$. In contrast, overtime changes on the chance DV were not significant at the .05 level, $t(118)=-1.414$, p = 0.160, $d = .26$.

Table 1
Paired Samples Means and t-Test with Cohen's d (n=119)

	Pre-test *M*	SD	Post-test *M*	SD	Means Diff.	SD	t	df	Sig.	d
Internal	31.95	6.23	27.08	6.14	-4.87	6.38	8.334	118	**.0005	1.53
Chance	17.45	8.16	18.42	8.92	0.98	7.52	-1.414	118	.160	.26
Powerful Others	18.26	8.32	20.39	7.46	2.13	7.36	-3.152	118	*.002	.58

Note. *p < .005, **p < .0005

Discussion

This study investigated first-semester honors postsecondary students' locus of control before and after completing service-learning, linking a course on the "Evolution of Community" to direct volunteerism in struggling schools. Results show that participants' internal locus of control decreased significantly, while external locus of control increased significantly. Although participants' internal locus of control scores were, and remained, higher than their external scores before and after the service-learning intervention, it is important to consider the role that service-learning may play on locus of control given the overtime changes.

Locus of control is interwoven with one's "attribution style." Attribution style determines to which forces an individual attributes success. Weiner (1974) reasoned that the concept of "locus of control" was misleading and, in fact, that locus and control should be considered two distinct dimensions. Weiner held that a person could have an internal or external locus, and yet believe that s/he either was or was not in control. For example, ability and efforts are both internal in their loci, but ability is uncontrollable and effort is controllable. Weiner's point, therefore, is that there actually are two independent dimensions of causality, and that Rotter's theory that individuals' expectations are established and strengthened via reinforcements may be limited in assuming that an internal locus always means that the person also is in control, and that an external locus always means that the person is not in control. Heider (1958) has postulated both personal (internal) and environmental (external) forces affect an individual's outcome expectations. Two factors make up personal force: power and motivation. "Power" refers to abilities, and "motivation" refers to one's intention or effort.

In terms of power or abilities in the current study, honors students arguably enter postsecondary studies with a high set of academic abilities. Their ability to understand the elementary civics material that they were asked to teach to K-5 learners should be high as well. Therefore, their sense of power or ability over the content should result in a high internal locus

of control. However, intertwined in service-learning is also the service activity in which one is engaged. For the honors students, the service comprised traditional teaching activities, or delivery of information by engaging young school-aged children. Such abilities would entail having pedagogical and child development knowledge, which one would not expect matriculating freshmen to habitually possess.

Given that a person enters a situation with expectancies concerning the probable outcomes of his/her behaviors based on past experiences, honors students might have entered the experience with heightened outcome impact expectations as students who grasp content easily or having been students of seasoned, effective teachers. The service-learners' abilities to present the information clearly, handle students in a classroom management situation, keep on schedule to the lesson, and organize information for learners at the different developmental stage might all adversely affect how they perceived their power/abilities in the end. And the fact that service-learners were engaged in underperforming schools should not be discounted, as it adds an additional element to complicate students' experiences and their understandings of these experiences.

This reading of the data parallels previous discussions of university honors' students reduced sense of efficacy following service-learning participation (e.g., Stewart, 2008). Simply put, abilities in service-learning comprise both knowledge of content and service activity. Discomfort in one may lower one's overall perception of his/her ability and ultimate internal control. Further, service implies that some need is being addressed. Sadly, most social issues or needs are likely to be steeped in histories of multilayered systems of inequity (Zinn, 2003). Students' experiences may be their first face-to-face experience with these realities, which in essence bursts their ontological bubble and opens their eyes to a world much more complex than they had experienced or even imagined. They may realize that their intelligence, hard work, and talents are necessary, but not alone sufficient for ultimate solutions. In this case, their sense of internal power would be reduced.

Another element affecting students' sense of power/abilities, and ultimately their internal locus of control, may be the dogmatic nature of the honors service-learning course. The honors service-learning program aimed to reduce any extra pressure and stress on first-year honors students by providing them with prefabricated lessons and logistical support. This external control extended beyond getting students established with service activities and placements. Each week that the course met, time was structured by the course instructors. The classes each began with announcements, followed by a lecture by a guest speaker, and ended with breakouts into small groups led by an honors peer. For assignments, students were provided prompts with identified course readings for each reflective essay. Students were not invited to introduce other materials, experiences, readings outside of those within the controlled course space. And, service-learners were constantly reminded of the strict dress code expectations and scheduled times for chartered buses to the service sites.

An essential consideration for high achieving honors students, in particular, is that they have surely had an academic career filled with messages of success. A less challenging, more comfortable service activity may diminish service-learners' receiving messages that others are unable to perform these particular tasks which would in turn build their personal perceptions of ability (Weiner, 1974).

Related to the inflexibility of the service-learning course, and the second internal locus of control element, is motivation or one's effort toward task. Although honors students are recognized for their high academic abilities, problem solving, creativity, and propensity to be bored when not challenged, these first year service-learners were not provided with

opportunities to select, create, or deviate from the actual service activity. If service-learners similarly read the service-learning course as prescriptive, it does run the risk of alleviating interest and buy-in by a group of students known to be creative and thirsty for leadership positions. Paralleling the issues of power diminution mentioned above, it may be possible that service-learners, upon realizing their limited role in affecting long-term change in their service settings and in their own course, simply go through the motions of a prescribed curriculum even more mindlessly.

Further, the provision of a cookie-cutter curriculum, process, approach, and expected learning outcomes removes a sense of causality from service-learners' involvement. They may see themselves as actors fulfilling a role by directors off-stage, and even internalize the attempt by course designers to lessen their stress as powerful others not seeing them as able. The difficulty for program designers is in striking a balance between trying to help students by taking on some of the burdensome preparatory tasks, and incorporating or retaining those elements that allow for positive personal development. Those programs that reduce the amount of student involvement seem to run the risk of sending a message of assumed incompetence to genuinely capable service-learners.

One difficulty in drawing conclusions from the current study, and arguably service-learning in general, is that researchers of locus of control do not agree whether the construct is a general disposition (Rotter, 1966) or situationally specific (Phares, 1976). They do agree that it reflects outcome expectations and that these outcome expectations are important determinants of achievement and other behaviors (Bandura, 1997). Locations of attributions are key as they are tied to motivation and influence beliefs, emotions, and behavior. Students who believe that they have control over their successes and failures, or a higher internal locus of control, would be expected to engage in tasks, expend effort, and persist to a larger degree more than those who have an external locus of control, and believe that their behaviors are hardly contingent on outcomes. In the case of service learning and civic engagement, a decrease in internal locus of control could arguably result in decreased beliefs, emotions, and behaviors in favor of volunteerism for other community engaged activities. Research shows that the most successful students have a tendency to overestimate the degree to which their own behavior leads to success or failure (Lefcourt, 1976). In fact, students report higher increases in self-confidence and personal efficacy, and are more interested in volunteering in the future, when they have ownership over the planning and implementation of their service-learning projects (Bradley, Eyler, Goldzweig, Juarez, Schlundt, & Tolliver, 2007; Spring, Dietz, & Grimm, 2006).

Implications & Recommendations

Given the findings from this study and the related discussion points above, the following implications and recommendations are offered to honors program administrators and service-learning researchers. First, institutions that require newly matriculated honors students to engage in service-learning or other community-based learning experiences should consider how program design elements will impact students' locus of control. Echoing research on youth voice and positive youth development in particular, program structures and management might consider the level to which they want participants to have a say in their service-learning experiences. Specifically, students may have a greater role in identifying problems, pathways to address these issues, and even how to report their meaning-making from their experiences. While such extemporaneity is difficult with larger classes, prescribed approaches carry a message of normalizing education to students who are used to thinking outside of the box. It is

advised that programs also think strategically about matching these elements to the course theme itself. Whereas the theme of this course was on "community," the general approach to the course seemed top-down and, ironically, could have played a role in the changes in students' locus of control scores.

To better understand the phenomena at work in these programs, it is recommended that future research utilize a mixed-methods design when possible. By adding a qualitative data set, it would increase the opportunity to determine and explain the sources of students' attributions (i.e., effort vs. ability). In addition, longitudinal time series designs would permit researchers to make more definitive statements on how service-learning may impact locus of control over time. Future data may also illustrate how students' internal or external locus of control manifests in terms of civic engagement. Lastly, the addition of a control group would permit more immediate and definitive comparisons between peers of similar ages, abilities, and experiences during their first year at university.

References

Anderson, C.R., & Schneier, C.E. (1978). Locus of control, leader behavior and leader performance among management students. *Academy of Management Journal, 21,* 690-698.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Billig, S. H. (2005). Use research knowledge to advance district-wide service-learning. *District Lessons, 3.* Washington, DC: National Service-Learning Partnership.

Bradley, R., Eyler, J., Goldzweig, I., Juarez, P., Schlundt, D., & Tolliver, D. (2007). Evaluating the impact of peer-to-peer service-learning projects on seat belt use among high school students. In S. Gelmon & S. Billig (Eds.), *Advances in service-learning research: Vol.7. From passion to objectivity: International and cross-disciplinary perspectives on service-learning research* (pp. 89–110). Charlotte, NC: Information Age.

Cason, D., & Gillis, H. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experiential Education, 17*, 40-47.

Cohen, J. (1988). *Statistical power for the behavioral sciences*. Mahwah, NJ: Lawrence Erlbaum Publishers.

Deery, B. (1983). The effect of project adventure on sixth grader's reading and math scores, and its relationship to locus of control. (Doctoral dissertation, Boston College, 1983). *Dissertation Abstracts International, 44*(02), 0435A.

DeVellis, R. F. (2003). *Scale development: Theory and applications, 2nd ed*. Thousand Oaks, CA: Sage Publications.

Drane, D. D. (2001). *The relationship between service-learning and self-reported civic outcomes of college students based on selected demographic variables*. Unpublished Doctoral Dissertation. University of Southern Mississippi.

Freeman, R. W., Anderson, C., Kairey, L., & Hunt, P. F. (1982). Evaluation of Camp Tortuga, a two week children's therapeutic day camp via goal attainment scaling and locus of control. *Children and Youth Services Review*, *4*, 375-388.

Gulliksen, H. (1987). *Theory of mental tests*. Mahwah, NJ: Lawrence Erlbaum Publishers.

Hans, T. (2000). A meta-analysis of the effects of adventure programming on locus of control. *Journal of Contemporary Psychotherapy*, *30*, 33-60.

Hattie, J., Marsh, H. W., Neill, J. T, & Richards, G.E. (1997). Adventure Education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, *67*, 43-87.

Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.

Hersch, P., & Schiebe, K. (1967). Reliability and validity of internal external control as a personality dimension. *Journal of Consulting Psychology, 31*, 609-613.

Hunter, J. & Csikszentmihalyi, M. (2003). The positive psychology of interested adolescents. *Journal of Youth and Adolescence, 32*, 27-35.

Joe, V. (1971). Review of the internal-external control construct as a personality variable. *Psychology Reports, 33*, 301-312.

Lefcourt, H. M. (1966). Belief in personal control: Research and implications. *Journal of Individual Psychology, 22*, 185-195.

Lefcourt, H.M. (1976). *Locus of control: Current trends in theory and research*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Lester, D. (1989). Locus of control, depression and suicidal ideation. *Percept. Motor Skills, 69*, 1102-1104.

Leung, P. W., Salili, F., & Baber, F. M. (1986). Common adolescent problems in Hong Kong: Their relationship with self-esteem, locus of control, intelligence and family environment. *Psychologia: An International Journal of Psychology in the Orient, 29*, 91-101.

Levenson, H. (1974). Activism and powerful others: Distinctions within the concept of internal-external control. *Journal of Personality Assessment, 38*, 376-383.

Levenson, H. (1975). Additional dimensions of internal-external control. *Journal of Social Psychology, 97*, 303-304.

Levenson, H. (1973). Multidimensional locus of control in psychiatric patients. *Journal of Consulting and Clinical Psychology, 41*, 397-404.

Levenson, H. (1973). Parental antecedents of internal, powerful others, and chance locus of control orientations. *Developmental Psychology, 9*, 260-265.

Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H. Lefcourt (Ed.), *Research with the locus of control construct* (pp. 15-63). New York: Academic Press.

Levenson, H., & Miller, J. (1976). Multidimensional locus of control in sociopolitical activists of conservative and liberal ideologies. *Journal of Personality and Social Psychology, 33*, 199-208.

Luckner, J.L. (1989). Altering locus of control of individuals with hearing impairments by outdoor-adventure courses. *Journal of Rehabilitation, 55*(2), 62-67

McCarty, B., & Hazelkorn, M. (2001). Reflection: The key to social-emotional change using service-learning. *Beyond Behavior, 10*(3), 30–35.

McCullough, P., Ashbridge, D. & Pegg, R. (1994). The effect of self-esteem, family structure, locus of control, and career goals on adolescent leadership behavior. *Adolescence*, *29*, 605-611.

Miller, D. T. (1978). Locus of control and ability to tolerate gratification delay: When is it better to be external? *Journal of Research in Personality*, *12*, 49-56.

Mirels, H. (1970). Dimensions of internal versus external control. *Journal of Consulting and Clinical Psychology, 34*, 226-228.

Myers-Lipton, S. J. (1998). Effect of a comprehensive service-learning program on college students' civic responsibility. *Teaching Sociology, 26*, 243-258.

Newbarry, E. H., & Lindsay, J. F. (2000). The impact of social skills training and challenge course training on locus of control of youth from residential care. *Journal of Experiential Education, 23*(1) p. 39-42.

Nowicki, S., & Duke, M. (1983). The Nowicki-Strickland life-span locus of control scales: Contruct validation. *Research with the Locus of Control Construct, 2*, 9-43.

Nowicki, S., & Barnes, J. (1973). Effects of a structured camp experience on locus of control orientation. *The Journal of Genetic Psychology*, *122*, 247-252.

Nunn, G. D. (1987). Concurrent validity between the Nowicki-Strickland locus of control scale and attitudes towards home, school, and peers. *Educational and Psychological Measurement, 47*, 1087-1089.

Nunn, G. D. (1988). Concurrent validity between the Nowicki-Strickland locus of control scale and the state-trait anxiety inventory for children. *Educational and Psychological Measurement, 48*, 435-438.

Phares, E. J. (1976). *Locus of control in personality*. Morristown, NJ: General Learning Press.

Reid, D. W., & Ware, E. E. (1973). Multidimensionality of internal external control: Implications for past and future research. *Canadian Journal of Behavioral Science, 5,* 264-271.

Robinson, J. P., & Shaver, P. R. (1973). *Measures of social psychological attitudes.* Ann Arbor, MI: Institute for Social Research.

Rotter, J. B. (1954). *Social learning and clinical psychology.* Englewood Cliffs, NJ: Prentice-Hall.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 609.

Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting and Clinical Psychology, 43,* 56-67.

Rotter, J. B., & Hochreich, D. J. (1975). *Personality.* Glenview, IL: Scott, Forseman and Company.

Rotter, J., B., Seeman, M., & Linerant, S. (1962). Internal versus external control of reinforcement: A major variable in behavior theory. In N. F. Washbourne (Ed.), *Decisions, values and groups* (pp. 473-516). London: Pergamon.

Rotter, J., Chance, J., & Phares, E. (1972). *Application of social learning theory of personality.* New York: Holt, Rinehart, Winston.

Seeman, M., & Evans, J. W. (1962). Alienation and learning in a hospital settings. *American Sociological Review, 27*, 772-783.

Seeman, M. (1963). Alienation and social learning in a reformatory. *American Journal of Sociology, 69*, 270-284.

Seigel, L. T., & Griffin, N. J. (1984). Correlates of depressive symptoms in adolescents. *Journal of Youth & Adolescence, 13*, 475-487.

Spring, K, Dietz, N., & Grimm, R. (2006, March). *Educating for active citizenship: Service-learning, school-based service and youth civic engagement*. Washington, DC: Corporation for National & Community Service.

Stevick, R. A., & Addleman, J. A. (1995). Effects of short-term volunteer experience on self-perception and prosocial behavior. *The Journal of Social Psychology, 135*(5), 663-665.

Stewart, T. (2008). Community service self-efficacy and first-year undergraduate honors service-learning. In M. Bowdon, B. Holland, & S. Billig (Eds.), *Scholarship for sustaining service-learning and civic engagement: Research and the k-20 continuum* (pp. 29-53). Charlotte, NC: Information Age Publishing.

Tabachnick, B., & Fidell, L. (2010). *Using multivariate statistics, 5th ed*. New York, NY: Allyn & Bacon.

Tolor, A., & Reznikoff, M. (1967). Relation between insight, repression-sensitization, internal external control, and death anxiety. *Journal of Abnormal Psychology, 72*, 426-430.

Topol, P., & Reznikoff, M. (1982). Perceived peer and family relationships, hopelessness and locus of control as factors in adolescent suicide attempts. *Suicide Life-Threatening Behavior, 12*, 141-151.

Weiner, B. (Ed.). (1974). *Achievement motivation and attribution theory*. Morristown, NJ: General Learning Press.

Weiner, B. (1992). *Human motivation: Metaphors, theories and research*. Newbury Park, CA: SAGE Publications.

Zinn, H. (2003). *A people's history of the United States: 1492-present.* New York: Perennial Classics.

Author

Trae Stewart, Ph.D., is an associate professor in the Education & Community Leadership Program at Texas State University. Dr. Stewart can be contacted at traestewart@txstate.edu or via www.traestewart.com.