
SHIFTS IN PERCEPTIONS, ABILITIES, AND ATTITUDES FROM TRAVEL-BASED LEARNING

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ABSTRACT

Since 2000, the Iowa State University Bachelor of Landscape Architecture degree program has featured the “Savanna” traveling program, conducted for students in the first year of their professional degree program. The traveling program typically includes six weeks of over-the-road field study during the course of a sixteen-week semester. Faculty members designed the program as an innovative experiential learning experience, integrating design pedagogies previously utilized within traditional lecture- and studio-based courses with the sort of field-study pedagogies previously utilized during short-duration field trips for traditional studio courses.

This paper summarizes the results from the initial year of a planned longitudinal study that examines the effect of the program on student perceptions and attitudes regarding their understanding of the profession, professional abilities, expectations for the program, cultural awareness, comfort level with travel-based learning, and social connectedness with their program peers. The general sense among faculty is that the Savanna experience is transformative for students in all these areas—based on 23 years of observation, on informal “exit survey” assessments conducted annually by the department chair, on feedback from alumni surveys (Klein-Hewett and Gansemer-Topf, 2022), and from assessments of current students conducted by the program’s professional academic advisor (Cooper, 2023).

This new study examines the actual self-reported shifts in student perceptions and attitudes by surveying Savanna students just before and again just after the completion of the six weeks of travel during Fall semester 2023. The study’s significance relates to its usefulness in informing the continuous improvement of our traveling program, but also its usefulness for other environmental design programs that consider the possibility of incorporating “longer-tour” field study pedagogies as exercises in experiential learning.

Keywords

Design pedagogy, travel-based learning, experiential learning

1 INTRODUCTION

This paper summarizes the results from the initial year of a planned longitudinal study that examines the effect of Iowa State University's (ISU) Savanna Traveling Program on student perceptions and attitudes regarding their understanding of the profession, professional abilities, expectations for the program, cultural awareness, comfort level with travel-based learning, and social connectedness with their program peers. The longitudinal study is an initial step that the department is taking to investigate the effects and outcomes of the Savanna Traveling Program.

1.1 The Savanna Traveling program

The Savanna Traveling Program is an innovative travel-based suite of interconnected courses for students entering the Bachelor of Landscape Architecture (BLA) degree program (following their first-year Design Core). Conducted since 2000, the program utilizes experiential teaching/learning methods as a method for introducing students to a variety of urban, suburban, rural, and wilderness landscapes that embody the culture, history, design, construction, and natural processes/ecologies of the living world. The program includes 16 credits comprised of five separate but interwoven courses taught by four collaborating faculty members (three of whom travel with the students during the excursions).

1.2 Research objectives

The purpose of the study is a preliminary stage of self-assessment that can inform the pedagogical, logistical, and programmatic design of the travel experiences. As a longitudinal study, it can also potentially inform efforts to adapt to general changes or trends among the student cohort as experiential learners and as participants in extended field studies. We will be repeating this survey for future Savanna Programs each fall, but will also be considering possible modifications to the survey instrument as we reflect on its effectiveness in drawing out meaningful responses and data. It is important to note that this study, as an initial step in self-assessment, is limited to understanding a particular range of student perceptions. We intend to eventually undertake other types of studies—such as outcomes assessments for particular Savanna Program pedagogical strategies—but also we will be undertaking comprehensive studies of the traveling program that tie its design to contemporary pedagogical theories such as PBL+ (Project-Based Learning, Zhu and Wang 2023), “Lifewide” Learning (Liang et al 2015), “Destination Curiosity” (Davari and Jang, 2024), and “Sticky Learning” (Brown et al 2014). Further Savanna Program scholarship will also include comprehensive descriptive publications that will illustrate the program (projects, logistics, best on-the-road pedagogical practices, integration of diverse coursework, etc.) in order to inform the design and operation of a future program at another institution. At present, there are no directly comparable landscape architecture-focused undergraduate travel programs of anything near this scope, but further investigation may lead to comparative studies with programs that feature some similarities with the Savanna Program.

This study examines the self-reported shifts in student perceptions and attitudes by surveying second-year Savanna students just before and again after the completion of the six weeks of travel during the 2023 Fall semester. The ISU Department of Landscape Architecture conducted focus-group studies with the prior-year (2022) Savanna students in April 2023, to develop appropriate questions for this online survey of the 2023 Savanna students. The list of survey questions were synthesized by comparing student-reported generalized outcomes (the focus groups) with intended outcomes. The research team (this article's authors) considered student comments/feedback during the several focus-group sessions—student concerns, student perceptions of positive and negative experiences, etc.—but also considered established learning outcomes for the five Savanna Program courses that are published in course syllabi. The initial online survey was conducted in early September 2023, and the second online survey of the same student cohort was conducted in January 2024. We expected to find significant shifts in perceptions and attitudes; the interpretation of these before-and-after shifts is part of our ongoing BLA program learning outcomes assessment.

2 METHODS

2.1 Demographic information: survey participants

According to course registration information, the 2023 Savanna group consists of 20 females and 17 males. Sixteen students (10 female, 4 male, 2 non-disclosed) voluntarily participated in the pre-departure

survey (43.2% response rate), which was conducted two weeks into the semester, about a week before departure for the first of two three-week excursions. Twenty-three students (12 female, 10 male, 1 non-disclosed) voluntarily participated in the post-travel survey, conducted at the beginning of the following semester, about two months after the return from the second excursion (62.2% response rate). Of 39 participants from both surveys (note that it is likely that several of the participants completed both surveys), 41% ($n=16$) came to ISU from the state of Iowa, and 94.8% ($n=37$) identified as White/Caucasian.

Note: for all questions, the N for the pre-departure survey is 16, and the N for the post-departure survey is 23. The total number of students eligible for participation for either part of the voluntary survey was 37.

3 RESULTS

3.1 Socialization

The most notable changes between pre- and post-surveys are the much larger number of students who consider nine or more classmates to be close friends (two students vs. eight students), as well as the large increase in the feelings of connectivity among the cohort. This result was expected based on observations from previous Savanna years, as many students tend to bond and sort themselves into affinity groups during free time in campgrounds, in cities, and even on long van rides (Table 1).

Table 1: Close friendships among Savanna cohort & connectivity

I have nine or more good friends among my Savanna cohort	
Pre-departure	Post-travels
14.3%	36.4% (+20.1%)
I feel connected with my Savanna classmates.	
Pre-departure	Post-travels
35.7%	86.4% (+50.7%)

3.2 Professional skills/abilities

A large number (80%) of students expressed confidence with hand media before the Savanna trips, due likely to their first-year Design Core classes which focus on hand-drawing techniques. However, the 15% jump in confidence post-trip suggests the Savanna excursions, and specifically their focus on daily use of sketchbooks for drawing, observations, and field notes, allowed the non-confident students to catch up to their peers. Although students utilize some digital tools during the home weeks of the Savanna semester, these tools are not typically employed on the road, so there is no expectation of a similar gain in confidence. The most notable gain in confidence is plant ID, which reflects the intense focus on becoming familiar with a variety of plants throughout the semester via field study (Table 2).

Table 2: Comfort level with skills/abilities: use of media, plant taxonomy

I am confident in my hand-drawing skills	
Pre-departure	Post-travels
80%	95.5% (+15%)
I am confident using digital media (e.g. Adobe Suite, AutoCAD, Rhino, etc.)	
Pre-departure	Post-travels
60%	59.1% (-0.9%)
I am confident in identifying plants	
Pre-departure	Post-travels
33.3%	77.3% (+40%)
Degree of confidence	Mean value (x/4.0)
Hand-drawing skills	Pre- 3.2 Post- 3.3 (+0.1)
Digital media	2.5 2.6 (+0.1)
Identifying plants	2.1 3.0 (+0.9)

3.3 Traveling skills/abilities

The only notable shifts among the first four questions are a boosted confidence in collaborating with unfamiliar peers, which probably results from the frequent work with assigned teams during travel (as opposed to voluntary teams), and comfort with traveling in groups, which likely indicates that many students had no prior experience with large-group travels.

The responses to the latter four questions indicate that most students were already interested in personal travel and travel-based learning and that most students intend to take advantage of future opportunities. The small decrease in curiosity about other cultures is interesting and is something to investigate more closely in future surveys. The differences in sample sizes may explain that drop in curiosity, but it could reflect some degree of discomfort among students who spent time on Savanna within parts of the country where different cultural practices prevail (e.g., the Pine Ridge Indian Reservation and the Mississippi Delta region) (Table 3).

Table 3: Comfort level with skills/abilities: traveling and collaborating

I am confident collaborating with people whom I know		
Pre-departure	Post-travels	
100%	95.5% (-4.5%)	
I am confident collaborating with people whom I don't know		
Pre-departure	Post-travels	
73.3%	90.9% (+17.6%)	
I am confident traveling by myself		
Pre-departure	Post-travels	
93.3%	90.9% (-2.4%)	
I am confident traveling with others		
Pre-departure	Post-travels	
86.7%	100% (13.3%)	
Degree of confidence	Mean value (x/4.0)	
	Pre-	Post-
Collaborating with people whom I know	3.8	3.7 (-0.1)
Collaborating with people whom I don't know	2.9	3.2 (+0.3)
Traveling by myself	3.5	3.5 (0)
Traveling with others	3.2	3.8 (+0.6)
I am curious about engaging with other cultures		
Pre-departure	Post-travels	
100%	90.9% (-9.1%)	
I am interested in initiating or participating in future personal travel experiences		
Pre-departure	Post-travels	
92.9%	95.5% (+2.6%)	
I am interested in participating in future educational travel experiences		
Pre-departure	Post-travels	
92.9%	90.9% (-2.0%)	
I am a skilled traveler		
Pre-departure	Post-travels	
92.9%	95.5% (+2.6%)	

3.4 Landscape types

There were some measurable shifts in mean scores for all three landscape types, but the greatest shifts in familiarity were with urban and natural landscapes. These shifts may reflect the fact that overnight stays on the Savanna program are often in cities, parks, and wilderness areas. Rural landscapes are most often experienced only through van windows while driving (Table 4).

Table 4: Familiarity with general landscape types

I am familiar with natural landscapes		
Pre-departure	Post-travels	
92.9%	100% (+7.1%)	
I am familiar with rural landscapes		
Pre-departure	Post-travels	
100%	100% (0)	
I am familiar with urban landscapes		
Pre-departure	Post-travels	
100%	100% (0)	
Degree of familiarity	Mean value (x/4.0)	
	Pre-	Post-
Urban landscapes	3.5	3.8 (+0.3)
Rural landscapes	3.6	3.7 (+0.1)
Natural landscapes	3.3	3.7 (+0.4)

3.5 Elements of landscape architecture

Significant shifts toward greater familiarity for each category appeared for each of the binary questions (familiar/not familiar), but the degree of familiarity question (scored as x/4.0) indicates an insignificant mean-score increase of familiarity with common landscape materials. This could suggest a need to diversify or intensify the study and observation of these materials in course content. The low mean score for familiarity with hydrology/stormwater suggests that this is an aspect of the landscape that students have relatively little awareness of before beginning the program (Table 5).

Table 5: Familiarity with elements of landscape architecture

I am familiar with native plants		
Pre-departure	Post-travels	
53.3%	81.8% (+28.5%)	
I am familiar with common landscape materials (e.g. pavers, concrete, soil mixes)		
Pre-departure	Post-travels	
86.7%	95.5% (+8.8%)	
I am familiar with non-native plants		
Pre-departure	Post-travels	
46.7%	63.6% (+16.9%)	
I am familiar with topography and landforms		
Pre-departure	Post-travels	
78.6%	95.5% (+16.9%)	
I am familiar with hydrology and stormwater management		
Pre-departure	Post-travels	
21.4%	59.1% (+37.7%)	
I am familiar with cultural and historical landscapes		
Pre-departure	Post-travels	
57.1%	86.4% (+29.3%)	
Degree of familiarity: elements of landscapes		
	Mean value (x/4.0)	
	Pre-	Post-
native plants	2.53	3.23 (+0.70)
non-native plants	2.33	2.77 (+0.44)
common landscape materials	3.40	3.45 (+0.05)
topography and landforms	3.14	3.32 (+0.18)
hydrology and stormwater management	2.00	2.82 (+0.82)
cultural and historical landscapes	2.79	3.18 (+0.39)

4 DISCUSSION

There are six primary findings or implications of the survey results. None of the findings were surprising to Savanna Program instructors, but it is useful to gain student perspectives that comport with or reinforce the instructors' anecdotal observations. In the following itemization, we characterize the basic collective response from surveys, followed by Savanna Program instructor observations that we recorded during our interpretation of survey responses.

First, the travel experiences on Savanna affect overall socialization and establish a sense of community/sense of connectedness among students. This finding comports with instructors' perceptions; we always observe a remarkable and obvious enhancement of social connectedness among students following the first of two excursions, when they operate as teams on studio-based projects accomplished during the "home" weeks of the semester. We also have noted that for most students, social connections among classmates seem to persist for the entirety of the remainder of their 5-year professional program.

Second, many students seem to overcome reluctance to work with or travel with unfamiliar peers because of assigned project teams and because of occasional mixing up passengers in vans (something instructors enforce). Again, instructor observations tend to confirm that many students have developed teamwork skills that come to bear in subsequent semesters, demonstrating a general willingness to engage with anyone among their peer group to accomplish team-based tasks (site analysis for project sites [Figure 1], negotiated design process work for group projects, etc.).



Figure 1: "Roadscape" teamwork site assessment at Lawrence Halprin's Baba Yar Memorial, Denver Colorado

Third, intensive daily use of sketchbooks works to facilitate drawing skill development for less-skilful students. The hand-drawing confidence enhancement for these students seems to have a significant effect on their ability to engage in conceptual explorations for in-studio projects that follow the excursions (sketchbooks are used for note-taking throughout the semester, but are used most frequently during travel weeks [Figure 2]).



Figure 2: Sketchbooks utilized for sectional study of alpine lake landscape (Cub Lake Trail, Rocky Mountain National Park)

Fourth, field study has a strong effect on effective teaching/learning about plants and plant communities, particularly native plants and ecosystems. The instructor for the Savanna Program plants/plant ecosystems course (one of the co-authors) has observed each year that many students become intellectually energized by the study of plants and plant communities within distant/often unfamiliar ecosystems that the students encounter during travels—for example, students being able to apply principles of plant community relationships and ecosystem processes (learned initially at “home” in Iowa) within the Black Hills [Figure 3], the Rocky Mountains, the Mississippi Delta, or the Texas coastal plain.



Figure 3: Shortgrass prairie plant community study (Needles Highway, Custer State Park, South Dakota)

Fifth, students enter the program with scant awareness of hydrology and stormwater systems, and field study facilitates significant awareness-building. As with the study of plant communities, instructors are able to demonstrate principles of stormwater design in diverse settings within distant eco-regions, particularly within innovative works of contemporary landscape architecture (for example, the recently-constructed Confluence Park in San Antonio Texas [Figure 4]).



Figure 4: Innovative stormwater systems and contemporary landscape material use in Confluence Park, San Antonio, Texas

Sixth, instructors should consider intensifying or enhancing the focus on landscape materials and cultural/historical dimensions of landscapes. Extensive travel affords the opportunity to study innovative use of landscape materials in contemporary works, such as The Gathering Place in Tulsa, Oklahoma, and Citygarden in St. Louis, or the historic use of materials in places such as Guernsey State Park in Wyoming and Chickasaw National Recreation Area in Sulphur, Oklahoma [Figure 5]. It is apparent that student engagement with such places through exercises such as measured detail drawings or on-site historical-context lectures has a strong effect on students understanding the relevance of particular built works.



Figure 5: Lecture on CCC landscapes and architecture at the Bromide Pavilion in Chickasaw National Recreation Area, Sulphur Oklahoma

5 CONCLUSION

The inaugural longitudinal assessments of the Savanna traveling program (focus groups and surveys) provided valuable insight for shaping future assessment tools. The focus group data (not reported upon in this paper), while difficult to quantify, is rich and diverse; it helped determine which topics to address in the subsequent survey. It also proved that students enjoy the opportunity to converse in smallish groups with a facilitator about their education (focus groups numbered about nine students per group); voluntary participation in the focus groups was well over 80%.

However, students seem much less willing to spend time on solo efforts to complete an online survey. Fewer than half participated in the pre-departure survey, and several of those students who began the survey did not complete it. One hypothesis for this low response rate is that the students were not yet “socialized” as a collective group before travel, and perhaps there was less incentive to make an effort to contribute to this faculty-led assessment project. Participation increased in the post-travel survey, suggesting a greater sense of connectedness among students and even perhaps a stronger connection between students and the department. Participation incentives are being considered for next year’s survey to encourage higher participation rates in both pre- and post-surveys.

Several open-ended questions were asked at the end of both surveys that sought to assess students’ understanding of the landscape architectural profession. The data generated by these open-ended questions was ambiguous and difficult to process/tabulate which is why that data is not included in this paper. In next year’s survey, the question formats and language will be revised to hopefully solicit clearer results.

Finally, the demographic questions lacked the specificity needed to clearly understand how students of diverse backgrounds might be affected differently by their Savanna travel experiences. Future surveys will include better demographic variables and will include questions that seek to shed light on the diversity of experiences.

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