The Tale of Three Campuses

A Case Study in Outdoor Campus Assessment

At an anecdotal level, it is obvious that a visually appealing campus environment is related to successful student recruitment, satisfaction, and persistence. Because a college education is abstract, marketing often involves "show[ing] evidence of what a college education experience will look like" (Anctil 2008), which often translates to a reliance on images of the campus environment. Images of campus have long been used to recruit students and are featured on university websites, advertisements, and in campus viewbooks.

In a study for APPA's Center for Facilities Research (CFaR), Cain and Reynolds (2006a; 2006b) linked the quality of campus facilities and the attractiveness of campus to college choice among their study's participants but also noted that facilities may not always be the primary motivation. Further, the physical campus environment can impact student feelings of safety and inclusion, their level of involvement in

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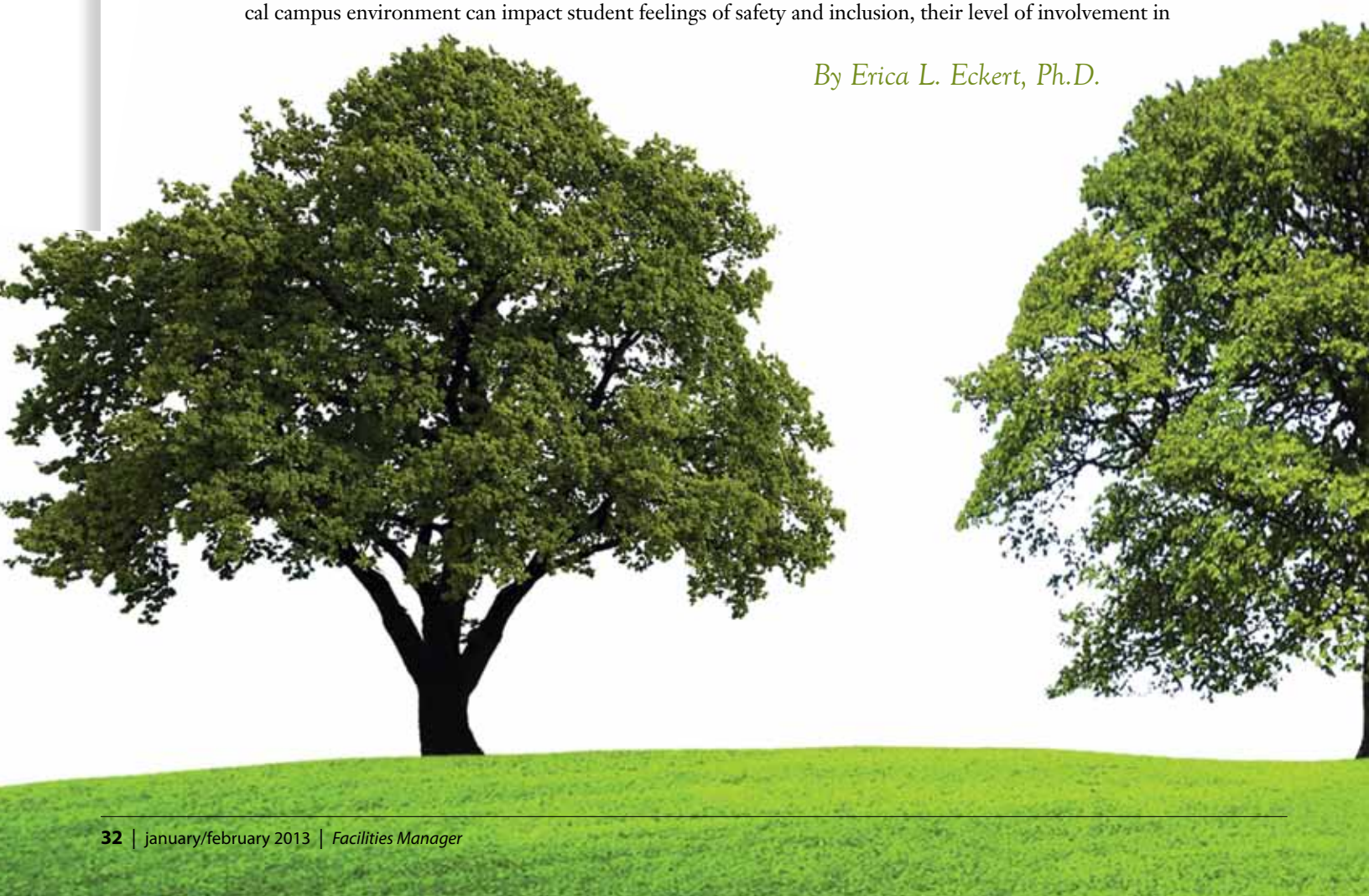

campus life, and their sense of community on campus (Strange & Banning 2000).

The importance of the campus environment is clear, but how does an institution know how their campus environment is being perceived? The answer is, quite simply, assessment—and that will be the focus of the remainder of this piece.

The data provided here were collected as part of a doctoral dissertation, completed by the author in 2012. The results for three of the eight participating institutions will be detailed as a case study on how a campus planning unit could use an instrument like the Outdoor Physical Campus Assessment to engage in self-study to identify areas of strength and areas for improvement. The campuses presented (with identities removed) in this article were selected for their diverse campus settings and features. The full dissertation is available through APPA's Center for Facilities Research website.

ATTRACTIVENESS, AMOUNT, AND IMPORTANCE RESULTS: DASHBOARDS

The survey instrument used in the study comprised element-based questions drawn from the work of Richard Dober (1992) and others to measure student satisfaction with the outdoor campus environment, along with the importance students attributed to the outdoor campus environment. The survey also included items on wayfinding and conceptual elements related to campus ecology literature. During the process of instrument development, intensive validation procedures were utilized (for a more complete discussion, see original work on CFaR website). A total of 1,710 participants across eight public universities in Ohio responded to the survey between September and November of 2011. Results of the validity and reliability analysis indicated that the Outdoor Physical Campus Assessment collected valid and reliable student perception data for the field test administration.

CAMPUS PROFILES

Campus 1 is located in a rural area and well-known for its beauty and cohesive red-brick buildings. This institution has a long history and has been careful to blend new architecture with the older, prevailing architectural style. The area is replete with

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Primary Element Scale Information:

Satisfaction Scale: 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Somewhat Dissatisfied, 4 = Neutral, 5 = Somewhat Satisfied, 6 = Satisfied, 7 = Very Satisfied

Importance Scale: 1 = Very Unimportant, 2 = Unimportant, 3 = Somewhat Unimportant, 4 = Neutral, 5 = Somewhat Important, 6 = Important, 7 = Very Important

Figures 1-3 Stoplight Dashboard Color Ranges:
Green: *Important* to *Very Satisfied/Important*
Yellow: *Somewhat Satisfied/Important* to *Satisfied/Important*
Red: *Neutral* to *Somewhat Satisfied/Important*
Black: *Neutral*

Figure 1: Attractiveness/Importance and Amount Importance Dashboard, Campus 1

Campus 1

Attractiveness + Importance Measures				
Description	Attractiveness Mean		Importance Mean	
Trees	6.53	🟢	6.30	🟢
Green Space	6.41	🟢	6.27	🟢
Landscaping	6.22	🟢	6.06	🟢
Building Exteriors	6.07	🟢	6.08	🟢
Campus Entrances	5.95	🟡	5.75	🟡
Walkways	5.89	🟡	6.45	🟢
Formal Meeting Space	5.72	🟡	5.72	🟡
Informal Meeting Space	5.62	🟡	5.92	🟡
Benches/Seating	5.55	🟡	5.96	🟡
Lighting	5.44	🟡	6.48	🟢
Statues and Artwork	5.37	🟡	5.42	🟡
Trash Receptacles	5.33	🟡	6.11	🟢
Water Features	5.24	🟡	5.40	🟡
Recycling Bins	5.24	🟡	6.08	🟢
Cigarette Disposal	4.59	🔴	5.59	🟡

Amount + Importance Measures				
Description	Amount Mean		Importance Mean	
Trees	6.43	🟢	6.30	🟢
Green Space	6.32	🟢	6.27	🟢
Landscaping	6.15	🟢	6.06	🟢
Walkways	6.14	🟢	6.45	🟢
Benches/Seating	5.55	🟡	5.96	🟡
Signage	5.54	🟡	5.99	🟡
Formal Meeting Space	5.51	🟡	5.72	🟡
Informal Meeting Space	5.51	🟡	5.92	🟡
Trash Receptacles	5.40	🟡	6.11	🟢
Lighting	5.40	🟡	6.48	🟢
Statues and Artwork	5.32	🟡	5.42	🟡
Recycling Bins	5.18	🟡	6.08	🟢
Water Features	5.03	🟡	5.40	🟡
Cigarette Disposal	4.76	🔴	5.59	🟡
Parking	4.06	🔴	6.21	🟢

trees, hills, and venerable details. The pedestrian is hard-pressed to leave the space without being in some way impressed by their experience.

Campus 2 is embedded in an urban area, buzzing with activity. This densely built campus is a mixture of new and old; the new buildings are cutting-edge with a fresh and modern look, while the older structures patiently wait renovation. Despite the urban location, this institution has infused its spaces with trees and bold landscaping as a means to provide a sense of oasis within the boundaries of campus.

Campus 3 is nestled in the suburbs, approximately 40 minutes from the nearest metropolitan area. The campus is a mixture of eclectic buildings surrounded by well-balanced grassy fields and hardscaping. It is neither completely green nor dense with buildings. Trees are well-placed throughout campus, often lining walks, to provide wind-screening and scenery for the pedestrian experience.

GRADING THE ELEMENTS OF THE OUTDOOR CAMPUS ENVIRONMENT

The Outdoor Physical Campus Assessment asked students to rate their satisfaction with the attractiveness and amount of elements of the campus environment on a scale of 1 to 7, (figures 1–3). Participants were also asked to rate how important an element was on a similar seven-point scale that allows a campus the

Figure 2: Attractiveness/Importance and Amount Importance Dashboard, Campus 2

Campus 2

Attractiveness + Importance Measures		
Description	Attractiveness Mean	Importance Mean
Landscaping	5.71	5.81
Trees	5.60	5.88
Green Space	5.60	5.91
Walkways	5.44	6.35
Campus Entrances	5.23	5.49
Benches/Seating	5.18	5.81
Statues and Artwork	5.08	5.05
Building Exteriors	5.05	5.61
Lighting	5.01	6.40
Informal Meeting Space	4.98	5.72
Trash Receptacles	4.97	6.09
Formal Meeting Space	4.95	5.46
Recycling Bins	4.76	6.02
Water Features	4.58	5.27
Cigarette Disposal	4.34	5.16

Amount + Importance Measures		
Description	Amount Mean	Importance Mean
Walkways	5.58	6.35
Landscaping	5.48	5.81
Trees	5.30	5.88
Green Space	5.23	5.91
Trash Receptacles	5.09	6.09
Signage	5.06	5.95
Benches/Seating	5.01	5.81
Lighting	4.96	6.40
Informal Meeting Space	4.92	5.72
Statues and Artwork	4.89	5.05
Formal Meeting Space	4.82	5.46
Recycling Bins	4.61	6.02
Cigarette Disposal	4.53	5.16
Water Features	4.41	5.27
Parking	3.62	6.54

Figure 3: Attractiveness/Importance and Amount Importance Dashboard, Campus 3

Campus 3

Attractiveness + Importance Measures		
Description	Attractiveness Mean	Importance Mean
Trees	5.77	6.14
Green Space	5.64	6.01
Landscaping	5.61	5.92
Walkways	5.19	6.25
Benches/Seating	5.13	5.82
Trash Receptacles	5.05	5.98
Recycling Bins	5.02	6.05
Building Exteriors	4.93	5.86
Informal Meeting Space	4.93	5.69
Lighting	4.92	6.16
Campus Entrances	4.87	5.41
Statues and Artwork	4.75	5.16
Formal Meeting Space	4.71	5.51
Cigarette Disposal	4.41	5.31
Water Features	3.99	5.15

Amount + Importance Measures		
Description	Amount Mean	Importance Mean
Walkways	5.57	6.25
Trees	5.53	6.14
Landscaping	5.49	5.92
Green Space	5.42	6.01
Trash Receptacles	5.18	5.98
Recycling Bins	5.07	6.05
Signage	4.88	5.94
Benches/Seating	4.87	5.82
Lighting	4.81	6.16
Informal Meeting Space	4.80	5.69
Statues and Artwork	4.68	5.16
Cigarette Disposal	4.66	5.31
Formal Meeting Space	4.52	5.51
Water Features	3.97	5.15
Parking	3.06	6.30

ability to not only see how happy students are with an element, but also how much it matters to them in general.

When compiling assessment data, using a dashboard-type layout can help you conduct visual evaluation of your results. Although the use of dashboards emulating stoplights is at best a crude measure, it provides a way to organize information and to weigh student satisfaction against the importance attributed to an element. Using bar graphs to map responses to questions is another helpful way to evaluate data, and an example using wayfinding questions will be outlined later in this piece.

As Figure 1 demonstrates, students at Campus 1 (the rural campus with myriad trees and cohesive architecture) were satisfied with the attractiveness of trees, green space, landscaping, and the building exteriors. They were less satisfied with the attractiveness of statues and artwork, water features, and trash, recycling, and cigarette disposal receptacles, although the item means were still in the *somewhat satisfied* to *neutral* range. Presented alongside the attractiveness mean, the importance mean provides a sense of how important an element was to students at that campus; for example, lighting was rated as more important (6.48) than it was attractive (5.44) as was the case for walkways, trash receptacles, and recycling bins.

Students at Campus 1 (the rural campus) reported high levels of satisfaction with the amount of trees, green space, landscaping, and walkways, and lower levels of satisfaction with the amount of statues and artwork, recycling bins, water features, cigarette disposal, and parking, with responses ranging from *somewhat satisfied* to *neutral*. As with the attractiveness questions, the importance responses are included for a more complete picture; parking (rated *neutral* in terms of amount) was rated as *important*. Additionally, students at Campus 1 reported lower levels of satisfaction with the amount of trash receptacles, lighting, recycling bins, and parking while rating them as *important*.

Students at Campus 2 (the urban campus) were generally satisfied with the attractiveness of their surroundings, as Figure 2 demonstrates. The students at Campus 2 were more satisfied with landscaping, trees, and green space, but were comparatively less satisfied with meeting space, recycling, trash and cigarette disposal receptacles, and water features. When considering the items of greatest importance, Campus 2 had only moderate satisfaction (approaching neutrality) with walkways, lighting, trash, and recycling receptacles. The data presented in Figure 2 might lead a campus planner to consider targeting these lower-satisfaction, higher-importance items for investment.

Figure 2 also presents the average respondent satisfaction with the amount of elements for Campus 2. Students were most satisfied with the amount of walkways, landscaping and trees. Several elements (walkways, trash receptacles, lighting, recycling bins, and parking) were rated as important (closer to *very important*, in the case of parking) but student satisfaction with the amount of the elements was more moderate.

Students at Campus 3 (the suburban campus) rated the attractiveness trees, green space, and landscaping was most satisfying, and like other campuses, meeting space, and cigarette disposal receptacles were rated as less satisfying. Using the stoplight motif, however, one can observe the spread of satisfaction between campuses (with Campus 1 being most satisfying). Also apparent in Figure 3 are the five items rated *important* (but only moderately satisfying): trees, green space, walkways, recycling bins, and lighting.

A majority of the elements at Campus 3 (presented in Figure 3) were between *somewhat satisfying* and *neutral*, which is denoted by the majority of red and black icons. Nearly all elements were rated as more important than they were satisfying (in terms of amount). Most notably, there was a large spread between parking (*important* to *very important*, but the amount was *somewhat dissatisfying*) and water features (amount satisfaction *neutral* and *somewhat important*).

WAYFINDING ON CAMPUS: DASHBOARD GRAPHS

The instrument developed for the initial study contained items on a variety of topics, including wayfinding. Three items were included in the survey instrument to allow campus planners to consider how their campuses are being perceived:

1. How would you rate your familiarity with the layout (where buildings are located how to get from one location to another) on campus at [insert university name]?
2. How difficult was it to become familiar with the layout (building locations) on [insert university name]'s campus?
3. How would you rate your ability to provide a lost student or parent with directions to a specific location on the [insert university name]'s campus?

Figure 4 details the wayfinding results for Campus 1. Based on the results, it is clear students were familiar with Campus 1, but the distribution for the difficulty in learning campus was flat. No students reported the campus being *very difficult* to learn, but a fairly large number felt the campus was at least *somewhat difficult* or *difficult* to learn. A majority of students at Campus 1 felt they had an *excellent* or *good* ability to provide directions. Taken together, it appears as though learning campus was not an overwhelming challenge, and students were mostly comfortable providing directions—a good sign for wayfinding.

Contrast this with Figure 5 for Campus 2—the distribution for familiarity with campus was unsurprising, the distribution for difficulty in learning campus was bell-shaped, and the ability to provide directions had a similar pattern. This implies that the wayfinding efforts are reaching the middle of the population, although fewer students felt that they had an *excellent* ability to provide directions. Given the number of students

Figure 4: Wayfinding Dashboard, Campus 1

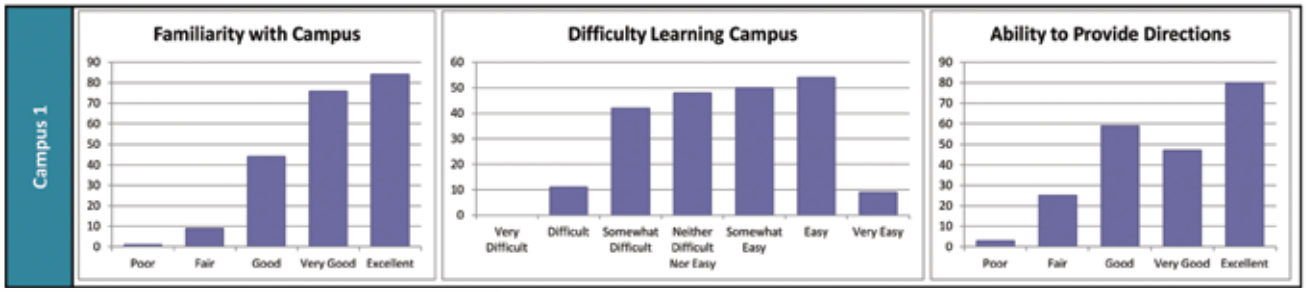


Figure : Wayfinding Dashboard, Campus 2

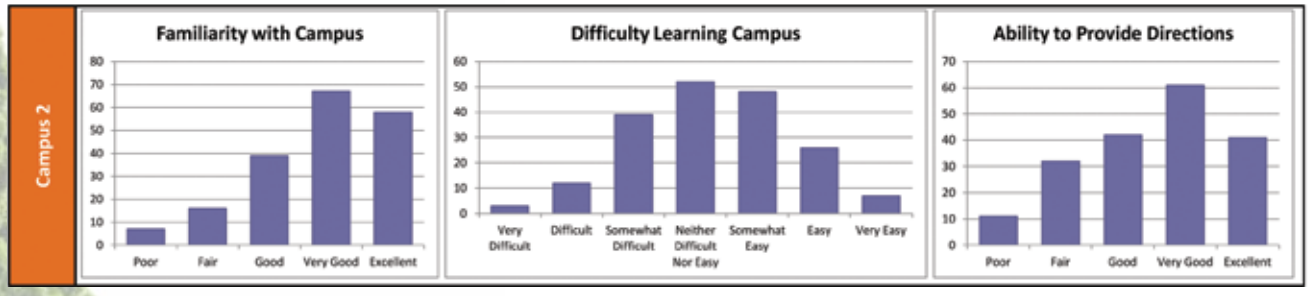
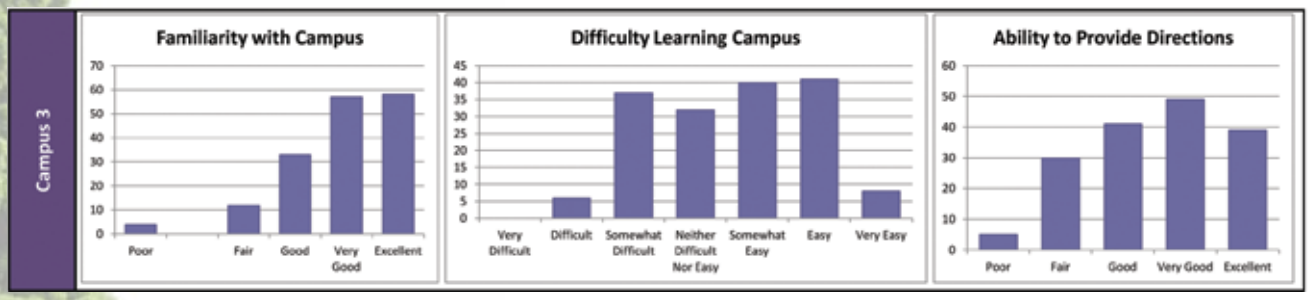


Figure 6: Wayfinding Dashboard, Campus 3



who feel that they know campus well, this may imply that signage or landmarks could be enhanced to assist newcomers to campus.

Finally, the results for Campus 3 are outlined; a majority of students felt that they had *very good* or *excellent* familiarity with campus, but as with Campus 1, very few students were on the extremes when considering how difficult it was to learn the campus layout. A large number (approximately 23%) reported that learning campus was *somewhat difficult*. The results for this campus are more mixed; students are familiar with campus, but like Campus 2, there is a population that is less confident directing lost persons—which is best investigated by native campus planning personnel.

CONCLUSION

Assessment is a powerful activity, and it can only enhance the effectiveness of campus planners in making decisions. Creating dashboards with the data collected allows for surface-level evaluation and guides further exploration of student perceptions. A smart step in any assessment endeavor would be to take the results from a campus environments survey and then convene student focus groups to gain a better understanding of the "why" behind the results.

Focus groups can provide pointed guidance. For example, many campuses in this study were found to have less lighting than students would like. A student focus group could provide guidance on *where* additional lights are necessary, or if the issue is more about how bright the individual lights are. For wayfinding, students might be able to explain why they are, on the whole, familiar with campus but struggle in providing directions to newcomers.

The use of an instrument, such as the Outdoor Physical

Campus Assessment, can be an effective first step in assessing your campus environment. Surveys are fairly quick to implement, inexpensive, and can yield useful information that allows a campus planner to put numbers to gut instincts and water-cooler conversations. It is important, however, to not simply accept the data from a survey as final—one must treat this data as one of many sources.

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