

Perceptions of Environmental Responsibility in Architectural Education

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ABSTRACT

The fundamental question began as, what are schools of architecture in North America actually doing to educate environmentally responsible building designers? Websites for each of the North American schools listed by the Association of Collegiate Schools of Architecture (ACSA) were reviewed for insight into the expressed importance of sustainability to each program. Each web site was initially scanned for the words “sustainable”, “green”, and related language that might imply a similar ideology. The working assumption in conducting this analysis was that a prospective student will only dig so deeply into the labyrinth of a web site before reaching a conclusion about the relative importance of environmental responsibility to the school. Consequently, the search was limited to major pages within each web site. We found that a prospective student interested in an architecture program that actively addresses environmental concerns (expressed as sustainability or green design) will find limited assistance on the majority of program web sites.

1. INTRODUCTION

The past year was an active time for architectural education relative to environmentally responsible design. The National Architectural Accrediting Board (NAAB) updated the criteria by which schools of architecture in the US are accredited. (1) This updating process drew a lot of interest from concerned parties across the design professions – a number of groups (including the Society of Building Science Educators and the Sustainability Topic Group of the Association of Collegiate Schools of Architecture) pushed for a stronger requirement for “environmental responsibility” as a core element of architectural education. Several of these proponent groups were very disappointed in the criteria that were ultimately adopted by NAAB. In brief, the feeling was that architecture schools were not asked to do anything with teeth to address the looming

environmental threats exacerbated by today's business as usual design practices. Architecture 2030 is perhaps the best-known proponent of the need for a change in practices. (2)

The efforts and discussions connected with the activities outlined above provided the impetus for the study that is reported herein. The fundamental question was relatively simple: Regardless of NAAB accreditation requirements, what are schools of architecture in North America actually doing to educate environmentally responsible building designers? According to the American College and University President's Climate Commitment: “Increasingly, leadership on climate and sustainability provides a key advantage in recruiting top students... The Princeton review recently reported that over 25% of applicants said that commitment to the environment would “very much” impact their decision on a college or university.” (3) The focus of this study is what such programs say about “sustainability” on their www sites. “Sustainability” was chosen as a term that encompasses the broad realm of environmentally-responsible design—even though sustainable buildings are rare and the term is frequently misused and abused. The study has been focused on college web pages because it is my observation that this is the primary source of information for most college aged individuals. I am a person who has recently returned to school after a 24 year hiatus as a business professional. I am struck by the central position the internet holds for research both formal and informal by my younger colleagues. Beginning undergraduates in particular often limit their information gathering to the more obvious sources. Architecture Program www sites were chosen because they are likely perceived as a good indicator of what a school feels is important to convey about itself to the world (and especially prospective students).

2. HOW IS THE SUBJECT OF SUSTAINABILITY BEING ADDRESSED BY THE ACSA MEMBER SCHOOLS OF ARCHITECTURE IN NORTH AMERICA?

The front-line response each institution provides to this question can be found in their web sites. Websites for each of the North American schools listed by the Association of Collegiate Schools of Architecture (ACSA) were reviewed for insight into the expressed importance of sustainability to each program. (4) Each web site was initially scanned for the words “sustainable”, “green”, and related language that might imply a similar ideology. The working assumption in conducting this analysis was that a prospective student will only dig so deeply into the labyrinth of a web site before reaching a conclusion about the relative importance of environmental responsibility to the school. Consequently, the search was limited to major pages within each web site. Major pages were loosely defined as Home Page, About Us Page, Dean’s/Chair’s/Director’s Page, Programs Page and Newsletter Page. The location of first mention among these pages was noted. Also noted were links dedicated to the subject of sustainability and the subsequent page(s) accessed through said links.

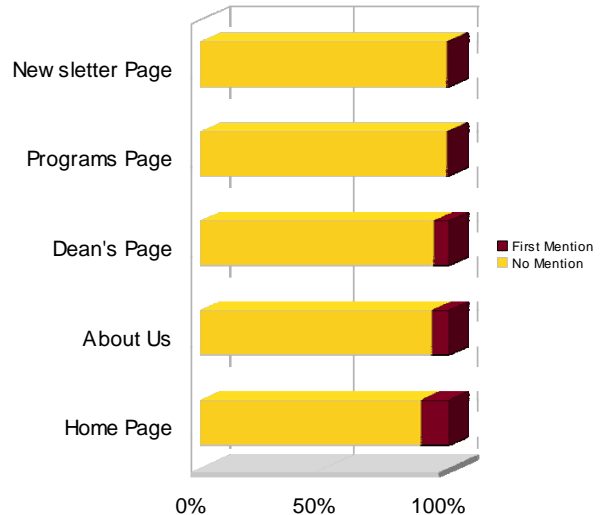
The majority of current school web sites never use words associated with sustainable or green practices or philosophies. Less than 30% of the schools even mentioned the sought-after terminology. Of the 134 schools listed by ACSA, only 36 mentioned the word green or sustainable on any of the examined pages. Of the institutions that met the initial screening requirement of early-announcement of the words sustainable or green, ten said not another word in ensuing web pages to indicate specific programs, activities or other supporting measures relative to sustainability. One of these ten institutions pronounced themselves on their Home Page to be the greenest program in Canada; but they did not clarify by whom they had been thus appraised, nor did the site ever mention the words “green” or “sustainable” (or other similar language) again.

The location of the first mention of “sustainability” communicates an implied hierarchical importance toward the subject. A student interested in those schools that support a sustainability agenda will find that fifteen schools (of the initial 134) consider the subject of sustainability important enough to mention on the Home Page; although four of these never mention the concept again. Nine websites initiate the subject on the Dean’s/Chair’s/Director’s Page with only six of these showing further interest. Among the About Us Pages, eight programs use this location for the first mention of sustainability; and one of

these eight falls silent on the subject thereafter. One institution waited until the Programs Page to broach the subject. One school did not offer any information about sustainability until the Newsletter Page.

A particularly interesting finding was that schools with developed programs and activities designed to support sustainable ideologies tended to repeat the terminology numerous times within a single page. Auburn University uses the term “sustainable” no less than 13 times on their Home Page and offers a Minor in Sustainability, as well as a number of other support activities. The University of Florida uses the term “sustainable” 12 times within the Director’s Message Page and offers a Program Major in Sustainable Design. Of the 36 schools that use the terms “sustainable” or “green”, 18 do so only once in their entire web sites. The remaining 18 sites use the word a combined total of 101 times on the pages containing first mention. These sites further add to the count on subsequent linked pages.

FIGURE 1: “Sustainable” or “Green” mentioned in Architecture Program Web Site Pages



As seen in Figure 1, no mention of the words “sustainable” or “green” on any of the examined pages is the norm among the 134 schools. When the terms are utilized, the Home Page is the typical location for first mention.

Web sites offering links to pages specifically dedicated to sustainability constitute less than 10% of the sites. Auburn and Cal Poly Pomona have taken the unusual approach of showcasing their “green” and “sustainable” goals ahead of

any other information about their architecture programs. The opening page for Auburn is titled: [Auburn Sustainability News and Events](#). This page refers to a number of available classes, lectures and news stories related to sustainability. Additional links accessible from this page include “What is Sustainability?”, “Minor in Sustainability”, “Climate Action Plan (CAP)”, “Myth Busting”, “Find your Carbon Footprint”, “Student Resources”, “Staff and Faculty Resources”, “Recycling”, “Transportation”, “Food”, “Water”, “Energy”, “Projects”, “Links”, “Our Office”, and “Newsletter”. Cal Poly Pomona has an opening page titled: [Climate Change](#) which is followed by the statement, “We're Going Green! Let's take a look at what we're doing now...” This announcement is followed by a 2:45 minute video delineating its green plans.

There are six more programs providing links from the Home Page that lead to pages focused on sustainability. Two schools have links leading to green-focused blogs. The University of Notre Dame has a Home Page titled: The University of Notre Dame School of Architecture followed by the sub-title: Green Architecture. This promising beginning is followed by the Heading: Join the Conversation. From this point they announce the student initiated blog, [greenarkiesnd.blogspot.com](#). The remainder of the Home Page is dedicated to extolling the ethical imperative for green architecture. The University of Pennsylvania provides a link to a blog which is written and maintained by the director of the certificate program in Ecological Architecture. The address for this site is [williambraham.net](#). It contains the following headings: Activities, Projects, Ecology, Technology, and Design. This site presents a more inclusive use of terminology and a broader scope of ideas than all of the other program web sites put together. These were the only two schools that offered easily found separate blog sites devoted to ideas and discussions regarding sustainability.

Five more schools had easily found links to specifically discuss sustainability programs. Philadelphia University provides a link from its Programs Page which outlines its Masters of Science in Sustainable Design (MSSD) Program--described as “a technically challenging, rapidly evolving and vitally important development for the future of our planet.” Portland State University, the University of Memphis, the University of Maryland, and the University of Texas at Austin each had links that open into pages describing facilities dedicated to research and training for sustainability.

TABLE 2. Schools with Special Links to Sustainability Content

Schools with Special Links	to Green Blogs	to Sustainable Programs	to Facilities for Sustainability
Auburn	School page		
Cal Poly Pomona	School page		
Philadelphia U		MS in Sustainable Design	
Portland State			Center for Sustainable Processes and Practices
U of Memphis			TERRA House
U of Notre Dame	Separate site		
U of Florida		Program Major in Sustainability	
U of Maryland			Nat'l Center for Smart Growth Research and Education
U of Pennsylvania	Separate site		
U of Texas, Austin			Center for Sustainable Development

2. OF THE 36 SCHOOLS OF ARCHITECTURE THAT MENTION SUSTAINABILITY, WHAT LANGUAGE AND TERMINOLOGY IS USED?

Variants of the word sustainable were by far the preferred language: sustainable buildings and communities, sustainable practices, sustainable design, sustainable architecture, environmentally sustainable, sustainable growth and change, urban sustainability, urban and sustainable design issues, sustainable architecture and urbanism, sustainability initiatives, global sustainability, built environment supportive of civil and sustainable patterns of living, sustainable development, and sustainable environments. Of the 36 schools that mention some form of the word sustainable, 34 (the majority) used the term “sustainable” versus a total of 11 schools, who also (or only) used the word “green”. Within this minority of 11 programs, three schools used the word green only inadvertently by a newsletter listing for a single upcoming event that contained the word green in the title. The specific terminologies used include green architecture, green

building design, greenness, green goal, and going green. One interesting correlative is the finding that among the 11 schools that chose to use the word “green” in a web site page, six can be counted as proactive schools toward the subject of sustainability. Most notable in this group, because of their blogs, are Notre Dame and the University of Pennsylvania. Georgia Tech also used the word green. Georgia Tech cannot currently be counted among the examples of proactive schools since it does not currently list any sustainable programs or other initiatives promoting the idea; however, they have highlighted intentions (on the Newsletter Page) to transition into the future with “bold structural changes and curricular advancement” that will “catapult its pursuit in areas such as green building, alternative energy...”

Only four schools expanded the subject vocabulary beyond the two words sustainability and green. Auburn delineates its Climate Action Plan (CAP), and provides a link to calculate a carbon footprint. Cal Poly Pomona informs that it is a charter signatory on the President's Climate Commitment. Notre Dame includes the phrases “ecological design” and “environmentally conscious design”. The University of Pennsylvania does the most to increase the pool of green terminology by contributing “climate neutrality”, “life cycle analysis”, “environmental accounting”, “ecological architecture”, “net zero”, “carbon neutrality”, “biomimicry”, “correalism”, and “cascades of power” to the dialogue.

3. HOW MANY PROGRAMS COULD BE DESCRIBED AS PROACTIVE BASED UPON WEB PRESENCE?

Each of the websites of the 36 programs (which met the initial requirement of mentioning green or sustainable in at least one key page) was analyzed for method of emphasis regarding sustainability. Ten schools had no defined method of emphasis. These ten schools limited their participation to stating the word sustainable a total of 11 times among them and the word green once. Eight schools made verbal assertions of commitment without cataloging specific programs or activities to support these statements. Ryerson University claims that sustainability “pervades all aspects of the program” without delineating specific programs activities, or even providing instructions for discovering further directives for participation. Four schools have built (or in one case has secured a grant to construct) specialized facilities for research and education focused on sustainability. These four include Portland State's soon to be built Center for Sustainable Processes and Practices, The

TERRA House on the campus of the University of Memphis, the University of Maryland's National Center for Smart Growth Research and Education, and the Center for Sustainable Development at the University of Texas, Austin. Six schools have developed degree programs specific to the study of sustainability. These programs vary in scope from full degree programs to departmental minors to seminars. Seven schools sponsor exhibits, activities and competitions for green initiatives. Four schools have blogs to facilitate an ongoing dialogue on the subject of sustainability.

FIGURE 2: Method of “Sustainability” Emphasis used by 36 Schools

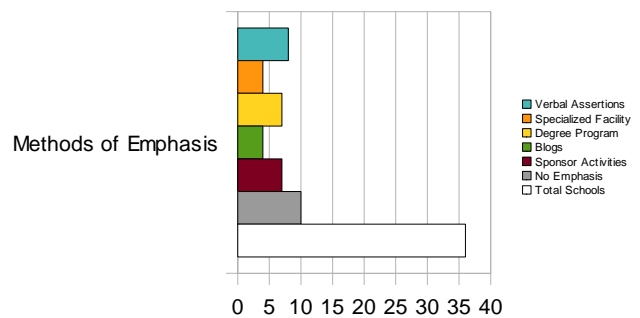


Figure 2 depicts the occurrence of the various methods of emphasis utilized by the 36 schools that met the initial criteria of using green terminology. As ten schools provide no emphasis, the remaining 16 schools can be seen to utilize more than one method of emphasis.

Among the various approaches on display, nine programs can be described as proactive. These include Auburn, Cal Poly Pomona, Philadelphia University, Portland State University, University of Memphis, University of Notre Dame, University of Florida, University of Pennsylvania, and the University of Texas, Austin. These nine schools are defined in this study as proactive (via information gleaned from their official websites) only within the paradigm of a recently emerging ideology. The strategies currently displayed by architecture programs for the promotion of sustainable practices within their purview (sometimes in partnership with the larger umbrella of the university to which they belong), include the following:

- 3 carbon footprint reduction on campus
- 4 communication of green information and ideas among architecture program members

- 5 communication of green information and ideas to a campus-wide audience
- 6 communication of green information and ideas to communities not associated with campus
- 7 opportunities made available to contribute to body of knowledge
- 8 opportunities made available to participate in design of green projects
- 9 formalized inclusion of sustainability in program

prospective student interested in an architecture program that actively addresses environmental concerns (expressed as sustainability or green design) will find limited assistance on the majority of program web sites.

4. ACKNOWLEDGMENTS

This study was supported by Research Assistantship funding provided by the Department of Architecture, College of Architecture and Planning, Ball State University.

5. REFERENCES

1. The National Architectural Accrediting Board, www.naab.org
2. Architecture 2030, www.architecture2030.org
3. American College & University President's Climate Commitment, www.presidentsclimatecommitment.org
4. The Association of Collegiate Schools of Architecture, www.acsa.org

TABLE 2. Characteristics of Proactive Programs

SCHOOL	PROCESS	COMMUNICATION			LEADERSHIP		EDUCATION
	Carbon Reduction	Architecture Program	Campus Wide	Others	Body of Knowledge	Project Design	Formalized Inclusion
Auburn	■	■	■			■	■
Cal Poly Pomona	■		■	■			■
Philadelphia U						■	■
Portland State U					■		
U of Memphis						■	■
U of Notre Dame		■				■	■
U of Florida							■
U of Pennsylvania	■	■	■	■	■	■	■
U of Texas, Austin	■	■	■	■	■		■

CONCLUSIONS

This paper presents a summary of what North American architecture programs say about green/sustainable design on their www pages. In general the picture is one of limited engagement with much room for improvement. It is impossible to tell whether this is a result of poorly-enunciated web site content, indifference, or true lack of engagement. Anecdotal evidence suggests that all of the above are true. After completing this study, I contacted a sampling of schools who were reported to have strong sustainability programs despite their lack of disclosing this information on their web pages. The University of Oregon was the only school to get back with me; and I was suitably impressed with their programs, facilities and staff though their www site had offered not a word on the subject. A