ASU School of
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An Exploration of Communicating Sustainability Ideas through Technology to Inspire Sustainable Urban Planning Practice

1. Abstract

Why does such an immense rift exist between academia and professionals in terms of researching and practicing sustainability and sustainable development, and how can we bridge the gap with effective communication? This report describes the process by which I created a concise but comprehensive online source of information about best practices in sustainability for urban planners. The goal of the project was to provide accessible information that would help planners comprehend and implement sustainable solutions to common planning problems that are found throughout the United States. To create the website, I researched methods for communicating clearly to planners, took a graduate course in communicating about sustainability, and drew on information that I had compiled on sustainable solutions for water, transportation, economy, green space, agriculture and governance.

2. Table of Contents

3. Introduction

A fundamentally flawed assumption made by many sustainability practitioners is that *any* communication about sustainability is good communication. However, according to the United Nations Environment Programme (UNEP) guide to communicating sustainability, ". . . badly planned and misplaced communications will, at best, not work (wasting time and money); at worst they can have negative consequences" (Shea and Montillaud-Joyel, 2005, p.11).

The average person is not very knowledgeable about sustainable development or the many ways that sustainability issues are interwoven into their daily lives. Academics who study sustainability know quite a lot about sustainable practices and development; they can continue to research best practices and keep reaching for a more sustainable future. But without adequate communication tools and techniques, their knowledge will be lost on others. If sustainability research and information cannot be efficiently and simply communicated to the public and to those who need it in order to make important decisions, such as planners, then all the research will be for naught and all parties will lose. Failed communication is a barrier to the success of sustainability in practice.

Planners are professionals whose decisions obviously have a big impact on whether the places where we live are sustainable or not. They make decisions about land use and development. The way a city develops a site influences how people use, interact, and behave in the space. The design of urban spaces sets boundaries around lifestyle choices, which in turn impacts sustainability. For example, think about urban design that encourages car use (abundant parking spaces, lots of car lanes) versus urban design that encourages use of public or non-motorized transport (bike lanes, walkability, transit stations).

Planners usually plan strategically for the long term, which makes their thinking congruent with that of sustainability practitioners and scholars. Planners plan at different scales, from local to national, which is congruent with the multiple-scalar way that we think about sustainability. These commonalities make it possible to leverage synergies between the two professions, planning and sustainability. Moreover, planners have direct connections at all levels and scales of development, which provides the opportunity for sustainability experts to reach a much broader group of stakeholders than they may have access to on their own—*if* they can communicate well with planners.

Urban *redevelopment* also provides opportunities for sustainability to become part of the planning process. Building retrofits allow developers to save what they can of old structures and rebuild with a focus on sustainability. Again, planners are keystone practitioners in the redevelopment process.

Planners have great potential to shape spaces and the behavior that occurs in them. Planners are trained to think in ways that are different from, but congruent with, sustainability scholars and

practitioners. What better audience to attempt to reach with useful information about sustainability—ideas, guidelines, and best practices—that will help them make decisions that shape the human environment and human behavior?

4. Context

Sustainability is not easily defined, and the meaning is still debated in academic discourse. For the purposes of this case study, I will leave that debate to the experts and instead define sustainable development, since it is the term most closely associated with sustainability in the planning profession. The most widely accepted definition of sustainable development comes from the Brundtland Report: ". . . development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (1987, chap.2 para.1). How do we make that kind of development happen?

"Business as usual" keeps academia in its own silo. (And within academia, units and departments may occupy their own separate silos.) Students are told that they will learn the practical skills necessary to do a job on the job. Students may take internships to get the real-world training that they do not get in the classroom. Sustainability students are taught that sustainability is relevant in every work sector. Because sustainability is a new discipline, we as sustainability practitioners often have to justify the value of and need for our knowledge, perspectives, and skills—whether in traditional workplaces or in those we create ourselves.

Outside academia, enterprises, industries, and government may also be isolated from one another. As a result of this pervasive siloing, we as a society lose out on the synergistic benefits of working with experts in different fields. Strategic partnerships advance sustainability efforts, so collaboration between fields is not only desirable, it is necessary.

Isolation stymies innovation. Our personal and professional perspectives are the boxes that we live in. We are often asked to "think outside the box" to solve problems. Getting outside the box in the working world means being able to communicate with people outside of our own area of expertise. We in the field of sustainability acknowledge the importance of interdisciplinary and transdisciplinary work, and of "engaging with stakeholders." But do we make enough effort to talk to those stakeholders in their own language?

Currently, there exists no single comprehensive source of detailed information about real-world sustainability planning applications (that I have been able to find). There are quite a few geared towards sustainable development in general, but none geared towards communicating specifically to people in the planning profession, even though, as I discussed in the introduction, planners have both the power and the networks necessary to contribute significantly to advancing sustainability.

Planners at all levels have an impact on the sustainability of what they create, whether they realize it or not. Those planning organizations that are consciously trying to find solutions to sustainability problems can serve as examples—of both successes and failures—to others, but only if what they are doing gets communicated to those others. The purpose of developing a website that is tailored to planners and provides a comprehensive source of information about what cities around the United States (and other places in the world) are doing is to fill that communication gap. Just having information doesn't necessarily translate into making different decisions or changing behavior, but information is a necessary basis for the process of change. If we don't know there are other options, we can't take them.

5. Literature Review

Joshua Schimel, the author of *Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded*, opens his first chapter with this: "As a scientist, you are a professional writer" (2012, p.3). Later in the same chapter he says, "Our success, then, comes from our ability to communicate our ideas as much as from their inherent quality. As the author, therefore, your job is to make the reader's job easy" (p. 5). Do we, as sustainability scientists and practitioners, take responsibility for making our ideas available outside of our own silo? The noted linguist and Harvard professor Steven Pinker says that "academics stinks at writing" (2014, p.1). And Joseph M. Williams, a noted writing teacher at the University of Chicago, says:

> "[The language of obscurity] . . . is a problem that has afflicted generations of writers who have hidden their ideas not only from their readers, but sometimes even from themselves . . . in academic writing that inflates small ideas into gassy abstractions, we call it *academese*. Written deliberately or carelessly, *it's a language of exclusion that a democracy can't tolerate* (Williams, 2006, p. 2) (my emphasis).

Planners are required by law, to engage citizens in every step of the planning process. Do sustainability scientists do the same? If sustainability is concerned with equity, as it advertises, is it not the responsibility of sustainability scientists to make their knowledge accessible to all?

"When companies and universities work in tandem to push the frontiers of knowledge, they become a powerful engine for innovation and economic growth" (Edmonson, 2012, p.6). Arizona State University's principle to conduct "use-inspired research" acknowledges the importance of connecting all of academia with real-world stakeholders, not just the departments whose work is obviously applied. "Virtually all of the fields of university research rated by industrial respondents . . . as 'important' or 'very important' for their innovative activities were related to engineering or applied sciences; fields of U.S. university research with a long history of university-industry collaboration" (Celeste, R. F., Griswold, A., & Straf, M. L. (Eds.), 2014, para.4). If sustainability is to become a reality, sustainability research will have to get on that list of "important" or "very important" research.

As communicators, sustainability scholars and practitioners aim to raise awareness, change attitudes, and change behavior. However, according to the UNEP guide to communicating sustainability, "the real skill in communicating lies in translating the big vision into messages that are both personal to the audience and practical in terms of inspiring a response" (Shea and Montillaud-Joyel, 2005, p.15). This means that we need to understand who it is we want to reach with our messages, what values they are likely to have, and what they are likely to already know. The guide points out that "the most successful communications campaigns are the ones which tightly define their target audiences and develop messages appropriate to them" (p.14). Planners already have infrastructure in place to get feedback from communities, through public forums and even social media platforms, and we as sustainability professionals can leverage this to our benefit through proper commuination.

6. Methodology

The main goal of the project is to provide an accessible, concise, but comprehensive source of information about sustainable practices to urban planners. The purpose of the project is to bridge the gap between academia and real world planning applications. A website was chosen as the medium because it creates a comprehensive centralized information hub that allows access to various resources through hyperlinks. Websites allow us to present the most relevant information because they can be continually updated. Anyone with access to the internet can freely and easily access the site, reaching a wider audience.

All of the communication techniques were derived from the lessons and readings in a course offered through Arizona State University: *SOS 598 Communicating about Sustainability*. I am not an expert in communication; therefore I relied heavily on resources provided in the class and guidance from the instructor for communication methods. The following methods were employed when creating the communication for the website:

1) The writing is clear and grammatically correct. Grammar is important. It is the first step in writing effectively because employing proper grammar allows us to be understood. Grammatical errors reduce an author's or speaker's credibility, and thus weaken his or her argument. Planners are degreed professionals and should be addressed as such. Clear writing states who is doing what in each sentence, avoids nominalizations, and avoids using the passive voice unless there is a good reason to do so.
2) The writing uses language that is accessible to the planning audience. I focused on an audience-centric approach in all aspects of communication.
3) Scientific information is translated so that the target audience can understand it. A lay audience is one that does not have special knowledge about a topic; planners are a lay audience with respect to many concepts in sustainability, but not all.
4) The writing appeals to the value system of the intended audience. The objective is to translate sustainability concepts in a way that makes them relevant to planners by appealing to their value system. Appealing to values your audience already holds is more effective than trying to change them. Planners are (more often than not) public servants, so I was able to make some assumptions about their values.
5) The writing communicates honestly about uncertainty and the limits of scientific knowledge. The original research pages the website is based on painted a rosy picture

about planning for sustainability. The content was edited to include discrepancies, negative outcomes, and unknowns, and thus more honestly reflects the limitations of the solutions presented on the website. It is okay to put the information out there and admit that you don't have all the answers.

6) The information is presented in a logical way and is adequately supported with reasons and evidence. Evidence is essential to making an argument persuasive, and planners want to see concrete evidence that an idea works. The website format lends itself nicely to providing supporting evidence because information that is cited can be hyperlinked, allowing the reader to easily verify the evidence, and find more information on the idea.

The website content was adopted from a prior research book project. The original project team identified planning problems and chose solutions to address the problems. The solutions address a wide range of concerns that urban planners commonly face in their practice. There are numerous examples, but the overarching ideas focused on issues in: transportation, water, economy, agriculture, green space, and governance.

The book provided a baseline of information and sources, but the structure, graphics, and writing were adapted for an online format. The following methods were used to change the format from book to website:

1) The language was translated from sustainability discourse into planning discourse. I had an advantage in this project because I hold an accredited degree in urban planning, and additionally held a planning internship. Therefore, I am familiar with the language and terminology that planners use and I was able to craft the language accordingly.

2) Unnecessary information was removed. Planners already have a grasp and understanding of many of the overarching planning issues and are familiar with solutions. The emphasis was switched to examples and supporting evidence, which is more useful to planners.

3) Bullet points were used to make the information concise and easily absorbed. I determined that a bulleted list was the best format to present information because bullets are designed for concision and clarity. The best way to help people make sense of complex information is to break it down into digestible chunks.

4) In-text citations were transformed to hyperlinks. Hyperlinks allow the audience to quickly and easily locate outside resources, which expands knowledge. This avoids synthesis bias of important information and allows planners to interpret source material in their own way.

5) Images were only used if they complemented the example presented, or emphasized an action, point, or idea. In some cases this meant removal of images completely because they did not effectively communicate the ideas presented.

6) "Implementation strategies" and "Keys to success" sections were added to make the information more useful to planners. Planners want to know about the concrete impacts of an idea before deciding whether to implement, adapt, or reject it.

7) An avenue for communication response was added to collect input and feedback. In the future, this will allow for the website to be refined and expanded upon.

7. Findings

The project is a qualitative analysis of effective communication methods put into practice in the form of a website. The project is unconventional in that it did not produce findings from data analysis to reach a conclusion. Rather, the project was an exercise on researched methods.

The writing process taught me how inaccessible academic writing can be. Even when we think we are writing in a way that is clear, it often is not. The way we communicate can make or break our message. If we write or speak in complex sentences or present information in a confusing or illogical manner, it is likely to be overlooked. Simplicity is our best tool.

Consider the following:

> "To understand how federal investments in scientific research result in societal benefits, it is necessary to understand the American research enterprise as a system that must be viewed in relation to the innovation system in which the discoveries produced by research are used to develop new technologies and other innovations" (Celeste, R. F., Griswold, A., & Straf, M. L. (Eds.) 2014, sec.7 para.6).

Much clearer when re-written as:

> Federal investment in scientific research benefits society because the American research system is tied to the innovation system; discoveries produced by research promote the development of new technologies and other innovations.

The client deliverable is a website highlighting applications of sustainability in planning, with a focus on clear communication. This is reflected in the delivery and format of the actual website, which can be found here: https://planningsustainable.weebly.com/

8. Conclusions

Through this project I learned how to communicate sustainability more clearly and effectively to planning professionals, and I think more sustainability students should learn how to communicate to professionals in other fields. As sustainability scientists, part of our job is to provide information in ways that people can understand. If our audience does not understand us, then we, as professionals, are failing. Remember, as scientists we are writers and communicators, and it is our job to make it easy to understand our principles and ideas. Our work will have the most impact if it is easily understood. Information does not ensure impact, but people will not change if they don't know the options for change and why they should be considered in the first place. The website begins to address the knowledge gap that exists between sustainability principles and urban planning as a professional practice.

9. Future Directions

Engaging with stakeholders is crucial to project success. The next step would be to research and implement a strategy to measure the impact of the website I created. Measuring how effectively the website communicates to its intended audience presents a challenge, and also an opportunity for engagement with that audience. The question I want to answer is: Can I improve the website to make it more useful to urban planners? A survey can be added to the site to measure engagement and collect feedback. A comment page already exists on the site, but a response feature can be added to each section to facilitate online discussion.

The project highlights a need for sustainability to be integrated into education for other professions. Students of urban planning, and other fields that have implications for sustainability (like business), need to learn about how sustainability impacts their respective fields. As Nelson Mandela says in his famous speech, "Lighting a Way to a Better Future," "Education is the most powerful weapon which you can use to change to the world" (2003). Education can shift people's value systems. If we teach people about sustainable values earlier, our messages are more likely to resonate with them later on.

The website can be updated and expanded indefinitely in the future as planners and organizations continue to develop creative solutions to sustainability problems. Other students can work on projects that explore ways to communicate with different audiences. Through my research, I discovered that there is abundant discourse on communicating to businesses, but other industries have been given far less attention. The basic communication tactics explored in the project are transferable to communicating with audiences beyond planners. But the value systems that prevail in different fields will have to be considered by those wishing to communicate to audiences in those fields. When we understand the value systems of other industries, we can strategically craft our sustainability messages so that they can be heard, understood, and considered, not ignored or resisted. We need to know how to package our ideas to appeal to different audiences, and when we do, we can start to fill the communication gaps that exist between academia and professional practice.

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11. References

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