Smartscape: Using education as a tool for reducing water in desert landscapes

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Research Background

The Smartscape program and those involved in it aim to reduce water-use among landscape professionals. With Phoenix being a large city in an arid climate it is of great interest to understand the role Smartscape plays in reducing water-use. I set out to understand the water-use behaviors and drivers of Smartscape certified landscape professionals. I created a ten-question survey that targeted water-use and irrigation practices. The survey highlighted many important water-reduction principles taught within the program. I then performed the survey on both Smartscape certified and non-certified landscape professionals. This comparison helped to examine the two questions:

What values and beliefs do landscape professionals hold regarding water-use in Phoenix?

What challenges do landscape professionals face when trying to implement low-water use landscape principles?

Methods

•I attended Smartscape courses as an observer to gather research regarding core Smartscape principles (e.g. low-water landscape design, soil management, efficient irrigation systems etc).

•I created a ten question survey that focused on understanding the values and beliefs regarding water-use and irrigation practices, as well as the challenges landscape professionals face in their work.

•I performed the survey (17 total), over the phone, on both Smartscape certified and non-certified landscape professionals.

•I analyzed the results, searching for similarities, differences and underlying themes between the two demographics.

Findings

•The Smartscape certified demographic displayed greater confidence in low-water use landscape and irrigation principles (See figures 1A, 1B, 2A, 2B).

•The most important factor to the Smartscape certified demographic was **efficient irrigation systems**, with **100%** of respondents agreeing that .

•The most important factor to the non-certified demographic was **budget constraints of the client**, with **86%** of respondents agreeing.

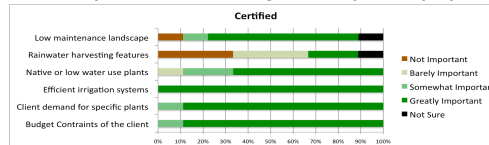*How important are the following factors to your company?*
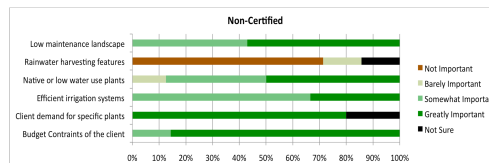

Figure 1A

Figure 1B

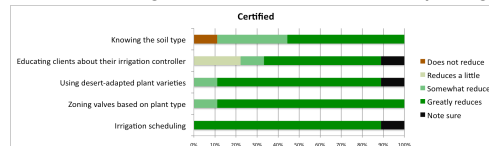*How do the following factors reduce water-use in landscape design?*
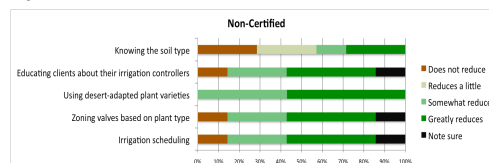

Figure 2A

Figure 2B

When asked to respond openly to the question: What is the biggest challenge when trying to reduce water use or respond to the irrigation needs for your clients?

Both demographics claimed that clientele represent the biggest challenge when trying to reduce water. Many clients are unwilling to pay the higher upfront cost associated such irrigation systems, even if it saves money in the long run. Many other clientele have an aversion towards educating themselves on irrigation controllers. One respondent states,

"…Clients have a lack of interest in paying for upgraded systems and a lack of interest in monitoring the system. Every client should adjust and know how to adjust their irrigation controllers but they just don't."

The second theme pulled from this question is the struggle in dealing with client demands for specific plants. Phoenix faces the unique challenge of having a city cultivated by transplant residents. These residents want plants they are geographically familiar with. Many of these plants have higher water requirements than native or drought tolerant plants. This causes an excessive amount of water use in some landscapes. Landscape professionals have little room to object to plant selection because it is in the best interest of their business to meet the request of clientele. One respondent states,

"Most clients are from other areas and they want the plants they grew up with, but most of those plants require a lot of water or just don't do well here."

Conclusions

•Smartscape is powerful tool to the diverse workforce of landscape professionals. It provides thorough and affordable education that increases knowledge and positive values regarding low-water landscape design.

•Those who took the course tended to understand low-water landscape design in greater detail. It is important to note that not all non-certified demographics where uneducated in low-water design. Some of the non-certified respondents held degrees in Landscape Architecture or had been practicing for 20+ years.

•There is a major undercurrent regarding aesthetic beliefs and values of low-water landscapes among Phoenix residents. This limits the impact both landscape professionals, and the Smartscape program can have on reducing water in landscape design.

Recommendations

•Smartscape should raise awareness among residents about the aesthetic appeal of low-water use landscapes and the added benefit it has regarding water conservation. By showing residents how attractive these landscapes can be the program may be able to create positive attitudes and beliefs regarding low-water use landscapes.

•The Smartscape program could work on improving the relationship landscape professionals have with their clientele by introducing proper marketing strategies during Smartscape courses.

•Finally, future research could target changes that certified professionals have made to their business practices since taking the Smartscape program. This could shed light on the impact the program has had in the field of landscape design.

References

1. Gilbert, Arizona Landscape Professional. (March 2012). Interviewed by M. Babcock [Personal Interview]
2. Phoenix, Arizona Landscape Professional. (March 2012). Interviewed by M. Babcock [Personal Interview]
3. Larson, Kelli. Professor of Social Sciences, Arizona State University (February 2012). Interviewed by M. Babcock [Personal Interview]
4. Paul, Haley. Smartscape Program Coordinator (February 2012). Interviewed by M. Babcock [Personal Interview]