

Evaluation of a Sustainable Green Living Expo Event: Attendees' Reports of Satisfaction, Learning, and Behavior Change

David C. Diehl

Assistant Professor, Program Planning and Evaluation
Department of Family, Youth and Community Sciences
University of Florida
Gainesville, Florida
dcdiehl@ufl.edu

Shelley E. Swenson

Extension Agent II—Family and Consumer Sciences
Wakulla County Extension
Crawfordville, Florida
sswenson@ufl.edu

Jessica N. Wente

Graduate Assistant
Department of Family, Youth and Community Sciences
University of Florida
Gainesville, Florida
jwente@ufl.edu

Abstract: *This article presents the evaluation of the Sustainable Big Bend Green Living Expo and Education Fair, which targets participants with a variety of learning opportunities. Evaluation was carried out using onsite surveys along with follow-up surveys and phone interviews. Results indicate that a 1-day sustainability event is a meaningful way to reach individuals and that they have high levels of satisfaction, learning, and self-reported behavior change. The study concludes that Extension has a critical role to play in sustainable living issues and that systematic evaluation can be valuable for program improvement as well as documentation of outcomes.*

Introduction

According to one of the most widely quoted definitions, sustainable development is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p.24). Other definitions of sustainability recognize the interrelationship among economic, environmental, and social sustainability (Goodland, 1995). Chiras and Herman (1997) propose that environmental sustainability is based on five fundamental principles: (1) conservation; (2) recycling and composting; (3) renewable resource use; (4) habitat protection, restoration, and sustainable management; and (5) growth management. As populations rise and natural resources become increasingly scarce, environmental sustainability has become a pressing social policy issue, both in the United States and around the world.

With its focus on agriculture, natural resources, and human behavior, Extension is a natural leader on education related to environmental sustainability and natural resource issues (Guy & Rogers, 1999; Harrison, 2002; Jensen et al., 2009). Extension has provided education on sustainability issues using a variety of delivery methods, including educational workshops (Brown, 2009), environmental field days for children (Blair et al., 2004), classroom instruction (Thornton, 2010), education through the Master Gardener program (Foerster & Barry, 2007), and educational events for conservation professionals (Ishler et al., 2006).

Sustainable living education is an important topic for Extension educators from a variety of backgrounds, including forestry and wildlife, horticulture, climate science, farming, housing, financial management, and 4-H, among others. Elliott and her colleagues (2008) issued a call to action for all of Extension, saying,

Community priorities are shifting in response to the scientific reality and socioeconomic threats of climate change. Improving sustainable resilience in the ways we supply food, water, and energy are creating new ways of thinking about these critical resources. Cooperative Extension is in a prime position to teach individuals and communities how to live and work sustainably.

Event Description

Extension has typically reached large audiences through active participation in county fairs and similar events (Diem & Rothenberger, 2001). This approach can also be adapted by conducting community events or fairs on specific topics of interest in the community. The Sustainable Big Bend Green Living Expo and Education Fair is an annual 1-day event that educates the public on issues related to sustainable living and environmental practices. The event, which is held in Wakulla County, Florida, brings together individuals, community organizations, and businesses to share ideas, information, and resources related to conservation, sustainability, and renewable energy issues <www.greenlivingenergyexpo.com>. Approximately 700 people attend the event annually.

A major part of the Green Living Expo is the series of educational workshops on a variety of topics, including organic gardening, the impact of human consumption, irrigation methods, green jobs, recycling, solar energy, composting, landscaping with native plants, green homes, and energy conservation. A full exhibit hall offers attendees the opportunity to see the latest in products related to their pursuit of a greener lifestyle. In addition, a full day of children's activities is held to cater to the younger children attending. Murals, games, experiments, boats, inspiration boxes, magazine holders, and flowers are made out of recycled items. Another highlight of the Green Expo is the Green Living Homes Tour. This tour offers participants an opportunity to visit homes and spend time with the green homeowners to engage them in an in-depth dialogue about environmentally friendly construction and living.

Evaluation Overview

The Extension system is under increasing pressure to evaluate the impact of its programs and demonstrate accountability to its various stakeholders (Franz & Towson, 2008). Patton (2008) highlights three central purposes of evaluation—accountability, program improvement, and learning—all of which have a role in the development and evaluation of Extension programs. Like other Extension programs, environmental education initiatives are under increasing pressure to conduct evaluations and establish the efficacy of educational programs and curricula (Blumenstein & Saylan, 2007). While environmental practitioners have been relatively slow in embracing evaluation practices, the field is making progress in this domain (Mickwitz & Birnbaum, 2009). Evaluation is a critical tool for accountability, program improvement, and learning that contributes to the long-term success of these programs.

To evaluate the impact of the Green Living Expo, the following questions were pursued:

1. **Event Satisfaction:** What was the level of overall satisfaction with the Green Expo?
2. **Workshop Satisfaction:** What was the level of satisfaction with the educational workshops?
3. **Behavioral Intent and Behavioral Change:** To what extent did participants *intend* to change their behavior and *actually change* their behavior as a result of the event?

Methodology and Data Analysis

Survey Administration and Measures

Three surveys were administered to evaluate the impact of the Green Expo event.

1. **Event evaluations (n = 85)** were administered on the day of the event to measure overall satisfaction with the event and participants' intent to change behavior. All attendees were encouraged to complete event evaluations, and a drawing for a door prize was used to encourage participation. Attendees were asked to: (1) rate the *overall quality* of the Green Expo; (2) identify what activities they attended at the event; (3) identify how many *times they had attended* the event, including this and previous years; and (4) state whether they planned

to change any behaviors and list the specific behaviors they intended to change.

2. **Workshop evaluations (n = 214)** were administered at all educational workshops on the day of the event to measure workshop satisfaction and intent to change behavior. Participants attending workshop evaluations were asked to: (1) rate each workshop on *overall quality*, *usefulness*, and *applicability* of the workshop content; (2) state whether they planned to change any behaviors and list the specific behaviors they intended to change; and (3) provide comments and suggestions about the workshops in general.
3. **Follow-up evaluations (n = 116)** were administered to attendees approximately 6 to 7 months after the event. Follow-up evaluations were conducted only with individuals who agreed to be contacted after the Green Expo. Surveys were administered using a combination of Internet-based surveys (using SurveyMonkey) and phone interviews. Attendees were asked to: (1) provide demographic information; (2) report on their experience at the Green Expo, including their satisfaction; and (3) report any behavior changes that took place as a result of the Green Expo.

Participant Characteristics

While demographic and background data were not collected at the event itself, participants were asked to provide this information during the follow-up survey or interview. It should be noted that these individuals may be the most engaged participants and may not accurately represent the opinions of more casual attendees. One hundred sixteen participants completed demographic information, which is summarized in Table 1. About 2/3 of the respondents were female, and the attendees were predominantly White (93%). The sample was highly educated, with 70% of respondents having at least a bachelor's degree. Older people were over-represented, with 60% of respondents being age 50 or over. Income was relatively widely distributed, with representation at all levels.

Table 1.
Demographic and Background Characteristics

| | |
|-----------------------------|-----------------------|
| Sex (n = 116) | Income (n = 95) |
| 66% female | 14% under \$25,000 |
| 35% male | 27% \$25,000 – 49,999 |
| | 31% \$50,000 – 74,999 |
| | 21% \$75,000 – 99,999 |
| Education (n = 116) | 7% \$100,000 or more |
| 4% high school or less | |
| 26% some college | Age (n = 111) |
| 34% college degree | 8% 20-29 |
| 36% graduate school or more | 14% 30-39 |
| | 13% 40-49 |
| Race (n = 116) | 27% 50-59 |
| 93% White/non-Hispanic | 33% 60-69 |
| 4% Black/non-Hispanic | 5% 70+ |
| 2% Hispanic/Latino | (range 22-82) |
| 2% Other | |

*Please note that all numbers do not sum to 100% due to rounding errors.

Analyses

Simple descriptive analyses were conducted using SPSS. When appropriate, qualitative coding was used to categorize open-ended responses into meaningful categories.

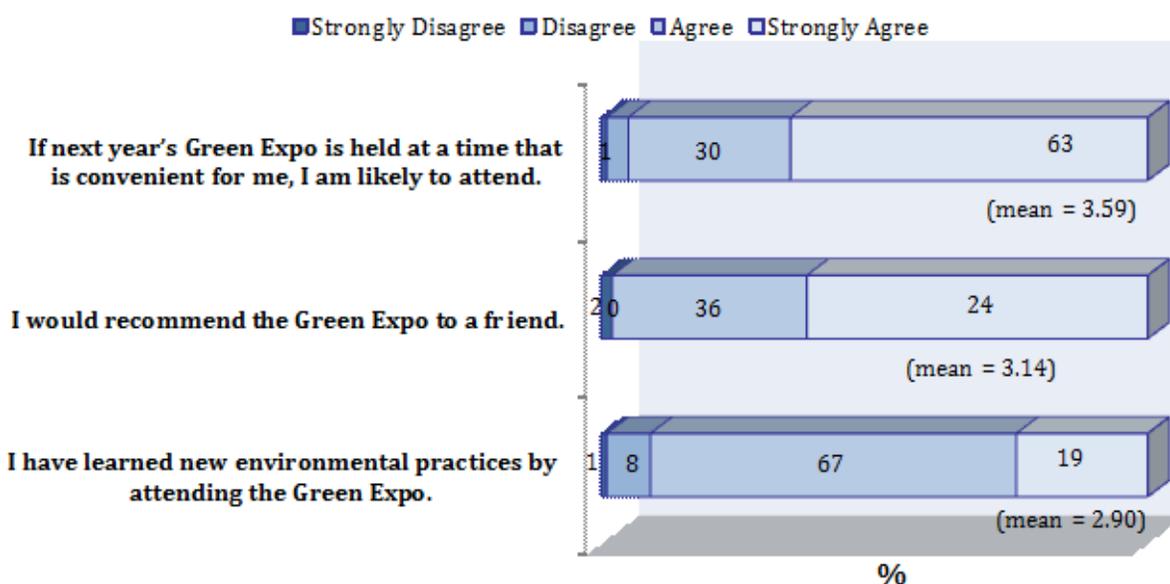
Results

Evaluation Question #1: Event Satisfaction

When asked to rate the overall quality of the Green Expo event, 92% of participants said the event was either good (51%) or excellent (41%), with a mean of 3.33 on a 4-point scale.

Ninety-six percent reported that they would be likely to attend the Expo again, 99% would recommend the Expo to a friend, and 91% agreed that they learned new environmental practices at the Expo (Figure 1).

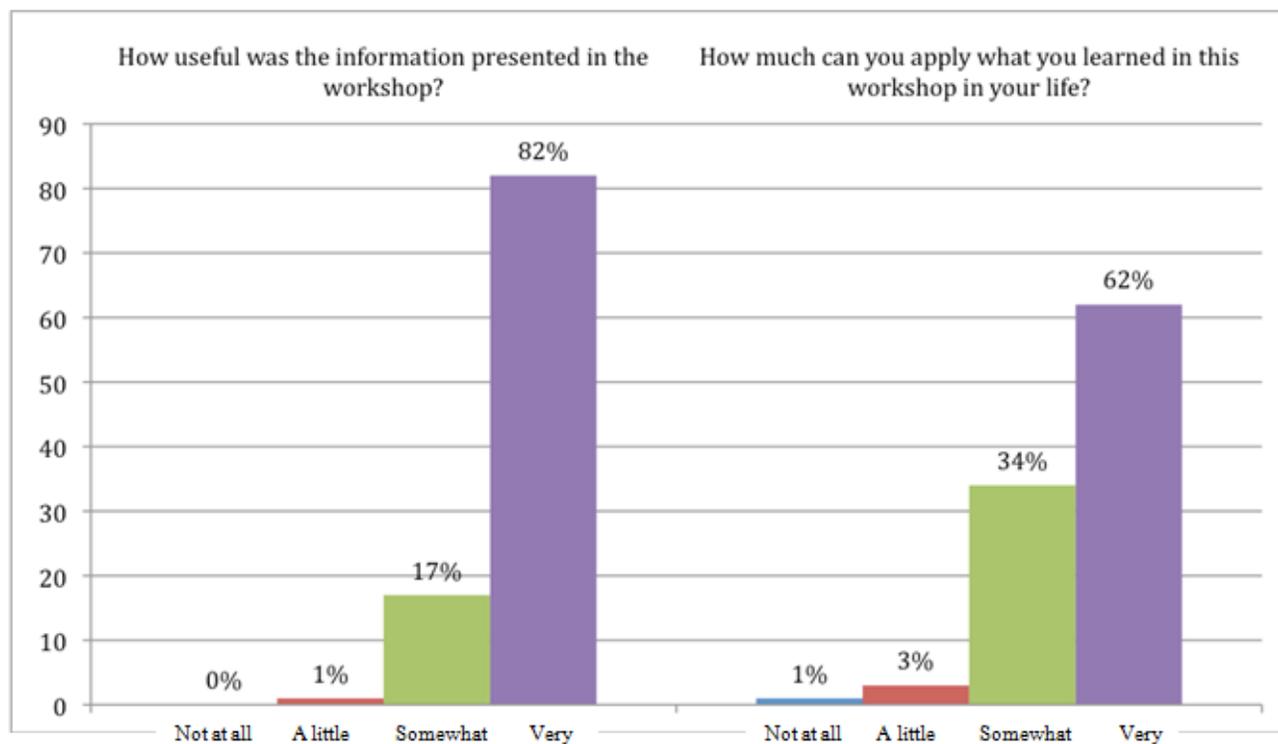
Figure 1.
Satisfaction with the Green Expo



Evaluation Question #2: Workshop Satisfaction

When asked to rate their satisfaction with individual workshops, 97% rated the workshop as either "excellent" (71%) or "good" (26%), with a mean of 3.69. Overall ratings of usefulness were also high, with 99% rating the workshop highly (82% reporting "very useful" and 17% reporting "somewhat useful"). Ratings of the applicability of the workshops were somewhat lower, but still positive, with 96% indicating that they could apply the knowledge "very much" (62%) or "somewhat" (34%). See Figure 2 for average workshop ratings for *usefulness* and *application*.

Figure 2.
Ratings of Workshop Usefulness and Application



While overall satisfaction with the workshops was quite high, it appears that it was more difficult to achieve high levels of satisfaction on *application* of concepts to real life. This is an important finding because the ability to apply concepts is likely a prerequisite for actually changing the behavior of participants.

In addition, there was considerable variation in the ratings of different workshops, with some receiving much higher ratings than others. This information has been helpful in making decisions about which presenters and workshop topics to repeat at future events.

Evaluation Question #3: Behavioral Intent and Behavioral Change

Behavioral intent was assessed at the time of the event on both the general event evaluation and the workshop evaluation. Intent to change behavior was measured using two questions. First, a simple yes/no question was asked ("As a result of the Green Expo/workshop, do you plan to make any changes in your life?"). Second, a more open-ended question was asked ("If yes, what changes do you plan to make?"). To qualify as intending to change behavior, respondents had to answer "yes" to the first question and be able to articulate a clear behavioral change in the second question.

Behavioral change six to seven months after the event was also measured using two questions on the Follow-Up Survey ("As a result of the Green Expo, have you made any changes in your life?"; "If yes, what changes have you made?"). See Table 2 for answers related to behavioral intent and behavioral change.

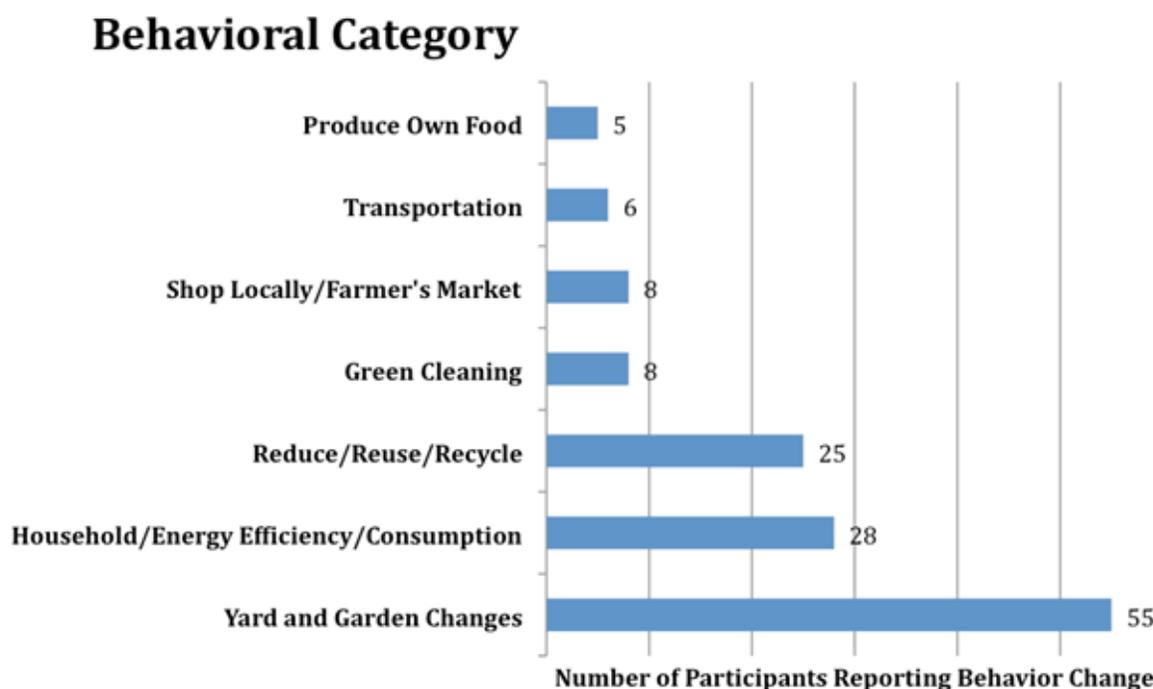
Table 2.
Summary of Behavioral Intent and Behavioral Change Items

| Question | % yes |
|--|-------|
| Intent to Change (Event Evaluation): As a result of the Green Expo, do you plan to make any changes in your life? If yes, what changes are you planning to make? | 72% |
| Intent to Change (Workshop Evaluation): As a result of this workshop, do you plan to make any changes in your life? If yes, what changes are you planning to make? | 84% |

| | |
|--|-----|
| Behavioral Change (Follow-Up Survey): As a result of the Green Expo, have you made any changes in your life? If yes, what changes have you made? | 84% |
|--|-----|

Actual behavioral changes from the follow-up survey were coded into the categories as shown in Figure 3. The three most common behaviors mentioned were yard/garden changes, increases in household energy efficiency, and reducing, reusing, and recycling materials.

Figure 3.
Categories of Self-Reported Behavior Changes



Very high percentages of attendees reported behavioral intent and actual behavior change 6 to 7 months after the event. Based on these self-reports, it appears that a 1e-day educational event has a meaningful impact on the behaviors of participants.

Conclusions and Implications for Extension Educators

Extension is a prime venue for providing educational opportunities related to sustainability. The findings from our evaluation of a Green Expo event generate several suggestions for Extension educators interested in reaching their audience with sustainability information. The methodology used served to raise citizens' awareness of many aspects of sustainability and offer practical means for citizens to incorporate practices into their daily lives.

The implications for this work are the following.

- One-day events are a promising setting for offering sustainability education. In this study, the participants reported high levels of satisfaction, knowledge gain, and behavioral change. It appears that the Expo is meaningfully reaching the audience through a variety of delivery methods, allowing the attendees to gain valuable information without a great deal of time investment. Such events also build valuable connections among community partners, with Cooperative Extension taking a visible leadership role in the community.
- When delivering sustainability information, it is important to consider the characteristics of the audience, especially their range of expertise. Because attendees range from beginners to experts, the activities must offer a range of learning experiences that meet the needs of all

participants. The event was planned to optimize learning for participants with widely ranging levels of expertise.

- Evaluation of one-day events is feasible and practical when the proper human resources are devoted to the task. The evaluation of this event, especially the follow-up evaluation, required the dedicated work of a state specialist and a county faculty member. However, the use of volunteers for follow-up interviews allowed this work to be done with very little financial expenditure. This was an excellent use of volunteer resources that contributed to the overall success of the effort.
- The evaluation process contributed to learning and improvement for the future. Event evaluations and workshop evaluations were used to identify the most successful approaches and workshops, resulting in a more refined set of program activities for subsequent years. This evaluation process allowed us to systematically assess the quality of specific Expo offerings to aid in the coordination of future events.
- The evaluation process also generated information that was useful in demonstrating impact to stakeholders and supporters. The evaluation results were reported to the local advisory group and other community stakeholders, providing support for the continuation of the Expo. The evaluation also provided information useful for reporting of impact within the Cooperative Extension system.
- Given the importance of sustainable living issues at the local, state, and federal levels Cooperative Extension is well positioned to provide educational information in a variety of formats. While the current study focuses on a one-day Green Expo event, Cooperative Extension has the capacity and expertise to provide sustainability education through workshops, in-service trainings, demonstrations, and other modes that work for a variety of community audiences. Sustainability education provides Cooperative Extension with an excellent opportunity to increase attention to environmental issues and further solidify support for the core mission of Extension.
- Existing resources can be utilized to inform educational programs. The following resources are a great starting point as you consider pursuing sustainability issues:
 - **NIFA** has launched their educational venue called Sustainable Development (<http://www.csrees.usda.gov/sustainabledevelopment.cfm>).
 - **Sustainable Agriculture Research and Education (SARE)**, supported by NIFA, provides a variety of resources on sustainable agriculture (<http://www.sare.org/>).
 - The **National Sustainable Agriculture Information Service** provides a clearinghouse of information on sustainable agriculture issues (<http://www.attra.org/>).
 - **eXtension** offers a variety of resources in related areas such as energy, gardening, and community planning (<http://www.extension.org/>).
 - The **Association of Natural Resource Professionals (ANREP)** provides membership, a directory of interested educators, newsletters, sustainability teaching tools, and a variety of other resources (<http://www.anrep.org/>).

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