UF IFAS Extension UNIVERSITY of FLORIDA

Measuring Outcomes of Landscape Site Visits and Individual Teachings: 2016 Update

In-Service Training 2016 (IST#311001)

FOR THE #GATORGOOD

Dr. Laura Warner

March 16, 2016

Group input!

- Where are you from?
- What is your main area of focus?

Personalized, educational opportunities: site visits, consultations

- Extension program
- *Individual contact teaching methods* (ICT) (Seevers & Graham, 2012)
- Tailored to client needs
- Learner: seeks clarification, incorporates new material, develops deeper understanding of information (Guion, 2006)
- Learner: may acquire new capabilities, skills, or goals

Extension program

The challenge

Evaluating and planning ICT

- ✓Diversity in content
- ✓"Dearth of user-friendly literature"
- ✓Need to be very time and effort efficient
- ✓Sensitive to planning cycles
- ✓High level of frustration?

(Carr & Clarke, 2002)

Group input!

What type of ICT do you conduct?

ICT methods and the plan of work

The Situation – overview of your program rationale

Sunny County encompasses 9981 square miles and is composed of 56 incorporated municipalities. Within the county there are over 6,100 multi-family communities run by an approximated 7,000 property managers. Many of the HOAs are on Sunny County's excessive water user list.

Sunny County property managers have a substantial influence on the local environment through their decision-making about horticultural practices and direct contact with the county's residents. Many of these property managers ***are responsible for landscape-related decision-making yet have not had substantial training*** *in this area.*

The Shady Watershed in Sunny County which is almost entirely made up of 98 multi-family ***communities run by 92 property managers, has been historically*** *impaired by high levels of nitrogen. Excessive nitrogen is* ***linked to over-fertilization and inappropriate fertilization****. Appropriate education for property management professionals will reduce negative practices such as incorrect chemical applications, overuse of water, and improper fertilization.*

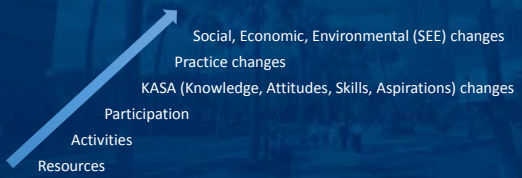
ICT methods and the plan of work

Program Objectives – SMART

- ❑Specific
- ❑Measurable
- ❑Achievable
- ❑Relevant
- ❑Time-Bound

ICT methods and the plan of work

Program Objectives



Adapted from Bennett & Rockwell, 1995

ICT methods and the plan of work

Participation

45 people will participate in individual contact teaching annually as measured by extension contact record sheets.

KASA (Knowledge, Attitudes, Skills, Aspirations) changes

Annually, 80% of property managers participating in Individual Contact Teaching education will report plans to adopt one new best management practice, as measured by an exit survey at the conclusion of the consultation.

- ❑ Specific
- ❑ Measurable
- ❑ Achievable
- ❑ Relevant
- ❑ Time-Bound

ICT methods and the plan of work

Practice Changes

Annually, 50% of property management professionals participating in Individual Contact Teaching education will report the adoption of a new best management practice, as measured by a nine-month follow-up survey.

SEE changes

Annually, 25% of property management professionals participating in Individual Contact Teaching education will reduce their landscape water usage, as measured by a nine-month, follow-up survey.

- ❑ Specific
- ❑ Measurable
- ❑ Achievable
- ❑ Relevant
- ❑ Time-Bound

ICT methods and the plan of work

Educational Methods and Activities

This Extension program offers many one-on-one consultations through ICT, which includes in-office sessions, landscape-site visits, telephone calls, and e-mails. ICT is appropriate because of the in-depth level of instruction needed by the target audience and the diversity of problems. The agent is often asked to diagnose landscape disorders and make recommendations for management options. Frequently, cryptic turf decline and tree disorders are the reasons for the requested consultation. The agent regularly identifies pests and diseases, but he/she often determines that the cause of a problem derives from inappropriate cultural practices, such as overwatering or over-fertilizing. These cultural practices contribute to runoff and nonpoint source pollution, which affect local ground and surface waters.

ICT methods and the plan of work

Educational Methods and Activities

In many cases, a change in cultural practices improves the health of the client's landscape and reduces the environmental impact. Individual Contact Teaching Methods support Extension clients' decision-making, while reducing negative cultural practices. Common topics include: 1) troubleshooting and improving fertilization and irrigation plans; 2) identifying disease and recommending cultural management. In 2013, the agent personally conducted site visits, e-mails, phone calls, office consultations, and provided research-based, follow-up documentation and recommendations.

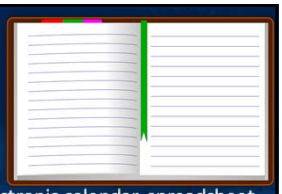
ICT methods and the report of accomplishments

- Site visit / Diagnosis request form
- Documentation of efforts
- Documentation of observations
- Surveys / Interviews
- Publicly available data

ICT Evaluation Methods – Site visit or Diagnosis Request Forms

- To initiate ICT (Paper or electronic)
- Collect: contact information, problem, **baseline** cultural practices (irrigation timing and frequency and depth, type of fertilizer used, annual pest-control budget, etc.)
- Useful for scheduling, documenting recommendations, guiding follow-ups
- Over time, can provide a detailed picture of the major issues and solutions provided through this service
- Measures activities, participation

ICT Evaluation Methods – Documentation of Efforts



- Written journal/logbook, electronic calendar, spreadsheet
- Personal documentation system, may include request forms
- Collect: numbers and types of consulting, issues discussed, problems solved, recommendations made, as well as clients' contact information for future evaluation
- Measures activities, participation, KASA
- Can be used to estimate impacts: water, fertilizer, $ saved
- Can provide a rich picture at the end of each year

ICT Evaluation Methods – Documentation of Observations

- Post-education observations can be useful tools in measuring outcomes
- Written, electronically recorded, and/or photographed
- May be combined with diagnosis request & documentation of efforts
- Measures KASA, practice changes
- Can also be used to estimate impacts: water, fertilizer, or money saved
- Especially **useful when findings are well-documented**

ICT Evaluation Methods – Surveys and Interviews

- Depending on the type of outcome being measured, surveys/interviews can be conducted on the day of or after the consultation (3-6-12 months)
- Can be verbal (in person or by telephone), by e-mail, postal mail
- Measures KASA, practices, and SEE conditions

- Connect changes in practices to known indicators

ICT Evaluation Methods – Publicly Available Data

Utility data

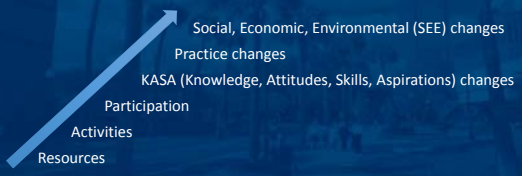
May provide an indication of changes in SEE conditions (income or environmental indicators) throughout time (Harder, 2013)

Example: local water management's water-quality reports used to quantify changes in the local environment

May be more appropriate to identify what contribution the project has made to larger goal

ICT methods and the report of accomplishment

Program Objectives



Adapted from Bennett & Rockwell, 1995

Reporting ICT outcomes

Participation

Objective: 45 property managers will participate in ICT annually as measured by extension contact record sheets.

Outcome: 59 property managers participated in ICT in 2013 as measured by extension contact record sheets.

Reporting ICT outcomes

KASA (Knowledge, Attitudes, Skills, Aspirations) changes

Objective: Annually, 80% of property managers participating in ICTM education will report plans to adopt one new best management practice, as measured by an exit survey at the conclusion of the consultation.

- Outcome: In 2011, 81.3% of property managers (n=48) participating in ICTM education reported plans to adopt one new best management practice, as measured by an exit survey at the conclusion of the consultation.
- The most common practices identified included reducing amount of water applied through irrigation (n=34) and installing plant material appropriate for specific locations (n=12).

Reporting ICT outcomes

Practice Changes

Objective: Annually, 50% of property management professionals participating in Individual Contact Teaching education will report the adoption of a new best management practice, as measured by a nine-month follow-up survey.

- Outcome: In 2013, 66.1% of property management professionals (n=39) who participated in ICTM education reported the adoption of a new best management practice, as measured by a six-month follow-up survey.
- The most common practices included reducing amount of water applied through irrigation (n=32) and installing plant material appropriate for specific locations (n=9).

Reporting ICT outcomes

SEE changes

Objective: Annually, 25% of property management professionals participating in ICT education will reduce their landscape water usage, as measured by a nine-month, follow-up survey.

- Outcome: In 2013, 27% of property management professionals (*n*=16) participating in ICT education reduced their landscape water usage as a result of the consultation, as measured by a nine-month, follow-up survey. The majority of participants reduced irrigation from 7 days/week to 2 days/week (n = 14) or installed soil moisture sensors (n = 2). These behavior changes will:
  - save 13,990,400 gallons of water per year
  - save each community an average of $211.31 / month
  - supply enough water to supply 173 household with water

ICT Success Stories

Statement of problem, Extension program, people served and impact

- Success should be measured by actual actions taken, (not knowledge or intentions)
- **Response**: what you did, for who, with who
- **Results**: what happened? Practice changes, SEE condition changes (back up – how do you know)
- **Relevance**: what is the problem and why does it matter?

Stems from personal rapport

Ask clients that you've served

ICT Success Stories: Example

Relevance: The Shady Watershed in Sunny County which is almost entirely made up of 98 multi-family communities run by 92 property managers, has been historically impaired by high levels of Nitrogen. Excessive nitrogen levels are linked to over- and inappropriate fertilization. Many of these property managers in this area are responsible for landscape-related decision-making yet have not had substantial training in this area.

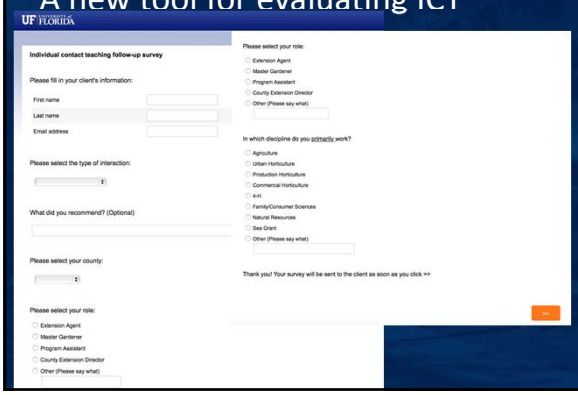
Response: Beginning in 2006, Sunny County Extension, along with Sunny State Department of Natural Resources Management, offered the Site-Specific Landscape Troubleshooting (SSLT) program to help property managers to better manage their landscapes by identifying inappropriate cultural practices onsite.

Results: 74 property managers have participated in a total of 143 SSLT events since 2006. Participants have been surveyed three months following their individual SSLT visit; 79% reported avoiding fertilizer use when rain is in the forecast and 37% have reported financial savings associated with reduced fertilizer use. Additionally, 2013 water quality reports from the Sunny State Department of Natural Resources Management showed no increase in Nitrogen levels for the first time in 11 years. As the SSLT program has positively changed behaviors in communities in this watershed, and contributed to positive directions in water quality in the Shady Watershed, it will continue to operate.

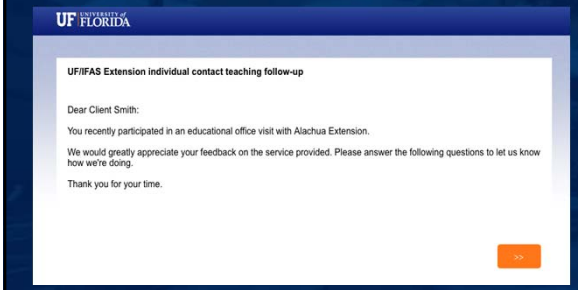
Recommendations for Incorporating ICT Methods into Extension Planning/Evaluation

- Make time to plan evaluation activities
- **Document** efforts
- Connect what you are doing with why
- Evaluate general outcomes, then provide specifics
- Use volunteers when appropriate
- Look for patterns over time
- Connect to known indicators when appropriate
- May be more appropriate to identify what contribution the project has made to larger goal
- Use evaluation data to make decisions

A new tool for evaluating ICT



A new tool for evaluating ICT



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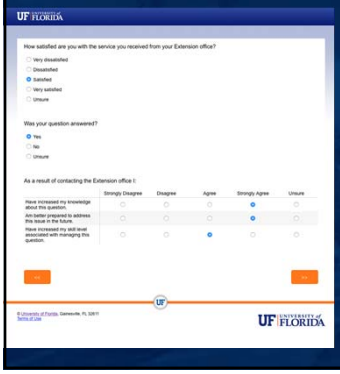

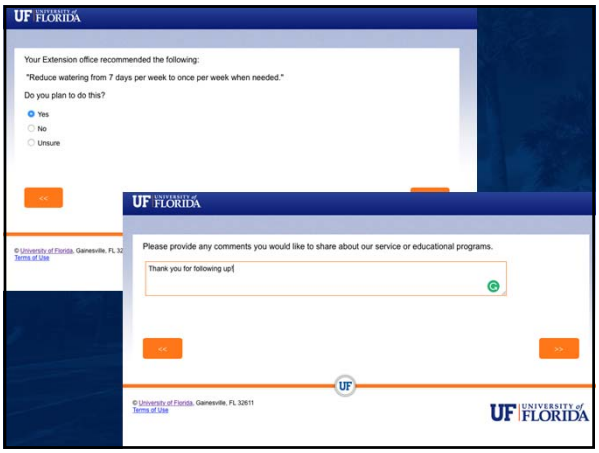

Next Steps / Discussion / Questions

Want to **get involved**?

- Testing the tool
- A research component

- What support or resources do you need?

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Center for LANDSCAPE Conservation & Ecology

UF IFAS

thank you!

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- The majority of participants reduced irrigation from 7 days/week to 2 days/week (n = 14) or installed soil moisture sensors (n = 2).
- This results in an annual savings of 13,990,400 gallons of water, which will save communities a total of $40,572.16 annually on their water bills.
  - 22,555 gal (per 1000 sq. ft./year) * 40,000/1,000*14 = 12,630,800 gal/year
  - 16,995 gal (per 1000 sq. ft./year) * 40,000/1,000*2 = 1,359,600 gal/year
  - 13,990,400 gallons / 1000 gallons * $2.90 = $40,572.16 savings per year (total)
  - $40,572.16 / 16 participants = $2,535.76 savings per participant/year = $211.31 / month
  - 13,990,400 gallons savings per year / 81,030 = enough water to supply 173 household with water

Resources

- Boyer, M., & Dukes, M. D. (2015). *Estimated Water Savings Potential of Florida-Friendly Landscaping Activities* (AE515) https://edis.ifas.ufl.edu/ae515
- Carr, S., & Clarke, C. (2002). Guiding small scale evaluation: A critical step in developing practice. *Practice Development in Health Care*, *1*(2), 104-117.
- Guion, L. A. (2006). *Educational methods for Extension programs* (FCS6013). Gainesville, Florida. UF/IFAS. Retrieved from http://edis.ifas.ufl.edu/fy399
- Sanagorski, L. (2013). *Incorporating Individual Teachings (aka Individual Contact Teaching Methods) into a Sustainable Landscaping Extension Plan of Work and Report of Accomplishments* (WC157) http://edis.ifas.ufl.edu/wc157
- University of Florida Program Development and Evaluation Center. Impacts Toolkit. (http://pdec.ifas.ufl.edu/workload/toolkit.shtml)
- University of Florida. (2011). *Policy concerning annual Reports of Accomplishments and Plans of Work (ROA/POW) submission deadline and quality for UF/IFAS Extension county faculty*. Retrieved from: http://ded.ifas.ufl.edu
- Vavrina, C. *Impact Statements & Success Stories: An Exercise in the Planning, Development and Use of Extension Accountability Tools* http://ded.ifas.ufl.edu/Impacts/Impacts_Success_Stories_files/frame.htm (Adapted by from: Richardson, J.G. & M.A. Corbin. 1998. Writing Program Success Stories. NC Coop. Ext. Serv. AEE 98-02)
- Warner, L. (2015). Evaluating horticultural site visits and individual teaching activities in extension. Journal of Extension, 53(4).