

## **Impact of a Professional Development Experience Focused on Extension Educators as Change Agents**

### **Abstract**

Extension educators should think of themselves as change agents, yet many act as information dispensers. Accordingly, we sought to determine whether we could change perceptions of county Extension educators in Oklahoma regarding their function as change agents. Educators participated in a two-part (two-treatment) professional development experience involving a workshop and a computer simulation. The experience was grounded in Rogers's diffusion of innovations theory and addressed nine established Extension educator change-agent roles. Participants ranked the importance of the roles prior to the experience and again following each treatment. Their perceptions changed regarding only the "Alternative Delivery Systems" role. We explore the imperative to improve Extension agents' understanding of how to be change agents.

**Keywords:** [change agent](#), [professional development](#), [Extension educators](#), [diffusion](#), [Everett M. Rogers](#)

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## **Introduction**

The Cooperative Extension System in the United States is known for being "one of the world's most successful technology transfer systems" and is recognized around the world for the "diffusion of technological innovations" (Rogers, 1988, p. 493). Everett M. Rogers's (2003) diffusion of innovations theory serves as the foundation of Extension outreach methods (Stephenson, 2003). Simply put, new ideas do not sell themselves; rather, they go through a process of adoption. Rogers (2003) conceptualized the diffusion of innovations theory to explain "the process in which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5). Through the years, diffusion research has helped agricultural researchers with the *how* of getting their scientific research put to practical use, and the diffusion model has been "the main theory guiding [Extension educators'] efforts to transfer new agricultural technologies to farmers" (Rogers, 2003, p. 54).

The role of the Extension educator as a change agent has evolved with the complex issues of today's world (Morse, Brown, & Warning, 2006). Much of the environment in which Extension educators work is focused on change. They are tasked with encouraging people to adopt new practices and arming them with knowledge that will help them solve problems and improve their lives (Amend, 1984; Blair & King, 2010; Gallaher, 1967;

Gallaher & Santopolo, 1967; Morse et al., 2006; Rogers, 1963, 2003). However, McDowell (2001, 2004a, 2004b) has argued that many Extension educators fall short of being true change agents and that instead they engage in programming that reacts to clients' concerns but have trouble anticipating or planning for change. Indeed, many Extension educators spend their time consulting one-on-one with clients and planning their days strictly around the phone calls they receive. McDowell (2001) specified that Extension educators are not engaging in "aggressive proactive program[ming]" that is research-based and aimed at promoting new agricultural practices to clientele (p. 74).

With the goal of helping county-level Extension educators see themselves as change agents and not information dispensers, we partnered with the Oklahoma Cooperative Extension Service to provide a professional development experience aimed at helping agents implement diffusion concepts in their daily work.

## Literature Review

Over 40 years ago, the Extension Committee on Organization and Policy adopted a statement emphasizing the need for continuous appropriate professional development for Extension professionals (Extension Committee on Organization and Policy, 1977). Prior to that time, professional development had been described as structured education enabling Extension professionals to develop technical skills (Crosby, 1920; Mathews, 1951). The development of nontechnical skills was not deemed important. Recent research, however, has explored the importance of developing nontechnical competencies in Extension educators (Benge, Harder, & Carter, 2011; Diem, 2009; Harder, Place, & Scheer, 2010).

One such nontechnical competency is the understanding of how to influence the adoption of innovations. Because Rogers's (2003) diffusion of innovations theory aligns with the work of Extension educators (Stephenson, 2003), understanding its underlying principles could help Extension educators understand their role as change agents and better equip them as they deliver programs to their clientele. Extension educators competent in this theory could then easily apply diffusion concepts to their work. Providing professional development to convey diffusion concepts could help Extension educators see themselves as change agents, rather than solely information dispensers.

Groundwork for exploration of Extension educators' views of themselves as change agents was laid decades ago. Brown (1980) distilled the Extension educator's job into nine distinct change-agent roles (Figure 1). Smalley (1985) later used these roles to understand Extension educators' self-expectations in the workplace.

### Figure 1.

Nine Extension Educator Change-Agent Roles as Defined by Dr. Norman A. Brown of the Minnesota Agricultural Extension Service in 1980

Teach Problem Solving Skills.....	Provide clients with skills that help them solve their own problems.
Alternative Delivery Systems .....	Develop approaches for assisting clients in addition to one-to-one consultations.
Interest in Issues.....	Keep aware of issues at the state, regional, and national levels that have an impact on clients.
Involve Volunteers.....	Recruit, select, train, and give volunteers a significant role in the delivery of educational programs.
Good Program Development .....	Identify educational needs with clients, set priorities, implement and evaluate learning experiences, and report results.
Remain Flexible to Meet Needs.....	Remain in touch with and react to the immediate and changing needs of clients.
Access Resources of Total University .....	Go beyond the Extension-related units of the university to acquire information and expertise to meet the needs of clients at the county level.
Self-Development Plan.....	Maintain and improve subject matter and personal skills as an Extension educator.
Educational Risk Taker.....	Try new educational approaches and attempt to work with nontraditional clients where there is risk of not being successful.

## Methodology

To achieve our goal of helping county-level Extension educators see themselves as change agents, we provided them with a professional development experience on how to implement diffusion concepts into their daily work. Specifically, we sought to change the Extension educators' perceptions regarding two of the previously identified Extension educator change-agent roles: "Alternative Delivery Systems" and "Educational Risk Taker."

We conducted our study at the 2016 Oklahoma Cooperative Extension Service conference. Our experimental design involved a pretest and two posttests and a comparison of two groups. We included only responses from Extension educators who completed all three administrations of the instrument (pretest, posttest I, posttest II) in our analysis.

## Instrument Development

We addressed the nine Extension educator change-agent roles defined by Brown (1980) (see Figure 1) and later used by Smalley (1985) to develop an instrument to measure the importance of Extension educator roles. We slightly modified Smalley's (1985) instrument, replacing the term *change agent* with *Extension educator* and including the definitions of the roles. Smalley (1985) established face validity for the instrument on the basis of his experience as an Extension district supervisor and through conversations with other district program leaders. Because 30 years had passed since he had done so, we consulted Extension staff members from three states to reestablish validity. The consensus was that the Extension educator roles were still relevant. Our use of the instrument involved administering it as a pretest and two posttests and having respondents rank the nine Extension educator roles in order of importance. Respondents ranked the most important role as 1 and the least

important role as 9.

## Treatments

Using Rogers's (2003) diffusion of innovations theory as a foundation, we created a 3-hr two-part (two-treatment) professional development experience on becoming an agent of change. Because diffusion theory has deep agricultural roots and underpins the mission of Extension (Stephenson, 2003), we included an overview of Rogers's (2003) theory and provided the opportunity for Extension educators to apply diffusion concepts.

Three key components of Rogers's theory (2003) that we deemed most applicable to Extension educators' daily jobs were selected as focuses for the professional development experience: (a) innovation-decision process, (b) categories of adopters, and (c) opinion leadership. Innovation-decision process is the stages an individual goes through while adopting an innovation. Categories of adopters are classifications applied to individuals on the basis of their personal innovativeness. Opinion leadership is the degree to which an individual can influence others.

Prior to their beginning the professional development experience, we organized the Extension educators in two groups, Group A and Group B. These group designations dictated the order in which the educators would experience the two-treatment program. Treatment A, a researcher-led workshop, included group discussions, activities, and role-playing exercises (Figure 2). Treatment B, a computer-based simulation, allowed participants to work through a simulation exercise individually by reading and following prompts (Figure 3). Each treatment was applied for 1.5 hr. Group A participated in the computer simulation followed by the workshop, and Group B started with the workshop and moved on to the computer simulation. The Extension educators ranked the aforementioned nine roles in order of importance prior to participation in the professional development experience (pretest) and again following participation in each treatment (posttest I and posttest II).

**Figure 2.**

Two-Part Professional Development Experience Treatment A: Workshop



**Figure 3.**

Two-Part Professional Development Experience Treatment B: Computer Simulation



## Findings

Seventy-seven Extension educators completed all three administrations of the instrument. Of those study participants, 75% were females, and 52% classified themselves as family and consumer sciences/4-H educators. Half of the participants had 8 years or less of experience in Extension, and half were 44 years of age or younger.

Across all three of the instrument administrations, "Teach Problem Solving Skills" ranked as the most important role. Somewhat more variation existed with regard to least important role. On the pretest, "Access Resources of Total University" ranked as the least important role. For the first posttest administration, "Educational Risk Taker" and "Access Resources of Total University" tied for least important role, and on the second posttest, "Educational Risk Taker" ranked as the least important role. Table 1 shows results for all roles across the three administrations of the instrument.

**Table 1.**

Rankings of Extension Educator Roles by Participants in Two-Part Professional Development Experience ( $n = 77$ )

Role	Pretest		Posttest I		Posttest II	
	Ranking	$M^a$	Ranking	$M^a$	Ranking	$M^a$
Teach Problem Solving Skills	1	2.75	1	3.08	1	3.34
Good Program Development	2	3.44	2	3.29	2	3.58
Remain Flexible to Meet Needs	3	4.18	3	4.52	3	4.42
Self-Development Plan	4	4.65	5	5.01	5	5.05
Interest in Issues	5	5.42	6	5.36	6	5.06
Alternative Delivery Systems	6	5.43	4	4.71	4	4.96
Involve Volunteers	7	5.45	7	5.75	7	5.35
Educational Risk Taker	8	6.68	8	6.58	9	6.60
Access Resources of Total University	9	6.91	8	6.58	8	6.58

<sup>a</sup>Respondents ranked Extension educator roles on a 1-to-9 scale: 1 = *most important*; 9 = *least important*.

After analyzing means, we used a one-way repeated-measures analysis of variance to analyze the change in participants' rankings of the nine Extension educator roles as a result of the two-part professional development experience. Significant differences were assessed at the  $p < .05$  level.

"Alternative Delivery Systems" was the only role that ranked significantly different over the course of the three instrument administrations,  $F(2, 152) = 3.46, p = .034$ . Participants' ranking of "Alternative Delivery Systems" increased from the pretest ( $M = 5.43$ ) to the first posttest ( $M = 4.71$ ) and remained approximately the same at the second posttest ( $M = 4.96$ ). The change in this role's ranking indicated an increase in participants' perceptions of its importance. An examination of the rankings of this role by group—Group A (computer simulation then workshop) and Group B (workshop then computer simulation)—showed that the role increased in importance from pretest to first posttest more for Group B ( $M = 5.58$  to  $M = 4.47$ ) than for Group A ( $M = 5.24$  to  $M = 5.03$ ). However, the rankings of the role at the second posttest were approximately the same for both groups (Group A:  $M = 4.94$ ; Group B:  $M = 4.98$ ). Details of the changes in ranking of the "Alternative Delivery Systems" role are shown in Table 2.

**Table 2.**

Participants' Rankings of the Role "Alternative Delivery Systems" as a Result of Two-Part Professional Development Experience ( $n = 77$ )

Time	Group A <sup>a</sup> ( $n = 34$ )	Group B <sup>b</sup> ( $n = 43$ )	Total ( $n = 77$ )
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Pretest	5.24 (2.19)	5.58 (2.28)	5.43 (2.23)
Posttest I	5.03 (2.14)	4.47 (2.14)	4.71 (2.15)
Posttest II	4.94 (2.12)	4.98 (2.30)	4.96 (2.21)

aOrder of administration: Posttest I—computer simulation, posttest II—workshop.

bOrder of administration: Posttest I—workshop; posttest II—computer simulation.

The other Extension educator role of interest in the study, "Educational Risk Taker," did not change in importance for participants. Table 3 shows that participants' rankings of "Educational Risk Taker" were not significantly different as a result of the professional development experience.

**Table 3.**

Participants' Rankings of the Role "Educational Risk Taker" as a Result of Two-Part Professional Development Experience ( $n = 77$ )

Time	Group A <sup>a</sup> ( $n = 34$ )	Group B <sup>b</sup> ( $n = 43$ )	Total ( $n = 77$ )
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Pretest	6.29 (2.46)	6.98 (2.12)	6.68 (2.29)
Posttest I	6.06 (2.53)	7.00 (2.14)	6.58 (2.35)
Posttest II	6.50 (2.51)	6.67 (2.43)	6.60 (2.45)

aOrder of administration: Posttest I—computer simulation, posttest II—workshop.

bOrder of administration: Posttest I—workshop; posttest II—computer simulation.

## Conclusions, Discussion, and Implications

Extension educators should be change agents. In fact, the primary reason for Extension's existence is to fulfill change-agent functions and advance the public good (Blair & King, 2010; Morse et al., 2006).

However, shifting Extension educators' view of their function to that of change agent was more difficult than we anticipated. Specifically, a 3-hr professional development experience was not effective in changing their perceptions of Extension educator change-agent roles. Of the two roles we focused on, perception shifted only with regard to "Alternative Delivery Systems," or using a variety of delivery methods when assisting clients. It is plausible that participants perceived this role significantly differently due to our use of two treatment methods during the professional development experience. The workshop engaged participants in a variety of learning activities in small groups, and the computer simulation immersed participants in a game-like environment.

Extension educators' perception of the other role of interest, "Educational Risk Taker," or trying new educational approaches and working with nontraditional clients where there is risk of being unsuccessful, remained unchanged. Perhaps this is because many Extension educators rely on the same teaching methods, such as group meetings, to relay information to their clientele, with few spending time to analyze content and select the most appropriate delivery methods (Cole, 1981). Additionally, many Extension educators focus their time on traditional groups at the expense of educating new groups (McDowell, 2001) as working with nontraditional clientele can be risky.

Perhaps the limited time allotted for the professional development experience was a limitation in our study. In the future, researchers should explore alternative delivery time frames. One alternative could be to offer sequential sessions over an extended period of time as the adoption of new practices "does not usually take place in a 'one-shot' presentation or workshop, but instead over a period of time" (Clements, 1999, "Behavior Change Takes Time," para. 2). Multiple sessions would allow Extension educators to apply the concepts learned to their daily work, reflect on resulting impacts, and discuss their experiences with colleagues.

Although Extension's mission involves fulfilling functions of a change agent, its authenticity in this area has been criticized. McDowell (2001) asserted that Extension educators are *not* being change agents. He argued that this fundamental role has eroded and been replaced by Extension educators who are simply serving as public service agents at the "beck and call" of the local people. Quite possibly Extension educators are not acting as change agents because their programming is driven by organizations offering financial and political support and not by grassroots needs. Extension administrators' requirements are typically tied to financial and political demands, a circumstance that may inhibit educators from taking risks and implementing innovative, impactful programming.

If the intention of Extension programming is to help clientele adopt practices that will improve their lives, Extension may need to reduce one-on-one contacts in favor of more impactful programs (Clements, 1999). For Extension educators, this could mean decreasing the numbers of both "one-shot" programs and face-to-face contacts in order to increase follow-up sessions and allow time to measure program impact. As a result, Extension administrators would need to offer their support, realizing that program success is not measured in the number of phone calls made, meetings held, or face-to-face visits conducted (Clements, 1999). With Rogers's (2003) diffusion of innovations theory serving as the guide, Extension educators can find their way back to being agents of change.

## Author Note

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