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Strategic Use of Audience Response Systems for Extension Programming Impact Evaluation

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Abstract

Audience response systems (ARS) are an increasingly popular tool used to deliver curricula and educational content across diverse, heterogeneous audiences while providing instant data on learner understanding. Given the increasing pressure to assess Cooperative Extension Service (CES) program impact on audiences across a widening scope of demographics, geography, agricultural experience, and education with limited time and human resources, ARS may offer a viable solution. In this paper, audience responses from a targeted Extension program reaching 204 agricultural producers are presented. Improved strategies for ARS applications in Extension program assessment are suggested.

Keywords: Cooperative Extension, audience response, Extension Program Assessment

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Introduction

Cooperative extension personnel have employed numerous variants of post-workshop evaluations in an effort to record effectiveness and efficiency of program content and impact on participants. With programming ranging from farm firm management, feasibility studies of new varietals, cost-benefit analysis of environmental management, and evaluation of value-added consumer markets, Extension economists are faced with added layers of complexity when gauging our impact on audiences. For example, implementation of an aerobic digester to handle post-harvest onion waste to provide energy for a community may take many years to prove its value, which is expected to cross numerous industries and result in time-dependent environmental implications. However, in this case, the workshop may have included an introduction to the digester process along with initial equipment and installation costs and estimates of net present value of the technology, yet less than half of the audience may have the capacity or need, half again may decide to explore further into this alternative, and the few who do choose to install an aerobic digester may not see returns on the investment until five or ten years have passed. Extension economists typically present market situation and outlook reports as a relatively minimal portion of production-oriented workshops. Audience evaluations of educational impact are limited to recording the number of farmers who indicate an interest in using a new tool, or apply new chemicals or fertilizers or feeding rates, or participate in certification programs. These evaluations fail to capture the long-run implications of improved profitability or cost savings associated with a greater understanding of the overall economic situation. Finally, pressure from competitive grant-funding agencies that require project teams to provide reports on the economic impacts of Extension programming on an annual or even quarterly basis is resulting in an increasing need for a quick, consistent, and transparent evaluation process and protocol.

A unique characteristic of the farmer audiences that attend Extension workshops is their relationships to one another and their community. As most meetings are geographically situated where the majority of the farmers are involved with the same commodity, there exists a strong sense of awareness between audience participants. Owners and managers of the largest operations are well-known, newcomers are easily identified, and there are natural comraderies, yet underlying tensions that result from the tendency of improved profitability to attract competition exist. Farmer audiences may be producing similar commodities; however, wide ranges in years of farming experience, formal and informal agricultural education, and position along the market supply chain (i.e., producer, processor, packinghouse, sales channels) are common. Increasingly, Extension audiences are expanding beyond the traditional multi-generational farm family, as the agricultural industry continues to attract new producers from all walks of life. The authors have encountered a range of Extension audiences, including young entrepreneurs with limited or no agricultural background interested in escaping from high-pressure corporate environments, recent retirees looking to diversify investment portfolios or start second careers, and recent graduates hired as farm managers who are charged with overseeing operations funded by investment companies. In this atmosphere, Extension specialists are expected to record demographic data, production and marketing techniques, information sources, etc., and, test audience retention of the material, as well as develop a sense of which economic issues are of primary importance to that specific group “on-the-fly,” all of which may have to take place in a 20-40 minute presentation. Given the traditional reliance on a two-page

hard-copy written evaluation collected at the end of the workshop (when half the audience may have left prior to completing the form), there is a demonstrated need to explore new technologies that allow Extension specialists to meet federal, state, and funding agency reporting requirements and, improve the value-added educational experiences offered to our farmer audiences.

Audience-response systems involve the use of hand-held "clickers" by workshop participants to indicate their response to questions viewed on a traditional PowerPoint slide, with results immediately tallied, shown to the audience, and recorded into a database either anonymously or linked to an individual. Questions ranging from yes/no or true/false, single or multiple answer choice selections, numeric answer, priority ranking, Likert scale, and ice breakers and short essays can be presented to the audience, with responses appearing on the next slide as histogram bar charts. Wireless ARS technology has been used in a traditional classroom setting, as well as corporate and organizational environments, since the early to mid- 2000s. The majority of ARS research reported in the literature focused on the educational progress of large, relatively homogeneous student audiences that were used to record participation, testing and review of lecture materials, with limited applications in continuing education courses in fields such as nursing and in-house corporate training programs.

Although many Extension specialists anecdotally report using ARS technology during adult educational programs, reported results are limited and appear to vary greatly due to ambiguous assessment objectives and inconsistent techniques. There exists a need to explore the capacity of ARS technology to verify achievement of adult instructional and learning objectives. The purpose of this paper is to present the results of traditional Extension workshop evaluations collected using ARS within the context of a broad, multidisciplinary review of the literature which applies ARS approaches and provides evidence of results and, (1) to evaluate the ability of ARS to measure learning outcomes; and, (2) to suggest strategies for effective implementation of ARS in Extension program assessment.

Review of Literature

All ARS consist of presentation software, receiver hardware, and hand-held wireless response devices. Audience responses can be collected anonymously or identified by the individual user, and responses can be shown to the audience or simply recorded into a data file (Cain and Robinson, 2008). These authors reviewed aspects of the use of ARS in classroom environments, and concluded that the primary benefits included: (1) improvements in the lecturer's ability to gauge and improvise by using student feedback; (2) capacity to encourage student interaction and engagement in the lesson content; and (3) a "safe" way for students to indicate their understanding of the material, and their true thoughts and opinions, across personality type, without fear of reprisal or scrutiny for incorrect answers. As with all technology, the value of ARS results was influenced by strategic implementation, the pedagogical methods used within specific learning environments, and constrained by technical limitations in the classroom.

In developing the scope of this study, this review of literature was expanded to discover the best practices, theoretical frameworks, empirical findings, and strategic fundamentals incorporated into ARS usage. Academic disciplines spanning agricultural economics, psychology, physiology, education, medicine, nursing, pharmacology, dentistry, veterinary medicine and, nationwide

audiences ranging from grade school students to professionals to retirees were represented in the ARS-related literature. The incorporation of ARS into classrooms varied from anonymous, single use, single lecture, and binary response options, which targeted audiences composed of relatively similar individuals where results were hidden from the audience to the other end of the spectrum, where heterogeneous participants are queried several times during a lecture with responses recorded specifically to the individual.

Forest (2012) developed an ARS implementation guide for effective use of ARS in classroom settings which included the following suggestions: (1) develop questions that promote critical thinking; (2) develop questions students perceive as important and relevant; (3) prepare for discussion/questions and allow time for discussion; (4) keep questions simple, short, and easy to read; (5) vary question formats (multiple choice, true/false, yes/no, Likert scale); (6) insert a question to stimulate interaction every 10 to 20 minutes; and as with all technology, (7) arrive early to test the ARS and avoid technical problems. Forest offered a summative table detailing evidence of ARS benefits as revealed in his review of literature, which were classified by classroom environment, learning and assessment benefits. Classroom environment benefits were shown by increased attendance, participation and attention, improved participation and anonymity of participation. Learning benefits were demonstrated by increased peer interaction, active discussion, contingent teaching based on feedback, and increased learning performance and quality. Evidence of ARS assessment benefits were evidenced by regular feedback, formative evaluation, and ARS responses compared to class responses.

The applicability of ARS benefits to Extension educational programs was confirmed by findings in a recent Journal of Extension article that documented farmer audience acceptance of the technology across 26 workshops, 1,093 participants ranging from volunteers to students to farmers, and six types of client categories (Sciarappa and Quinn, 2014). Across this diversity of audiences, time, geography, and subject matter, the authors shared evidence of improved lecture content flexibility and student bonding, increased interest levels in subject matter, and, the ability of presenters to quantify knowledge gained, behavior changes, and learner adoption with empirical data. Additional comments highlighted the simplicity of use of the ARS technology, relative low cost in terms of equipment costs and time needed to set up the equipment and prepare data analyses and reports, and the ease of creating appropriate questions for use before, during and after each training session. A recent Journal of Extension article (DeKoff, 2013) provided additional information on the positive audience feedback and relative cost of ARS technology. In this paper, DeKoff (2013) collected ARS data from a dozen farmer participants at a biofuels workshop and included questions asked before and after the training program using the hand-held clickers. Overall, the audience members indicated they enjoyed using the clickers and, the author suggested the cost of the ARS equipment ($1,826 for up to 50 respondents) was reasonable compared to earlier versions (Salmon and Stahl, 2005) and recommended it for audiences with at least ten participants.

While numerous articles outline an array of feasible benefits of using ARS, few articles provide theoretical constructs or comparisons of statistically significant gains in learning between traditional and ARS evaluation methods. Boscardin and Penuel (2012) published a systematic review of literature with the objectives of evaluating the benefits and consequences of using ARS, to provide context to educators for reporting outcomes, and, optimal utilization of the ARS

technology. The authors presented a review of reported outcomes types and the instructional context in which ARS was implemented, spanning 42 articles published from 2000-2009 where the empirical effects of ARS on learning were reported. The authors suggested "For the implementation of ARS to be successful, every question should serve pedagogic objectives that can range from checking for understanding to eliciting discussion for conceptual change and understanding…the combination of these question types will deliver the optimal utilization of this technology for instructional improvement (p. 406)."

As reported in similar articles, the authors discovered: ARS as an instructional tool is relatively simple and low-cost; learners reported improvements in engagement and motivation; peer-to-peer interactions were improved through initiation of discussions; and, instructors were able to use the immediate feedback to adjust lecture points of emphasis. However, inconsistent results were reported when ARS was used by instructors to facilitate formative assessment (monitor student learning) and, measurable gains in student knowledge were limited. The authors concluded that the use of ARS as an instructional strategy with the goal of documenting significant gains in learner outcomes would require incorporation of a theoretical framework. Specifically, and most importantly for adult educators who choose to strategically implement ARS, the authors note that educators must be experts in the subject content, learn to develop appropriate ARS-delivered questions, and possess the expertise to adjust and modify the training based on learner feedback.

Evaluation Methodology

Extension agricultural economists and food scientists conducted one-day workshops focused on delivery of the Market Ready program originally designed and delivered by Tim Woods and his team at the University of Kentucky (www.uky.edu/fsic/marketready). The Mississippi-Arkansas Market Ready workshops were tailored to specific needs identified by statewide producers and state agencies such as health departments and departments of agriculture. Partner organizations included farmers' market associations, food policy councils, restaurant associations, and the state's Cooperative Extension Service (CES). Audience participants were recruited using existing CES and partner organization email list-serves, and an online registration link was provided as well as a hardcopy that could be returned by regular mail to the program organizers. The program was advertised to attract growers with a wide range of experience, diverse production practices and product variety, farm sizes, and market channels utilized.

The Market Ready curriculum was based on testimonials resulting from in-depth interviews of 29 chefs and restaurant owners conducted by Woods (2010). Comments collected during the interviews were reviewed, and primary challenges and obstacles faced by buyers when attempting to source locally grown food items were included in the curriculum. The Mississippi and Arkansas Market Ready Farm to Restaurant curricula were developed to provide access to specific online resources to producers interested in selling a range of food and food products direct to restaurants and retail establishments and minimizing market risk exposure. Each workshop was prefaced with a Market Ready Motivation introduction, which included information from the literature on nationwide and state-specific direct marketing trends, food handling and safety regulations, and the Market Maker food industry portals for Mississippi and Arkansas. The curriculum targeted nine primary beyond-the-farm gate marketing areas,

including packaging and labeling, pricing, consumer demand, production supply, state Market Maker portals (foodmarketmaker.com), delivery/invoicing/insurance, storage/quality assurance, and satisfaction guarantee/communication. Each workshop included four hours of lecture, a working lunch, and a 1.5 hour question and answer session with an expert panel consisting of Extension marketing specialists, a horticultural specialist, a food safety specialist, and a representative of the state agricultural department. Each participant was provided with a 4MB flash drive that included 1,200+ pages of online and hard copy materials that formed the basis of the training materials and related agencies needed to successfully deliver product to restaurants in their respective state.

The ARS technology was incorporated into the Market Ready day-long workshop in the form of both pre- and post-workshop questionnaires. The questionnaire was created using Turning Technology's TurningPoint software and delivered using a traditional Power Point presentation. Audience members were given handheld response devices (Figure 1) at the beginning of the workshop. Prior to launching the questionnaire, the audience was informed of the competitive grant funding that was used to support delivery of the program and of the need for accurate documentation of their learning experience to provide feedback to the educators, funding agency, their state's Cooperative Extension Service (CES), and the federal government.

Figure 1. Turning Point Technologies Handheld Devices Provided to Market Ready Farm to Restaurant Extension Audience Participants.

The ARS questionnaire was developed following survey methodology guidelines outlined by Dillman (2008) and informed by CES and funding agency reporting requirements. Questions included an initial icebreaker to ensure the audience was comfortable with the handheld devices, and a range of demographics, including: gender, age, level of education, percent of family income from farming operations, years of farming experience, sources of production and marketing information, types of food produced, primary and any type of marketing channels used. Audience members were asked to provide pre- and post-workshop subjective assessments of their level of understanding of direct marketing, pricing strategies, food safety and direct-to-restaurant marketing strategies such as Market Maker portal awareness using the clickers that were provided.

Results and Conclusions

Six individual workshops were offered (five in Mississippi and one in Arkansas) and 204 producers attended the programs (Table 1) between December 2011 and February 2013. The

audience was provided with handheld response devices and asked to complete both the pre- and post-workshop evaluations, which were identical in all locations. Almost half of the audience was female (Table 2), and just over half were at least 50 years of age (Table 3). Seventy-seven percent of the audience had completed college and/or graduate school (Table 4). The range in farming experience was extensive, with 20% having no experience, 30% with less than ten years' experience, 15% farming for between ten and 19 years, and 35% with 20 or more years of experience with farming activities (Table 5). However, 64% of participants derived less than ten percent of their family income in the previous year from their farming activities, and 12% indicated that more than half of their income resulted from their farming activities (Table 6).

As understanding the audience backgrounds and educational needs represent a key component of successful implementation of ARS technology, participants were asked about their current marketing channels, food and food items produced, information sources, and the primary challenge facing today's farmers. The top two concerns of workshop participants were labor (26%) and regulations (21%), followed by markets and marketing (17%) and rising input costs (17%) which were identified as equivalent challenges (Figure 2). The majority of participants claimed that CES was their primary production information source (38%), while 18% relied on the Internet, 16% attended workshops and conferences, and 13% looked to their fellow growers (Figure 3). As these workshops were sponsored and delivered by state CES personnel at CES facilities, these responses indicate a growing need to consider innovative partnering opportunities and media types when delivering education and outreach programs.

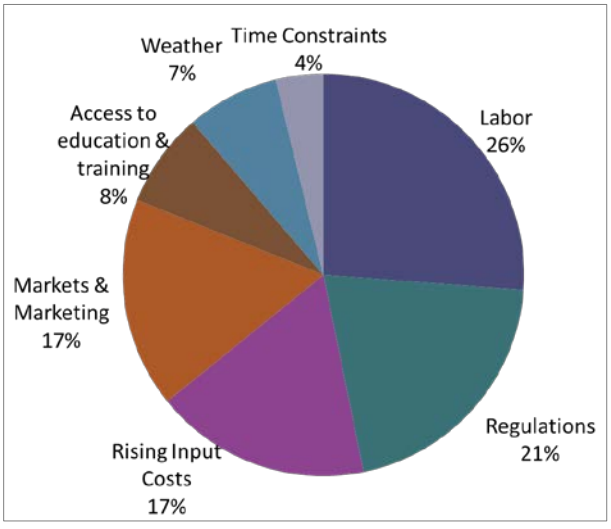

Figure 2. Market Ready Pre-Workshop WorkshopParticipant Responses – "Greatest Challenge Facing Farming Today?" (Limited to single response).

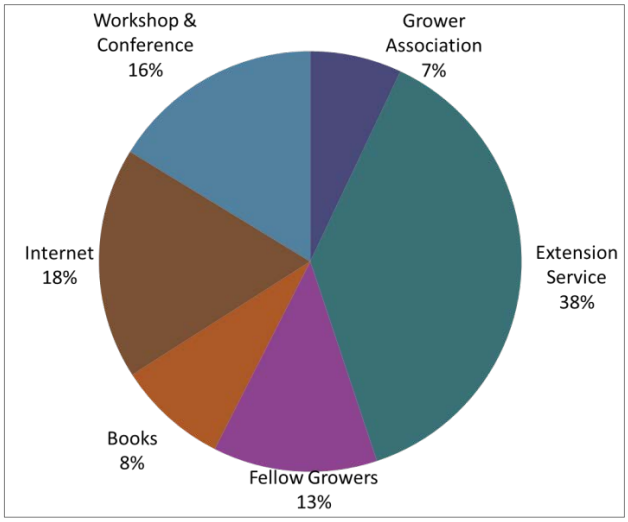

Figure 3. Market Ready Pre-Workshop Workshop Participant Responses – "Primary Production Information Source?" (Limited to single response).

Vegetables were produced by the majority of workshop participants (38%), followed by fruit (15%), and livestock (12%), which together represent those food and food items that are highly desired by restaurants and consumers (Figure 4). When asked to identify their primary marketing channel, 45% of participants selected farmers' markets, followed by 16% with on-farm sales, roadside stands (8%) or wholesalers (8%) (Figure 5). Overall, just three percent of audience members indicated that sales to restaurants represented a primary marketing channel. Of these, 11% indicated they had sold product to restaurants (Figure 6), although it still ranked lower then farmers' markets (25%), on-farm sales (20%) and roadside stands (20%).

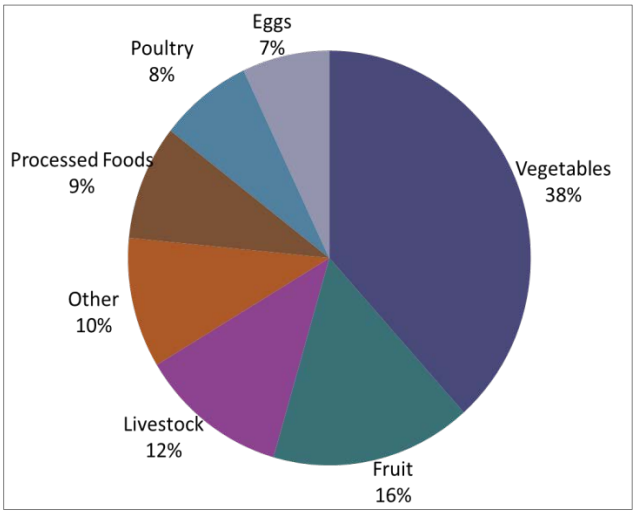

Figure 4. Market Ready Pre-Workshop Workshop Participant Responses – "Food and Food Items Produced…?" (Multiple responses allowed).

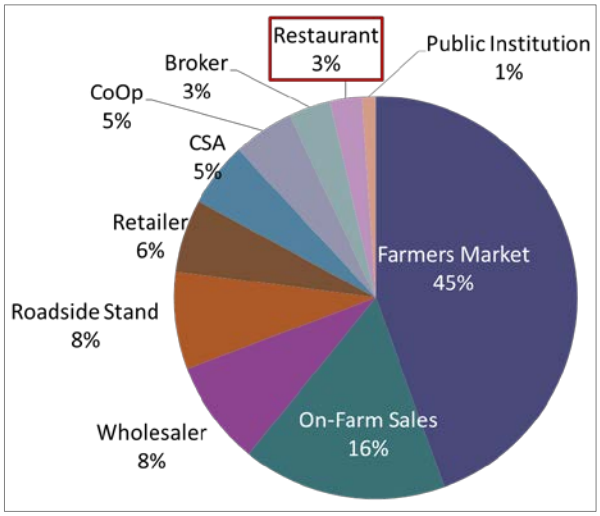

Figure 5. Market Ready Workshop Pre-Workshop Participant Responses – "Primary Marketing Channel?" (Limited to single response).

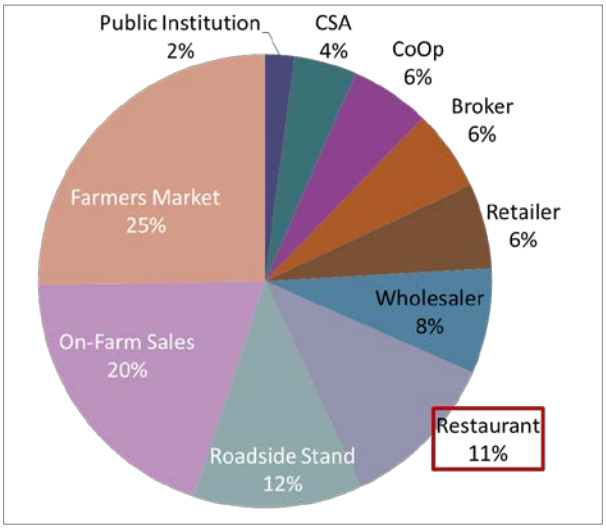

Figure 6. Market Ready Workshop Pre-Workshop Participant Responses – "I have sold my produce to…" (Multiple responses allowed).

Market Maker, an online food marketing portal that is financially supported primarily by states' CES, departments of agriculture, and Farm Credit and offered at no cost to producers, was made available in Mississippi in 2006 and Arkansas in 2009. Although each state had devoted considerable resources to educating agricultural supply chain participants about the features, advantages and benefits available to them through Market Maker, 45% of these participants indicated they had never heard of Market Maker, and just 14% had established an account and/or completed a profile on the Market Maker state-specific portal (Figure 7). Another 23% indicated that had visited their state Market Maker portal, while 18% were aware of the portal but had not yet visited the site. Just nine percent had completed a Market Maker profile for their agribusiness, with an additional five percent responding that they had set up an initial account (Figure 7).

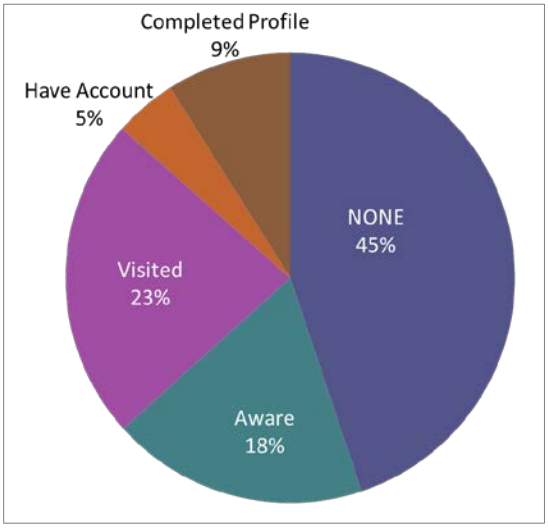

Figure 7. Market Ready Workshop Pre-Workshop Participant Responses – "Pre-workshop Knowledge of Market Maker?" (Limited to single response).

Strategic implementation of the ARS feedback into the workshop lectures was the motivation for including pre-workshop questions. In each workshop, participants were asked to provide a subjective assessment of their own knowledge levels of direct-to-restaurant sales strategies, pricing, and food safety requirements by choosing from a 5-point Likert scale, with response options ranging from "strongly agree" to "strongly disagree." Responses were recorded anonymously and the audience and instructors were immediately presented with the final tallies in a bar chart format. This information was then used by the instructors to prioritize the related component of the material and focus examples used to demonstrate the learning objectives based on the audience demographics and existing knowledge levels. At the conclusion of the workshop, participants were asked to indicate changes, if any, in their knowledge levels, offering the same set of responses. When asked to reveal "knowledge of direct marketing strategies," a total of 64% indicated pre-workshop levels of "none" or "low," with post-workshop responses of "working" and "high" accounting for the majority (60%) for this same learning objective (Figure 8a). Post-workshop participant knowledge of direct sales pricing improved from initial subjective assessments where 77% of the audience selected the "none" and "low" options, shifting to 59% who selected either the "working" or "high" categories (Figure 8b). Similar improvements were

evidenced in participant responses to "knowledge of food safety requirements," with 58% of participants indicating post-workshop knowledge levels of "working" and "high" (Figure 8c). At the beginning of the workshop, 81% of the audiences indicated "none" or "low" knowledge of selling food and food products direct to restaurants, with overall knowledge levels improving to 77% at the end of the workshops (Figure 8d.).

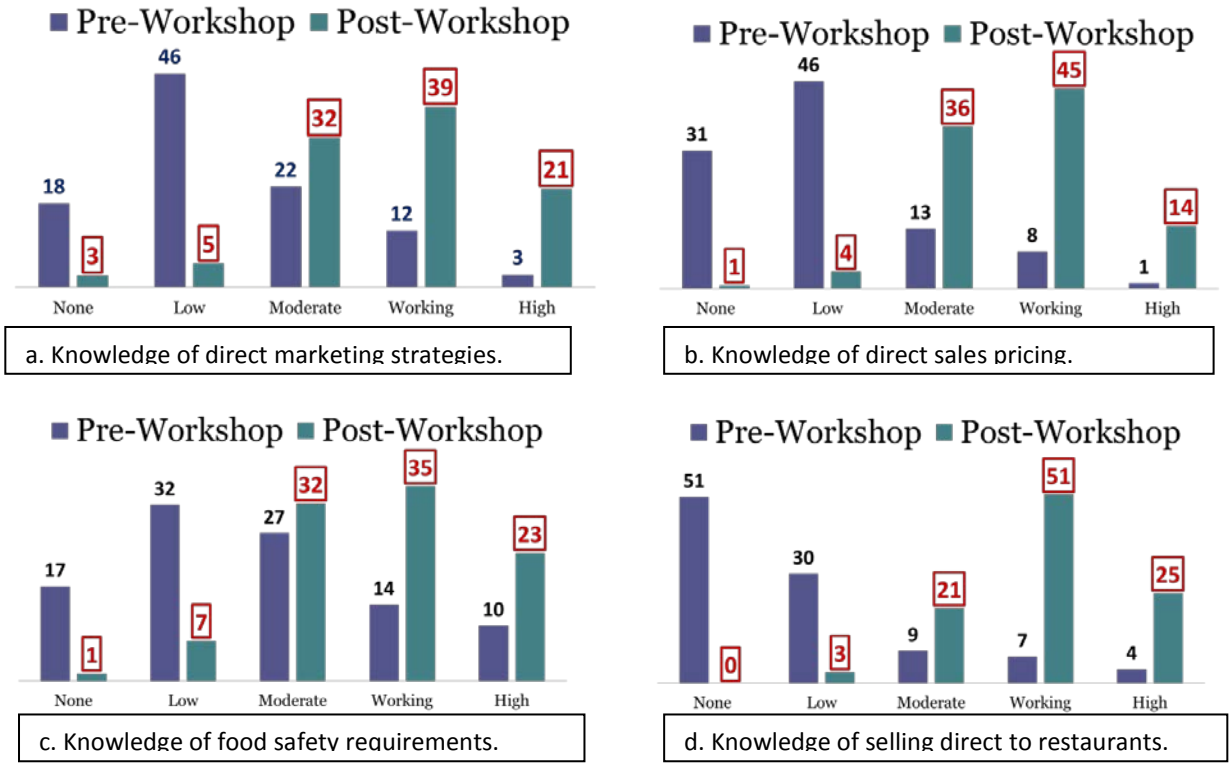

Figure 8 (a-d). Market Ready Workshop Pre- and Post-Workshop Participant Responses – "Indicate Your Knowledge Level of…" (Listed below each figure).

At the conclusion of each workshop, participants were asked to respond to four statements by choosing from a 5-point Likert scale, with response options ranging from "strongly agree" to "strongly disagree." Overall, 73% of participants indicated they "agree" or "strongly agree" with the statement "I am better prepared to sell my food items directly to a restaurant (Figure 9a)." Ninety-four percent of participants selected "strongly agree" and "agree" with respect to understanding how to best manage buyer communication (Figure 9b). Another 85% agreed with the statement "I know where to find information about market data (Figure 9c)." Nearly all (92%) agreed to "better understand the relationship between my production plans and restaurant supply needs (Figure 9d)."

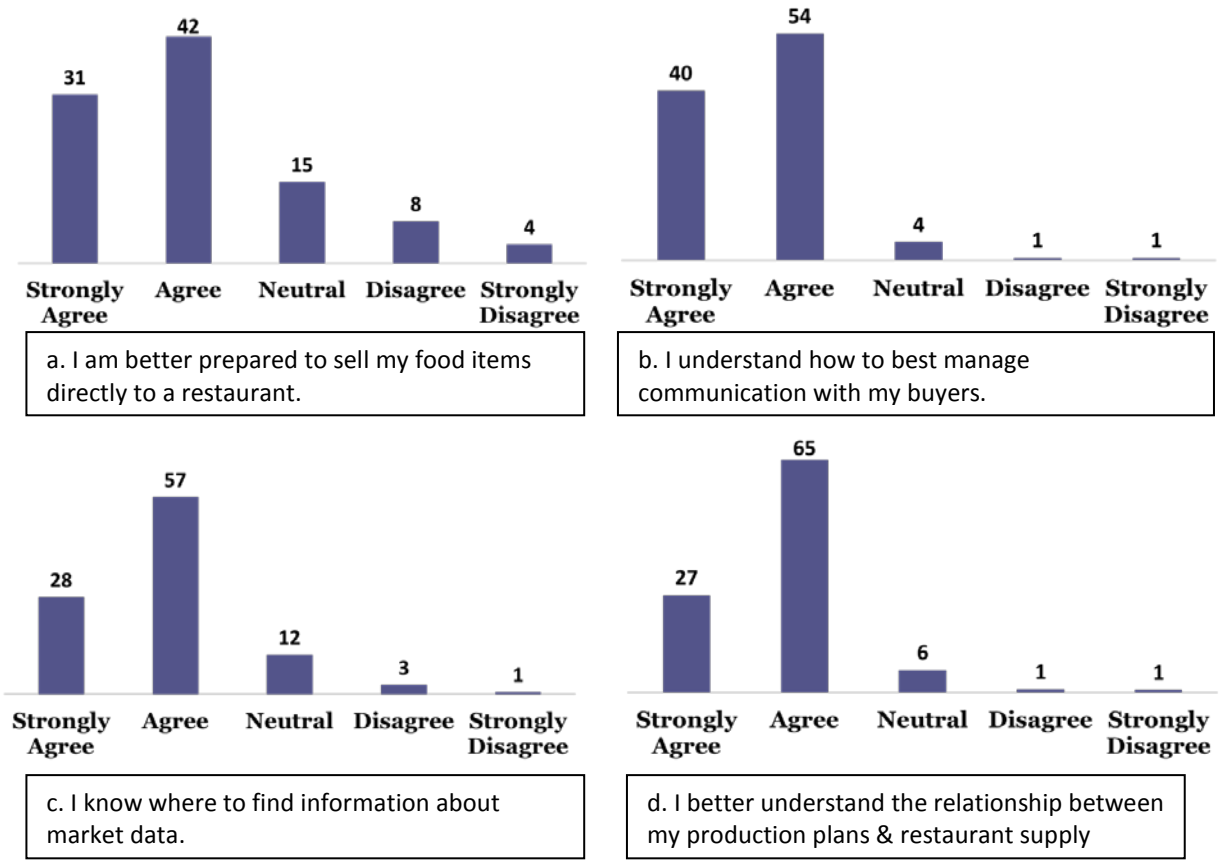

Figure 9 (a-d). Market Ready Workshop Post-Workshop Participant Responses to Statements (Listed below each figure).

Suggested Strategies for ARS Applications in Extension Programming

Development of a theoretical framework targeted at one or more of the four major categories of learner engagement, peer instruction, formative assessment, and knowledge gains that can be addressed by ARS may allow educators the opportunity to test for significant gains in learner knowledge levels. Strategic decisions to use ARS should be founded on the methods and practice of teaching and require educator training on intellectual engagement and exposure to the psychology of learning. The ARS results presented in this paper provide conclusive support for the use of this technology across Extension audiences, providing feedback to both audience members and instructors that served to guide educational content, build rapport, and shape panel discussion topics at the conclusion of the workshop. For example, an unanticipated result of the workshop and panel discussion was a joint effort between Extension personnel, the state food policy council, and the department of agriculture to lobby the state legislature to make changes to regulatory obstacles related to direct sales of meat to restaurants.

The use of ARS to gather learner feedback related to specific educational content prior to the workshop provided the authors with the opportunity to personalize the content to producer

audiences across commodity types, market supply chain position, production and marketing risk management experience, and demographic variations, which provided necessary solutions in a world where contact hours are limited, audience compositions are increasing diverse, and more accurate and timely impact reporting is required. To develop modifications to the instruction "on the fly," instructors and panel discussants took notes on the ARS data as it was recorded, and selected examples for Market Maker specific to the type of food items that audience produced and based on the primary marketing channels utilized. Contrary to the authors' initial concerns, there were no technical problems during any of the six workshops, nor did the participants experience difficulty in adapting to the handheld devices nor user fatigue or frustration. In fact, the authors noted that all participants appeared to be intensely interested in "learning" about one another and, observing the subjective assessments of knowledge levels of each subject matter, as the bar graphs were revealed at the conclusion of each question.

Limitations of employing ARS for Extension programming evaluation include the inability to ask open-ended questions that require written responses, such as preferred future educational topics, or providing an opportunity for individuals to sign up for mailing lists or list-servs. There exists a need for educators to discover which types of questions delivered through ARS are most appropriate to elicit the feedback necessary. As with any survey questionnaire, results are dependent upon the question composition and are restricted to ARS delivery mechanisms. For example, current versions of hand-held response devices are limited to single alpha-numeric responses, which necessitate the use of close-ended or short answer questions and limits the ability of the instructor to capture open-ended or essay responses via ARS. The types of queries included in the ARS should focus on an examination of the audience composition, characteristics, indication of content comprehension, and demonstrated improvements in knowledge levels.

Given the interactive nature of the ARS, the authors recommend employing the ARS more often during the talk, to continue to engage the participants with two or three queries to confirm understanding of each learning objective before moving along to the next item. Using ARS data during a workshop provides the instructors with the opportunity to encourage guided discussions based on "teachable moments" while minimizing the risk of "tangent" or "off-topic" discussions which tend to plague larger audiences and disrupt workshop timetables.

In conclusion, the use of ARS to evaluate Extension program impacts across two states, six workshops, and a widely diverse audience with varying degrees of technological experience, within the time constraints of a day-long program and limited human resources, provided a viable, cost-effective alternative and generated qualitative evidence of the value of this tool for Extension educators. Future studies of multiple-session Extension programs are recommended to explore any differences in audience comprehension levels when ARS or traditional paper questionnaires are used.

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Appendix

Tables 1 -6

Table 1. Market Ready Workshop Location Dates, and Participants (ARS)

Workshop Location	Workshop Date	# Participants	% of Participants
Raymond, MS	12-8-11	42	21%
Hattiesburg, MS	1-19-12	33	15%
Little Rock, AR	2-1-12	56	28%
Pontotoc, MS	3-2-12	32	16%
Biloxi, MS	7-19-12	17	8%
Starkville, MS	2-13-13	24	12%
TOTAL		204	100%

Table 2. Market Ready Workshop Participants by Location and Gender (ARS)

Workshop Location	Male Participants		Female Participants	
	#	%	#	%
Raymond, MS	21	10%	21	10%
Hattiesburg, MS	22	11%	11	5%
Little Rock, AR	28	14%	28	14%
Pontotoc, MS	18	9%	14	7%
Biloxi, MS	6	3%	11	5%
Starkville, MS	11	5%	13	7%
TOTAL (N=204)	106	52%	98	48%

Table 3. Market Ready Workshop Participants by Location and Age(ARS)

Workshop Location	< 20 yrs		20-29 yrs		30-39 yrs		40-49 yrs		50+ yrs	
	#	%	#	%	#	%	#	%	#	%
Raymond, MS	0	0%	6	3%	7	3%	5	3%	24	12%
Hattiesburg, MS	0	0%	4	2%	5	3%	5	3%	18	9%
Little Rock, AR	2	1%	7	3%	12	6%	10	5%	26	13%
Pontotoc, MS	1	<1%	1	<1%	4	2%	8	3%	18	9%
Biloxi, MS	0	0%	2	1%	4	2%	3	2%	9	4%
Starkville, MS	0	0%	1	<1%	1	<1%	8	3%	13	6%
TOTAL (N=204)	3	2%	21	10%	33	16%	39	19%	108	53%

Table 4. Market Ready Workshop Participants by Location and Education Level (ARS)

Workshop Location	High School/GED		Tech/Trade		College		Graduate School	
	#	%	#.	%	#.	%	#.	%
Raymond, MS	7	3%	3	2%	20	10%	13	6%
Hattiesburg, MS	3	2%	4	2%	17	9%	9	5%
Little Rock, AR	2	1%	7	3%	18	9%	28	14%
Pontotoc, MS	10	5%	2	1%	7	3%	13	6%
Biloxi, MS	1	<1%	0	0%	12	6%	4	2%
Starkville, MS	1	<1%	7	3%	11	5%	4	2%
TOTAL (n=203)	24	12%	23	11%	85	42%	71	35%

Table 5. Market Ready Workshop Participants by Location and Years' Farming Experience (ARS)

Workshop Location	No Experience		1-9 years		10-19 years		20+ years	
	#	%	#	%	#	%	#	%
Raymond, MS	5	3%	17	9%	7	4%	13	6%
Hattiesburg, MS	8	4%	4	2%	6	3%	15	8%
Little Rock, AR	18	9%	18	9%	7	4%	12	5%
Pontotoc, MS	3	1%	8	4%	4	2%	15	8%
Biloxi, MS	1	<1%	4	2%	5	3%	7	4%
Starkville, MS	5	3%	8	4%	2	1%	8	4%
TOTAL(n=200)	40	20%	59	30%	31	15%	70	35%

Table 6. Market Ready Workshop Participants by Location and Percent of Family Income Sourced from Farming Activities (ARS)

Workshop Location	< 10%		10-25%		26-50%		51-74%		75+%	
	#	%	#	%	#	%	#	%	#	%
Raymond, MS	29	15%	12	6%	0	0%	0	0%	1	<1%
Hattiesburg, MS	17	8%	7	4%	3	1%	2	1%	4	2%
Little Rock, AR	34	18%	10	5%	0	0%	6	3%	6	3%
Pontotoc, MS	17	8%	8	4%	4	2%	2	1%	0	0%
Biloxi, MS	10	5%	1	<1%	3	1%	1	<1%	2	1%
Starkville, MS	21	10%	0	<0%	1	<1%	1	<1%	0	0%
TOTAL (N=202)	128	64%	38	19%	11	5%	12	6%	13	6%