

## **Examining the Entrepreneurial Leadership Propensities of Extension Educators**

### **Abstract**

Innovation and entrepreneurship are integral to the development and vitality of contemporary communities and economies. Accordingly, entrepreneurial leadership is directly relevant to the Extension education mission. Yet research examining the entrepreneurial leadership propensities of Extension educators is scant. We applied a survey design to analyze the entrepreneurial leadership propensities of Extension educators throughout Arizona using two constructs: innovation and entrepreneurial strategy. The data revealed modest levels of entrepreneurial leadership propensities across the sample. Recommendations aimed at enhancing the entrepreneurial leadership propensities of Extension educators are provided.

**Keywords:** [entrepreneurial leadership](#), [innovation](#), [strategy](#), [Extension educators](#)

### **Ashley Jeffers-Sample**

Assistant Agent, 4-H  
Youth Development  
University of Arizona  
Extension  
Tucson, Arizona  
[ajefferssample@email.arizona.edu](mailto:ajefferssample@email.arizona.edu)  
[@ajs\\_az](#)

### **Matthew M. Mars**

Assistant Professor  
Department of  
Agricultural Education  
The University of  
Arizona  
Tucson, Arizona  
[mmars@email.arizona.edu](mailto:mmars@email.arizona.edu)  
[@mars\\_matthew](#)

### **Amber H. Rice**

Assistant Professor  
Department of  
Agricultural Education  
The University of  
Arizona  
Tucson, Arizona  
[amrice@email.arizona.edu](mailto:amrice@email.arizona.edu)  
[@ahouckrice](#)

### **Robert M. Torres**

Professor and Head  
Department of  
Agricultural Education  
The University of  
Arizona  
Tucson, Arizona  
[rmtorres1@email.arizona.edu](mailto:rmtorres1@email.arizona.edu)  
[@bobbymtorres](#)

## **Introduction**

Entrepreneurial leadership is broadly defined as the advancement of innovation through the application of entrepreneurial strategy (Leitch & Volery, 2017). Such leadership is most often associated with mainstream business development (Leitch, McMullen, & Harrison, 2013). However, entrepreneurial leadership principles and strategies are equally relevant to initiatives directed at bettering communities and society (Mair & Marti, 2006; Zahra, Gedajlovic, Neubaum, & Shulman, 2009). In this broader context, entrepreneurial leaders are change agents who have strong propensities toward innovation and entrepreneurial strategy within both market- and community-based environments.

The relevancy of entrepreneurial leadership to Extension is illustrated across a range of community and economic contexts (Akin, Shaw, & Spartz, 2015; Barnes & Haynes, 2006; Bowen-Ellzey, Davis, Romich, & Lloyd, 2013) and through programs that span youth and adult learner audiences (Bassano & McConnon, 2008, 2011; Kantor, 2012; Scorsone, 2003; Teague, 2001). Indeed, educators within many of the capacity areas of Extension (e.g., community and economic development, scientific and technological training, youth development) are well positioned to serve as entrepreneurial leaders within the communities and economies they serve (Barnes, Meche,

Hatch, & Dixon, 2009; Fields, Brown, Piechocinski, & Wells, 2012; Zamudio, Mars, & Torres, 2016). However, the entrepreneurial leadership propensities of Extension educators themselves have not been adequately studied.

## **Conceptual Framework**

Innovation is the development and refinement of novel and impactful solutions to economic, social, and/or technological problems or opportunities (Baumol, 2010; Rogers 2003). Innovation is reliant on creativity, visionary ideas, and the representation of diverse perspectives and experiences (Chen, 2007; Gupta, MacMillan, & Surie, 2004). The orientation of innovation toward the future requires tolerance for uncertainty and the capacity to adapt to unexpected circumstances. Yet innovation is not a mysterious process. Instead, it is one that involves a combination of strategic intuition and rigorous planning (Kickul, Gundry, Barbosa, & Whitcanack, 2009; Miller & Ireland, 2005).

Entrepreneurial strategy is the culmination of decisions and actions that support the initiation and implementation of innovation (Shane, 2003). Entrepreneurship is a highly analytical and collaborative process that attempts to build resiliency and prosperity through the mitigation of risks and uncertainties (Bullough & Renko, 2013; Bullough, Renko, & Myatt, 2014). The execution of entrepreneurial strategy centers on the mobilization and allocation of the financial, human, and organizational capital necessary to effectively advance innovation (Garud, Schildt, & Lant, 2014; Martens, Jennings, & Jennings, 2007).

The advancement of innovation through entrepreneurial strategy is reflected in the work of Extension educators whose instructional activities and programming responsibilities cover the areas of community and economic development, scientific and technological training, and youth development. Because of the need to understand how Extension educators identify with entrepreneurial leadership as a change strategy, we explored the entrepreneurial leadership propensities of Arizona Extension educators. On the basis of our findings, we make recommendations for enhancing the entrepreneurial leadership propensities of educators within the relevant capacity areas of Extension.

## **Purpose and Research Objectives**

The purpose of our study was to describe the entrepreneurial leadership propensities of Arizona Extension educators. The following research objectives guided the research:

1. Describe the innovation propensities of Arizona Extension educators.
2. Describe the entrepreneurial strategy propensities of Arizona Extension educators.
3. Describe the entrepreneurial leadership propensities of Arizona Extension educators.

## **Methodology**

We identified Arizona Extension educators with a full-time-equivalent appointment of 32 hr per week and above as the population for our study. The instructional activities and programming responsibilities of these Extension educators covered the areas of community and economic development, leadership training, scientific and technological training, and youth development. The census consisted of 236 Extension educators at the time of data collection. Our study was approved by The University of Arizona Institutional Review Board.

We used descriptive correlation research (Ary, Jacobs, Sorenson, & Razavieh, 2009) to investigate the current

entrepreneurial leadership propensities of Arizona Extension educators. We collected data using a web-based version of Mars and Torres's (in press) Entrepreneurial Leadership Proclivity Inventory (ELPI). Our use of "propensity" herein is synonymous with the meaning of "proclivity" as used by Mars and Torres (in press). Innovation and entrepreneurial strategy are the two constructs that make up the inventory. The innovation construct includes the following five subconstructs: idea-driven activities and decisions, idea generation through interdisciplinary collaboration, ability to adapt to new or changing conditions, creativity, and strategic intuition. The entrepreneurial strategy construct includes the following five subconstructs: collaboration, data-driven decision making, resiliency, risk tolerance, and storytelling. We examined each of the innovation and entrepreneurial strategy subconstructs using four statement items.

Respondents were prompted to consider previous instances in which a problem or opportunity required their decision making and leadership. Respondents were then expected to respond to each prompt using a 5-point summated Likert-type scale that ranged from 1 (*never*) to 5 (*always*). The scale was anchored to create equal intervals between response options. Additionally, we collected demographic data identifying the age, gender, and years of experience of each respondent.

The instrument was assessed for validity and reliability in order to address the issue of measurement error (Ary et al., 2009). The content and face validity of the ELPI was determined by a panel that included experts in the areas of commercial and social entrepreneurship, entrepreneurship and leadership education, psychometrics, and data analysis. The reliability of the ELPI was established through a pilot study conducted with community development and human service professionals requiring skill sets similar to those of Extension educators. Twenty-nine usable data cases made up the pilot sample, yielding Cronbach's alpha coefficient estimates of .89 for the innovation measure and .88 for the entrepreneurial strategy measure.

We maximized the response rate by clearly outlining the purpose of the study for prospective respondents, assuring confidentiality, offering an incentive to respond, and sending up to three reminders to nonrespondents (Dillman, 2000). A total of 129 Extension educators responded, resulting in 103 usable data cases ( $n = 103$ ). Despite the multiple points of contact, nonresponse error was present. Therefore, data hold true for only this sample. Measures of central tendency and measures of variability were used to describe the data when addressing the research objectives.

## Findings

Research objective one was to describe the propensities of Arizona Extension educators for innovation (see Table 1). The lowest innovation propensities of the respondents were for idea-driven activities and decisions ( $M = 3.44$ ) and strategic intuition ( $M = 3.64$ ). Conversely, the highest innovation propensities of the respondents were for ability to adapt to new or changing conditions ( $M = 4.13$ ) and idea generation through interdisciplinary collaboration ( $M = 4.05$ ). Thus, the respondents were more oriented toward generating new ideas in teams as opposed to doing so independently and were more inclined to act on ideas on the basis of changing conditions rather than in response to their own strategic intuition.

**Table 1.**

Arizona Extension Educators' Innovation Propensities ( $n = 103$ )

<b>Subconstruct</b>	<b>Minimum</b>	<b>Maximum</b>	<b><math>M^a</math></b>	<b><math>SD</math></b>
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Ability to adapt to new or changing conditions	3.00	5.00	4.13	0.49
Idea generation through interdisciplinary collaboration	1.50	5.00	4.05	0.67
Creativity	3.00	5.00	3.92	0.48
Strategic intuition	2.75	5.00	3.64	0.50
Idea-driven activities and decisions	2.25	5.00	3.44	0.42

aScale: 1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *most of the time*, 5 = *always*.

Research objective two was to describe the propensities of Arizona Extension educators for entrepreneurial strategy (see Table 2). The lowest propensities of the respondents were for risk tolerance ( $M = 3.57$ ) and data-driven decision making ( $M = 3.77$ ). On the other hand, the respondents had the highest propensities for collaboration ( $M = 4.13$ ) and resiliency ( $M = 4.02$ ). Interestingly, the respondents seemed to view entrepreneurial strategy as a way of building resiliency and overcoming challenges rather than an independent approach to leading change through risk mitigation and data-driven decision making. Similar to the findings associated with research objective one, results indicated that the respondents preferred engaging in entrepreneurial strategy via collaboration rather than through independent activities.

**Table 2.**  
Arizona Extension Educators' Entrepreneurial Strategy Propensities ( $n = 103$ )

<b>Subconstruct</b>	<b>Minimum</b>	<b>Maximum</b>	<b><math>M^a</math></b>	<b><math>SD</math></b>
Collaboration	2.00	5.00	4.13	0.55
Resiliency	2.75	5.00	4.02	0.55
Storytelling	3.00	5.00	3.95	0.51
Data-driven decision making	2.25	5.00	3.77	0.54
Risk tolerance	2.50	5.00	3.57	0.54

aScale: 1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 =

*most of the time, 5 = always.*

Lastly, Table 3 shows that respondents indicated an overall higher propensity for entrepreneurial strategy ( $M = 3.89, SD = 0.37$ ) than for innovation ( $M = 3.83, SD = 0.37$ ). Accordingly, the respondents had a marginal preference for acting on rather than generating innovative ideas.

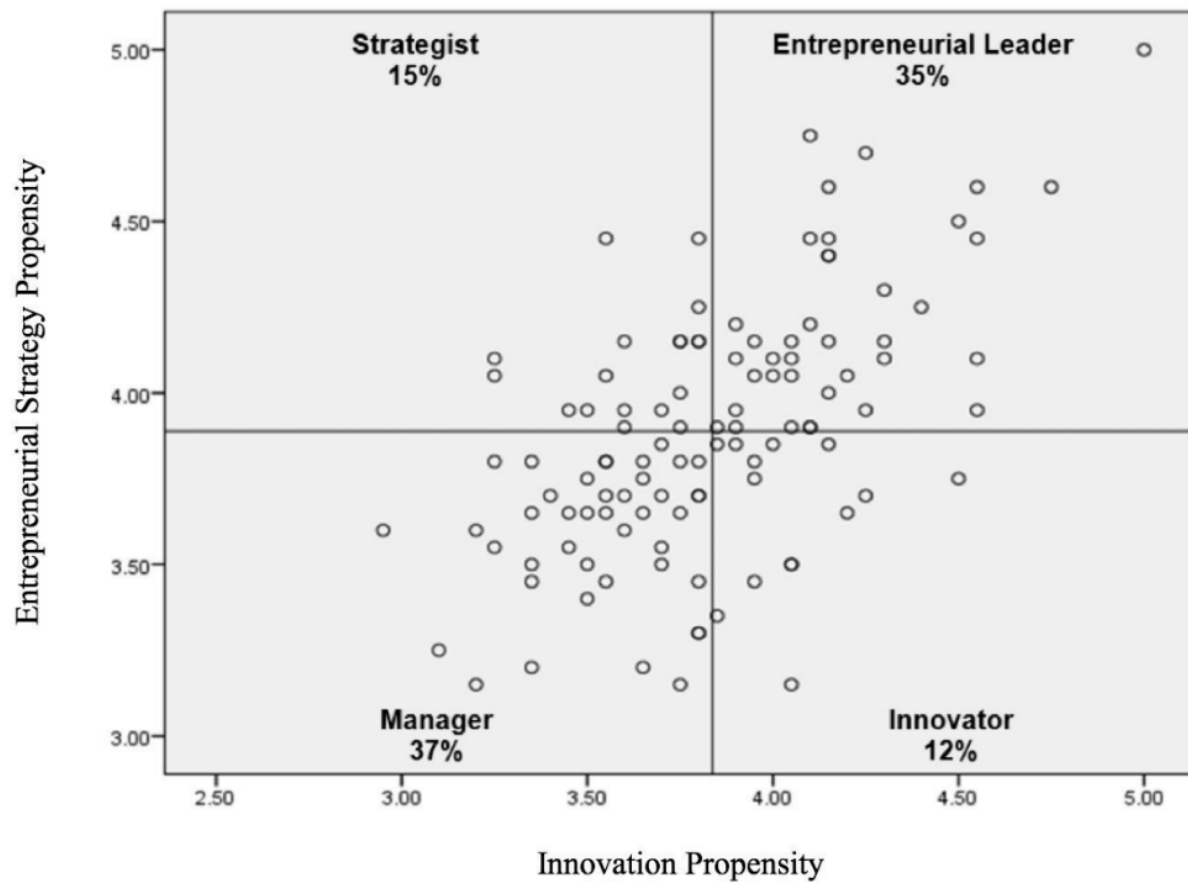
**Table 3.**  
Arizona Extension Educators' Innovation and Entrepreneurial Strategy Propensities ( $n = 103$ )

<b>Construct</b>	<b>Minimum</b>	<b>Maximum</b>	<b><math>M^a</math></b>	<b><math>SD</math></b>
Innovation	2.95	5.00	3.83	0.37
Entrepreneurial strategy	3.15	5.00	3.89	0.37

*aScale: 1 = never, 2 = rarely, 3 = sometimes, 4 = most of the time, 5 = always.*

Research objective three was to describe the propensities of Arizona Extension educators for entrepreneurial leadership. Figure 1 illustrates the findings, displayed according to Mars and Torres's (in press) methodology whereby a two-by-two matrix is used for plotting the means of a group's propensities for innovation and entrepreneurial strategy. Managers, those respondents mostly oriented toward the maintenance of established procedures and performance standards, are represented in quadrant III. Innovators, respondents more inclined to generate rather than advance innovative ideas, are represented in quadrant IV. Strategists, respondents more inclined to advance rather than generate innovative ideas, are represented in quadrant II. Lastly, entrepreneurial leaders, respondents with a notable inclination toward both the generation and entrepreneurial advancement of innovative ideas, are represented in quadrant I. We note that 37% of the respondents showed a general propensity for management and the maintenance of established procedures and performance standards. Similarly, 35% of the respondents indicated an overall propensity for entrepreneurial leadership. Hence, our analysis shows Arizona Extension educators to be slightly more oriented toward managerial processes aimed at maintaining the status quo than toward the creation of change through innovation and entrepreneurial strategy.

**Figure 1.**  
Arizona Extension Educators' Propensity for Entrepreneurial Leadership ( $n = 103$ )



## Conclusions and Recommendations

Innovation and entrepreneurship are vital inputs to the development, competitiveness, and prosperity of U.S. communities and economies (Macke & Markley, 2006; Powell & Snellman, 2004). Extension educators are thereby challenged to develop and enhance the entrepreneurial leadership capacities of the stakeholders they serve (Franz & Cox, 2012; Seger & Hill, 2016). We have revealed the propensities of Arizona Extension educators for entrepreneurial leadership to be nearly equal to those who favor managerial processes. We do not argue against the importance of managerial functions to the maintenance of communities and economies. However, we do contend that the propensities of Extension educators for entrepreneurial leadership should exceed those for managerial processes considering the remarkable influence of innovation and entrepreneurship over the development and vitality of communities and economies (Powell & Snellman, 2004). Accordingly, there is a broader need for academic and professional development programs designed to increase the entrepreneurial leadership knowledge, skills, and overall propensities of emergent and current Extension educators. Herein we provide recommendations for the initiation and implementation of such academic and professional development programs.

First, the integration of formal entrepreneurial leadership courses into undergraduate- and graduate-level programs of study commonly pursued by students preparing to become Extension educators is encouraged. Emergent Extension educators who receive such preparation would be more likely to enter the profession with the knowledge, skills, and perspectives necessary to support the development of entrepreneurial change agents within the communities and economies served. We recommend that the courses be developed to collectively span the topical areas of entrepreneurial strategy, organizational and technological innovation, and strategic communication. Agricultural education and leadership faculty and Extension educators housed within agriculture

colleges are especially encouraged to mobilize the curricular resources and intellectual capital necessary to act on this particular recommendation.

Second, the development of internships that pair aspiring Extension educators with entrepreneurial leaders in Extension, as well as in businesses and community organizations, is recommended. These types of academic experiences are likely to provide students intending to pursue careers as Extension educators with a recognition and understanding of the multiple ways in which entrepreneurial leadership can be applied by stakeholders to the benefit of their communities and surrounding economies. Agricultural education and leadership faculty and Extension educators, working in partnership with Cooperative Extension administrators, are well positioned to lead in the development of such experiential learning opportunities.

Third, Cooperative Extension administrators, Extension educators, and other faculty in agriculture colleges are encouraged to collaborate with business schools, local entrepreneurs, and community leaders to deliver entrepreneurial leadership workshops. These nonformal workshops should be designed to enhance the knowledge and skills of community members with preexisting entrepreneurial aspirations as well as to develop the propensities for entrepreneurial leadership among individuals with more general interest in contributing to the economic vitality and overall betterment of their communities. We also recommend that these workshops be offered through multiple formats (e.g., in-person sessions, online modules, virtual meetings) in order to increase access, enrich learning, and diversify and expand the resulting entrepreneurial networks.

We direct our final three recommendations at the professional development of current Extension educators. First, the implementation of externships and mentoring programs that pair Extension educators with community- and industry-based entrepreneurial leaders is recommended as a strategy for enhancing the entrepreneurial leadership propensities of Extension educators. In addition to promoting professional development, such pairings would further integrate Extension educators into the entrepreneurial networks of the communities they serve. Second, entrepreneurial leadership workshops similar to those we recommended for community members should be routinely offered as professional development opportunities for current Extension educators. Third, Extension administrators are encouraged to integrate items that assess the entrepreneurial leadership propensities of candidates into hiring and promotion protocols. The inclusion of such items, which could be developed using the ELPI subconstructs, would help gradually increase the entrepreneurial leadership propensities of Extension educators.

In closing, we call for future research that builds on our study. In particular, research that scales our design to the regional (i.e., multistate) and national levels would produce a more comprehensive understanding of the propensities of Extension educators for entrepreneurial leadership. Conversely, narrower examinations of entrepreneurial leadership propensity patterns within the particular specializations that make up Extension education (e.g., animal and crop sciences, youth development) would add nuance and overall depth to the initial insights we have generated here. Finally, the implementation and outcomes of the preceding academic and professional development recommendations should be formally assessed and documented.

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