ACADEMIA AND INDUSTRY PERSPECTIVES ON LEADERSHIP AND HUMAN RESOURCE DEVELOPMENT COMPETENCIES REQUIRED FOR AGRICULTURAL LEADERSHIP GRADUATE STUDENTS PURSUING INDUSTRY CAREERS

By

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This dissertation is dedicated to my grandmother, Zelma Jones, and the memory of the late William Alexander Jones.

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TABLE OF CONTENTS

page

ACKNOWLEDGMENTS iv

LIST OF TABLES ix

LIST OF FIGURES xii

ABSTRACT xiii

CHAPTER

1 INTRODUCTION 1

Problem Statement 6
Purpose and Objectives 6
Variables 7
Definitions of Terms 7
Limitations of the Study 9
Assumptions 9
Importance of the Study 9
Summary 11

2 REVIEW OF LITERATURE 12

Theoretical Framework 12
Leadership Defined 16
Overview of Major Leadership Theories 16
Trait approach 17
Situational approach 18
Transformational and transactional leadership 19
Theory X and Theory Y 20
Psychodynamic approach 20
Exemplary Leadership Practices 20
Faculty Characteristics 23
Industry Characteristics 24
Leadershipt and development 24
HRD competencies 25
Academia and Industry Partnerships 31
Curriculum Development 34

Overview of curriculum theories 34
Tyler's rational model 35
Gagne's model 36
Trends in curriculum reform in agricultural sciences 38
Competency defined 40
Competency assessment 41
Competency models 41
Student Characteristics 44
Requisite skills required by industry 45
Leadership training and development 45
Competencies 46
Conceptual Model for the Study 47
Summary 50

3 METHODOLOGY 52

Population and Sample 53
Instrumentation 54
Research Design 56
Validity and Reliability 57
Pilot Study 59
Data Collection 60
Qualitative research component 62
Profiles and trends of graduate agricultural leadership programs 62
Low response rates 63
Data Analysis Procedures 63
Summary 64

4 RESULTS 65

Overview of University and Industry Participants 66
Description of University Faculty Respondents 67
Gender 67
Sources of leadership training 67
Graduate agricultural leadership programs 68
Agricultural leadership teaching experience 68
Business/Industry work experience 69
Highest degree obtained 69
Area of Highest Degree 70
Description of Industry Representatives 70
History of hiring agricultural education graduates 71
Training and development career opportunities for agricultural education graduates 72
Company type 72
Current job titles 73
Years employed in current position and at company 73
Job titles of industry representatives 74

Objective One 74
Objective Two 79
Objective Three 83
Objective Four 86
Objective Five 88
Objective Six 88
Original target audience 90
Graduate agricultural leadership specialization 90
Graduate leadership minor offered 91
Graduate Agricultural Leadership Curriculum 91
Primary areas of research interests 99
Professional memberships in leadership organizations 99
Leadership emphasis in doctoral degree 100
Formal leadership courses 100
Summary 101

5 SUMMARY AND DISCUSSION 102

Problem Statement 103
Population and Sample 103
Review of Methods 104
Summary of Results 105
Description of University and Industry Respondents 105
Objective One 106
Objective Two 108
Objective Three 109
Objective Four 110
Objective Five 111
Objective Six 113
Discussion and Implications 113
Objective One 116
Objective Two 118
Objective Three 119
Objective Four 120
Objective Five 122
Low Response Rates 124
Objective Six 124
Conclusions 125
Recommendations for Practice 126
Recommendations for Future Research 127

APPENDIX

A EXPERT PANEL 129

B UNIVERSITY FACULTY QUESTIONNAIRE 130

C INDUSTRY QUESTIONNAIRE 136

D UNIVERSITY FACULTY QUESTION GUIDE 142

E INDUSTRY QUESTIONNAIRE 143

F PRE-EMAIL NOTIFICATION 144

G E-MAIL NOTIFICATION 145

H REMINDER E-MAIL NOTIFICATION 146

I COVER LETTER TO INDUSTRY RESPONDENTS 147

J COVER LETTER FOR SECOND MAILING 148

K UNIVERSITY CHAIRS QUESTIONNAIRE 149

L UNIVERSITY FACULTY QUESTIONNAIRE 153

M UNIVERSITY AFFILIATION OF FACULTY PARTICIPANTS 155

N INDUSTRY PARTICIPANTS 156

O INSTITUTIONAL REVIEW BOARD FORM 157

LIST OF REFERENCES 159

BIOGRAPHICAL SKETCH 170

LIST OF TABLES

Table page

2-1 Competencies in the Leadership Effectiveness Framework as identified by the USDA Graduate School. 43

2-2 Review of agricultural education research on competencies required for professionals and graduate students. 47

3-1 Cronbach's Alpha for Exemplary Leadership Practices (n=15) 58

4-1 Sources of leadership training of university faculty respondents (n=22)....67

4-2 Graduate agricultural leadership programs as reported by university faculty (n=21). 68

4-3 Years of experience teaching graduate agricultural leadership courses (n=17). 68

4-4 Business and industry experience of university faculty (n=20). 69

4-5 Job areas of industry positions held by university faculty (n=20). 69

4-6 Frequency and percentage of highest degree completed by university faculty (n=21). 70

4-7 Frequency and percentage of area of highest degree completed by university faculty (n=21). 70

4-8 Demographics of industry representatives (n=10). 71

4-9 Frequency and percentage of industry representatives who have hired agricultural education and communication graduates (n=10). 71

4-10 Job titles, preferred degrees, and degree areas of positions for which agricultural education and communication graduates are qualified. 72

4-11 Frequency and percentage of type of company by industry representatives (n=8)..72

4-12 Frequency and percentage of current job titles held by industry representatives (n=10). 73

4-13 Years employed in current position and at current company (n=7). 73

4-14 Mean and standard deviations of perceptions of HRD competencies required for training and development positions as rated by university faculty (n=22).....75

4-15 Means and standard deviations of exemplary leadership practices required for training and development positions as rated by university faculty (n=22). 76

4-16 Mean and standard deviations of HRD competencies required for training and development positions as rated by industry representatives (n=10) 79

4-17 Means and standard deviations of perceptions of exemplary leadership practices required for entry-level training and development employment.....80

4-18 Mean scores of HRD competencies required for training and development positions as rated by university faculty (n=22) and industry representatives (n=10) 84

4-19 Mean scores of leadership practices required for entry-level training and development positions as rated by university faculty (n=22) and industry representatives (n=10) 85

4-20 Frequency of emergent themes regarding HRD/leadership competencies. 86

4-21 Frequency and percentage of decade of original development of agricultural leadership programs as identified by unit leaders and department chairs (n=7).....88

4-22 Frequency of original degrees offered with a specialization or major in leadership (n=7). 89

4-23 Current degrees/programs with a leadership specialization or major. 89

4-24 Frequency of target audience of original agricultural leadership programs (n=7). 90

4-25 Frequency of target audience of current agricultural leadership programs (n=7). 90

4-26 Frequency of graduate leadership specialization only (n=8). 91

4-27 Frequency of graduate minor in agricultural leadership (n=5) 91

4-28 Frequency of graduate courses in agricultural leadership programs (n=8). 91

4-29 Frequency and percentage of total number of graduate students by specialization for Fall 2003 semester. 92

4-30 Frequency of trends of graduate enrollment in agricultural leadership over three academic years. 93

4-31 Frequency of companies employing graduate agricultural leadership students.....93

4-32 Frequency of job titles of non-university positions in which graduate students have obtained employment. 94

4-33 Frequency of job titles for which M.S.....agricultural leadership students are well prepared. 94

4-34 Frequency of job titles for which Ph.D .....agricultural leadership students are well prepared as reported by university department chairs/unit leaders (n=7). 95

4-35 Frequency of projected changes in graduate agricultural leadership courses as reported by university department chairs/unit leaders (n=7). 95

4-36 Frequency of projected changes in competencies during the next 3-5 years as reported by agricultural leadership faculty (n=6).....96

4-37 Frequency of projected changes in competencies during the next 5-7 years as reported by agricultural leadership faculty (n=7).....96

4-38 Frequency of courses essential for graduate agricultural leadership students as reported by agricultural leadership faculty (n=7).....96

4-39 Frequency of eadership inventories/assessment tools in graduate courses as reported by agricultural leadership faculty (n=7).....97

4-40 Frequency of leadership inventories/assessment tools used in graduate courses as reported by agricultural leadership faculty (n=7).....97

4-41 Frequency of required textbooks for graduate leadership courses as reported by agricultural leadership faculty (n=7). 98

4-42 Frequency of industry positions held by agricultural leadership faculty as reported by agricultural leadership faculty (n=7). 98

4-43 Frequency of primary areas of research interests of agricultural leadership faculty (n=7). 99

4-44 Frequency of professional memberships in leadership organizations (n=7).....99

4-45 Frequency and percentage of doctoral degree with a leadership education emphasis by agricultural leadership faculty (n=7) 100

4-46 Frequency of formal leadership courses completed as reported by agricultural leadership faculty (n=7). 100

LIST OF FIGURES

Figure page

1 Leadership Development Model Part A-Developmental Experiences.....13

2 Leadership Development Model Part B–The Development Process 15

3 An instructional system design model (ASTD, 1999) 38

4 Conceptual model of the preparation of society-ready graduates for HR/training and development positions (Jones, 2004). 48

5 Key components of graduate level agricultural leadership curricula. 112

Abstract of Dissertation Presented to the Graduate School
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By

Laikhe Tanyara Jones

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Chair: Edward W. Osborne
Major Department: Agricultural Education and Communication

The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. This study recommended a curriculum model to enhance the leadership specialization in agricultural education graduate programs. The populations for the study included university faculty teaching graduate agricultural leadership courses and representatives of agriculturally related Fortune 500 companies. The study sample included twenty-two agricultural education faculty who teach graduate agricultural leadership courses and ten human resources professionals employed at agriculturally related Fortune 500 companies, agribusiness firms, and career resource centers. A researcher-developed questionnaire was used to determine the competencies required for training and development and human resources careers. In addition, interviews were conducted with university faculty and industry representatives to determine key components of a graduate agricultural

leadership curriculum. To determine the profile of graduate agricultural leadership programs, a researcher-developed questionnaire was sent to university faculty and department chairs and unit leaders of graduate agricultural leadership programs.

The findings revealed that both academia and industry participants rated the following competencies as most important: communication, leadership, and interpersonal relationship building and collaboration. The lowest rated competencies were contracting, business knowledge, and implementation/support. Based on the interviews, participants recommended that graduate agricultural leadership programs focus on management, youth organizations, organizational leadership, and personal leadership development. A very small number of universities in the nation offered an agricultural leadership specialization in the graduate program. These programs have evolved from agricultural education perspectives and have not fully transitioned to an industry focus. Industry representatives preferred master's students for human resources/training and development positions; thus, the proposed curricula model focused on master level student development.

CHAPTER 1
INTRODUCTION

National reports have examined the knowledge, skills, abilities, and competencies required to prepare society-ready graduates. The American Society for Training and Development recently conducted a study, "Mapping the Future: Shaping New Workplace Learning and Performance Competencies." The competency model included competencies, areas of expertise, and workplace learning and performance roles for training and development professionals (Davis, Naughton, & Rothwell, 2004). The competencies were divided into three clusters: interpersonal, business/management, and personal. The areas of expertise included: designing learning, improving human performance, delivering training, measuring and evaluating, facilitating organizational change, managing the learning function, coaching, managing organizational knowledge, and career planning and talent management (Davis, Naughton, & Rothwell, 2004). The workplace learning and performance roles included learning strategist, business partner, project manager, and professional specialist (Davis, Naughton, & Rothwell, 2004).

Increasingly, more graduate students are pursuing careers outside academia (Andruss, 2002; Hartle & Galloway, 1996). According to a recent Dickson's Marketing Academia Labor Market Survey there are twice as many graduate students who are job candidates as there are positions available in the universities surveyed (Adruss, 2002). Hartle and Galloway (1996) asserted that higher education has an obligation to ensure that graduate students have realistic expectations about the job market that awaits them upon graduation. The changing industry demands an influx of graduates who can

compete for job positions outside academia. To prepare students for an ever-changing society and workforce, higher education programs must solicit industry perspectives to determine the requisite skills required for industry careers (Hartle & Galloway, 1996).

According to the Bureau of Labor Statistics (2004), employment growth will be concentrated in the service-providing sector of the economy. Specifically, the education and health services sectors represent an industry experiencing the strongest projected employment growth. By 2012 the number of workers gainfully employed in the education and health services industry is projected to increase by 31.8% (Bureau of Labor Statistics, 2004).

Various studies (Brown & Fritz, 1994; Drucker, 1999; Foster & Pikkert, 1991; Marshall, Patton, & Stocker, 1999; Scanlon et. Al, 1996; Spotanski & Foster, 1989) designed to identify skills and competencies required for business and industry positions have been conducted. According to Drucker (1999), professionals in the 21st Century must be able to manage using "soft skills" to relate to others in the workplace. Human resource managers of large American corporations indicate that soft skills are the most important characteristics an employee possesses, in addition to good communication skills and appearance. Among the soft skills were a "how can I help" attitude, good manners, willingness to take ownership, commitment, initiative, adaptability, teamwork, relationship building through trust and respect for the firm and individuals, and device to advance (Marshall, Patton & Stocker, 1999). A national study of college graduates in food and agricultural sciences found that the factors with the most prevalent impact on employment opportunities for college graduates in food and agricultural sciences are

changing business structure, continued globalization, evolving customer tastes and preferences, and public-policy decisions (Goecker, Whatley, & Gilmore, 1999).

Foster and Pikkert (1991) noted that if students in the colleges of agriculture are to be competitive in a world in which technology is rapidly changing, agricultural faculty need to be able to provide their students with the cognitive abilities to solve problems, make decisions, and integrate new technology outside the classroom. To address this concern, colleges of agriculture across the nation have begun revamping their curricula to incorporate industry-identified competencies.

In agricultural education, various researchers (Dooley & Lindner, 2002; Goecker, 1992; Place & Jacob, 2001) have examined student competencies required for success in different contexts. In the distance education context, researchers synthesized the competencies required for distance education professionals (Dooley & Lindner, 2002). The clustered core competencies include adult learning theory, technological knowledge and skills, instructional design, communication tools, graphic design, and administrative issues (Dooley & Lindner, 2002). Goecker (1992) indicated that agricultural education graduate students needed high levels of teaching and learning competencies to become effective and productive. Place and Jacob (2001) found that extension employees need resource management to competencies, including time management, workplace, and stress management to become effective professionals.

Numerous researchers (Birkenholz et al., 1994; Brown & Fritz, 1994; Fritz & Brown, 1998; Graham, 2001; Hansen et al., 1989; Harris, 1989; Scanlon et al., 1996) have conducted studies to determine the competencies graduate students should possess in order to be marketable. Competencies cited included development of an electronic

portfolio, web design and technology, quality research design, ability to think critically (Rudd, 2000; Torres & Cano, 1995; Whittington & Newcomb, 1993), ability to use problem-solving skills (Dyer & Osborne, 1999), and agricultural literacy (Graham, 2001).

Colleges and universities are revamping leadership curricula to incorporate industry trends and requirements. In *Understanding Agriculture: New Directions for Education,* the authors contended that agriculture is too important a topic to only be taught to individuals pursuing careers in agriculture. They further recommended that, "New curriculum components must be developed and made available to teachers addressing the science basic to agriculture, food, and natural resources; agribusiness; marketing; management; international productivity" (National Research Council, 1988). Graduates of undergraduate degree programs in the 21st Century will be required to possess knowledge of concepts fundamental to literacy, critical thought, mathematics, history, science, values, art experience and appreciation, international perspectives and multicultural experience, in-depth study, how to learning, problem-solving ability, technical skills, practical psychology of interpersonal relations, relevant courses, and practical perspectives on careers (Erpelding & Mugler, 1987; Bjoraker, 1987).

Increasingly, colleges of agriculture are seeking an industry perspective when considering curriculum development. Higher education and business partnerships are emerging to address educational reform issues. Tornatsky (2001) recommended the use of a practitioner-orientated approach to better understand and enhance the craft of university-industry technology transfer.

Similarly, researchers in organizational leadership are examining the nature of leadership curricula in higher education programs (Crawford, Brungardt, Scott, & Gould,

2002). Approaches to leadership development include the incorporation of adult learning theory (Crawford et al., 2002; Mitchell & Poutiatine, 2001), experiential learning models (Mitchell & Poutiatine, 2001), and action research (Zimmermann-Oster & Burkhardt, 1999). According to Crawford et al. (2002), major changes, such as faculty cost and delivery model, will continue to impact degree program requirements for organizational leadership.

A review of graduate programs in organizational leadership identified approximately 40 graduate degree programs, including only six programs offering doctoral degrees (Crawford et al., 2002). The study concluded there have been few graduate programs in organization leadership exist that are designed to examine the theoretical perspective of organizational leadership (Crawford et al., 2002). Master's degree requirements for organizational leadership programs were an average of 37 credit hours. Eleven programs required a research component, and nearly all programs had a research or other project requirement (Crawford et al., 2002).

Mitchell and Poutiatine (2001) recommended that future efforts to provide opportunities for leadership development should carefully examine how leadership education can be most effective. Leadership education is becoming widespread at the graduate level and is available within specific disciplines such as schools of business administration, education, and public policy. Leadership academic programs are emerging into a new field of study (Bennis & Goldsmith. 1997; Gardner, 1990; Komives et al., 1998; Rost, 1993). Mitchell and Poutiatine (2001) stated that, "To meet the challenges presented by our changing society, the United States system of higher

education, specifically graduate programs, must devise practical, efficient, and effective approaches to leadership development" (pp. 183).

Efforts to revitalize leadership curricula must include a critical review of the marketability of agricultural education graduates for industry leadership careers. Currently, there are limited data describing curricula, graduates, placements, and industry needs and preferences to assist faculty and administrators in developing graduate-level agricultural leadership curricula.

Problem Statement

It is imperative for administrators and instructional designers to dialogue about their perceptions of curriculum areas that are important and to determine ways to improve the delivery of the curriculum. Limited research is available on the marketability of agricultural education graduates for industry leadership positions. While studies have been conducted on the industry perspective of curriculum revisions necessary to prepare undergraduate students for a competitive job market, few studies have been conducted that address the specific curriculum content areas necessary to prepare graduate students for such positions. Therefore, the problem to be addressed in this study is the limited research available on the marketability of agricultural education graduates for industry leadership and training and development careers.

Purpose and Objectives

The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. To accomplish this goal specific objectives were to:

1. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses.

2. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by selected industry representatives.

3. Compare and contrast the importance of HRD/leadership competencies necessary for agricultural education graduate students to obtain employment in training and development as perceived by university faculty and industry representatives.

4. Identify key components of a graduate level agricultural leadership curriculum as recommended by industry and academia representatives.

5. Propose a model for graduate-level agricultural leadership curricula based on research and findings of the study.

6. Determine the profile of graduate agricultural leadership programs.

Variables

The primary independent variables in this study include gender, educational background, experience, years in current position, job title, type of company, leadership courses taught, and business/industry experience. The dependent variables in this study included perceptions of university faculty and industry representatives toward HRD/leadership competencies and exemplary leadership practices for agricultural leadership graduate students, perceptions of university faculty and industry representatives' key components of graduate-level agricultural leadership curricula, and profiles of current graduate agricultural leadership programs.

Definitions of Terms

Key terms in the study were operationally defined as follows:

- **Academia representatives**. Agricultural education faculty who teach graduate leadership courses as identified by their unit administrator. Alternatively, the respondent pool was broadened to include chairs or unit administrators of graduate agricultural education programs.

- **Agribusinesses**. Agriculturally related Fortune 500 companies categorized under the subheadings, *Food Consumer Products, Food Production Food Services, Tobacco, Industrial and Farm Equipment*, and *Wholesalers, Food, and Grocery* (http://www.fortune.com, April 14, 2002).

- **Agricultural education.** Secondary and post-secondary programs designed to prepare education and communication specialists. On the secondary level, agricultural education includes FFA, SAEP, classroom instruction, and laboratory (Phipps & Osborne, 1990). At the post-secondary level, program emphases may include teacher education, adult or Extension education, agricultural communication, leadership, international agriculture programs, and other areas**.**

- **Agricultural leadership.** The process whereby an individual influences a group to achieve a common goal (Northouse, 2001). For the purposes of this study, agricultural leadership refers to a specialization or program emphasis in departments of agricultural education throughout the United States.

- **Agricultural literacy.** Knowledge and understanding about our food and fiber system (Leising & Zilbert, 1994).

- **Competences.** A cluster of related knowledge, attitudes, and skills that affect a major part of one's job are correlated with job performance that can be measured against standards (Parry, 1998). In this study, competencies measured will include industry-identified competencies relative to graduate employment in leadership positions.

- **E-learning.** Instructional content or learning experiences delivered or enabled by technology (ASTD & NGA Center for Best Practices, 2001). For the purposes of this study, e-learning refers to distance education in the private sector.

- **Human resource development.** "..the integrated use of training and development, organization development, and career development to improve individual, group, and organizational effectiveness" (McLagan, 1989, p. 7).

- **Industry-identified competencies**. Competencies that were identified by industry representatives and deemed essential for obtaining gainful employment in training and development.

- **Industry leadership positions.** Position titles such as training specialist, training director or manager, change agent, and leadership education specialist.

- **Industry representatives.** Human resource professionals employed by agriculturally related Fortune 500 companies that were categorized under the subheadings *Food and Consumer Products, Food Production, Food Services, Tobacco, Industrial and Farm Equipment,* and *Wholesalers, Food and Grocery.* (http://www.fortune.com, April 14, 2002). Alternatively, the respondent pool was broadened to include career resources professionals from land-grant colleges and human resource professionals from agribusinesses.

- **Leadership.** The process whereby an individual influences a group to achieve a common goal (Northouse, 2001).

- **Skill.** A present, observable competence to perform a learned psychomotor act (Maxine, 1997). In this study, skills were identified by academia and industry representatives.

- **University agricultural leadership participants.** University participants who were faculty in graduate agricultural leadership programs.

- **University department chairs/unit leaders.** University participants who were department chairs or unit leaders of graduate agricultural leadership programs.

- **University faculty participants.** Faculty who teach graduate agricultural leadership courses at land-grant universities

Limitations of the Study

This study had the following limitations:

- The population frame for this study included industry representatives of selected Fortune 500 companies with an agriculturally related specialization. Also included in the study were academia representatives from selected departments of agricultural education with leadership programs at land-grant colleges and universities.

- Data provided by academia and industry representatives represented opinions at a particular point in time.

- Generalizability of the findings was limited to the respondents participating in this study.

Assumptions

The following basic assumptions were made in conducting this research study:

- The respondents were candid and honest in providing their responses to survey items.

- The survey instruments were completed by the respondents for whom the instruments were intended.

- The selected university faculty, university agricultural leadership faculty, university department chairs/unit leaders, and industry representatives possessed general knowledge of leadership and its dimensions.

Importance of the Study

This study examined academia and industry perspectives on Human Resource Development competencies and leadership practices required for graduate students

pursuing training and development employment. Many of the previous studies (Arndt et al., 1997; Brown & Fritz, 1994; Cole & Thompson, 2002; Dodge & Foster, 1990; Fritz & Brown, 1998 Harris, 1989; Scanlon et al., 1996; Schumacher & Swan, 1993; Spontanski & Foster, 1989) conducted in this area focused specifically on curriculum revitalization of undergraduate programs in colleges of agriculture across the nation. As more graduate students pursuing non-academic careers (Andruss, 2002), research efforts to determine the required competencies are imperative. The rapidly changing competency skill sets need to be updated periodically and utilized to update curricula accordingly.

Without input from agribusinesses and administrators, curriculum planners will have difficulty modifying current graduate agricultural leadership education programs of study. There is limited research on the marketability of agricultural education graduates for industry leadership positions. While studies have been conducted on the industry perspective of curriculum revisions necessary to prepare undergraduate students for a competitive job market, few studies have been conducted to identify the competencies required for non-academia careers and to recommend curriculum to prepare society-ready graduates. Thus, it is beneficial to focus research efforts on curriculum development, competency identification and assessment, and dynamics of academia-industry partnerships.

This research study is important to both academia and industry audiences involved in leadership development programs. Given the cyclical demand for university faculty and the need for effective leadership in all public and private settings, graduate students should be prepared to compete for non-academic careers. Therefore, research efforts that provide empirical data to support the availability of industry leadership employment and

more fully documented industry leadership perspectives are pertinent and may assist in building a theoretical basis on which departments can improve their leadership programs. From the industry perspective, partnerships with universities will strengthen employees and help to secure qualified graduate students to fill vacancies for leadership and training positions.

Summary

Chapter one provided the background for studying academia and industry perspectives on the importance of human resource development and leadership competencies. The chapter also included the problem statement, purpose and objectives, variables, definitions of terms, limitations, assumptions, and importance of the study.

CHAPTER 2
REVIEW OF LITERATURE

The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. Chapter 1 described the background for studying university faculty and industry perspectives on graduate competencies necessary for training and development employment.

Chapter 2 presents a theoretical framework and empirical research relevant to this study. This chapter is subdivided into the following topics: overview of leadership theories, leadership styles, academia and industry partnerships, curriculum development and theory, and human resource development competencies. In addition, a conceptual model of graduate agricultural leadership curricula is presented.

Theoretical Framework

The Center for Creative Leadership defines leadership development as the expansion of a person's capacity to be effective in leadership processes and roles. According to McCauley, Moxley, and Velsor (1998), this view of leadership is based on the assumptions that:

- Leadership development involves the development of capacities with an individual.
- Life experiences cause people to take on leadership roles and participate in leadership processes to fulfill commitments to organizations, social groups, or neighborhoods.
- People can learn, grow, and change.

The Center for Creative Leadership developed a leadership development model that describes the processes that influence leaders' effectiveness (see Figure 1). This model

illustrates the direct relationships among assessment, challenge, support, and developmental experiences (McCauley, Moxley, & Van Velsor, 1998).

Figure 1. Leadership Development Model Part A-Developmental Experiences

Leadership development should include assessment data (McCauley, Moxley, & VanVelsor, 2000). Assessment is important in increasing one's understanding about personal strengths, level of current performance or leadership effectiveness, and development needs. It also provides benchmark data for future development.

- What am I doing well?
- Where do I need to improve?
- What are others' views of me?
- How do my behaviors impact others?
- How am I doing relative to my goals?

Assessment data can be gathered from oneself or from other people (McCauley, Moxley, & VanVelsor, 2000). Other sources of assessment include peers in the workplace, bosses, employees, spouses, children, parents, friends, customers, counselors, and organizational consultants. These data can be collected using informal or formal methods. Examples of formal assessments include performance appraisals, customer evaluations, 360-degree feedback, organizational surveys that measure employee satisfaction with managers, and assessments and recommendations from consultants (McCauley, Moxley, & VanVelsor, 2000).

Experiences that shape individuals the most are the ones that challenge people. Individuals develop ways of thinking and acting that work for them and make them more comfortable. Challenging experiences force individuals to go beyond their comfort zone and develop new capacities to become successful. The importance of new experiences is highlighted in Hill's (1992) study of men and women during their first managerial assignment. The participants found that becoming a manager involved more than just learning new skills and building skills. Rather, it involved a transformation in thinking and feeling in new ways.

Assessment and challenge are important factors in leadership development; however, it is also important that support is available to individuals (McCauley, Moxley, & VanVelsor, 2000). Assessment data point out the strengths and weaknesses, challenge provides disequilibrium to foster people to change, and support is an indication that efforts to learn and grow are valued. Support can come from other people, including bosses, coworkers, family, friends, professional colleagues, coaches, and mentors (McCauley, Moxley, & Van Velsor, 1998). The role of these people can range from listening to stories of struggle, identifying with challenges, suggesting strategies for coping, reassuring in times of doubt, inspiring renewed effort, celebrating the smallest accomplishments and cheering from the sidelines. Talking to others about struggles can help people in their personal struggles. Support is a key factor in maintaining motivation to learn and grow (McCauley, Moxley, & Van Velsor, 1998). Similarly, individuals with higher self-efficacy exert more effort in mastering challenges and persevering in difficult situations (Bandura, 1996).

Open communication discussing mistakes, confirming and clarifying lessons taught gives individuals a sense that they are on the right track, the feedback is legitimate, and new ways are making sense of their situations as shared by others.

The Center for Creative Leadership further developed the Leadership Development Model Part B (Figure 2) to show the leadership development process. According to this model, an individual's ability to learn impacts leadership development, which impacts the variety of developmental experiences (McCauley, Moxley, & Van Velsor, 1998).

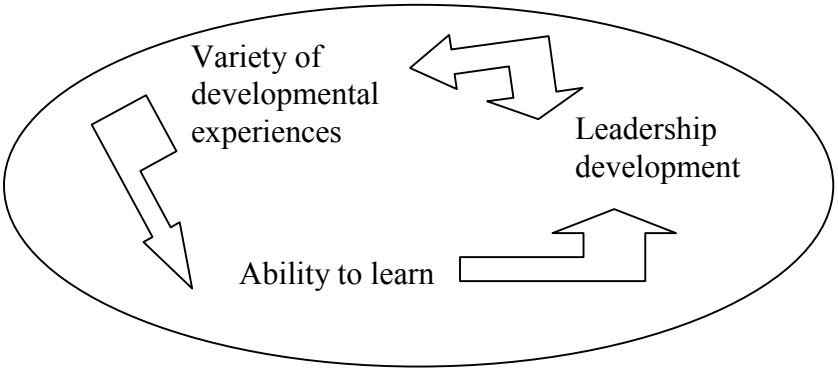

Figure 2. Leadership Development Model Part B–The Development Process

The leadership development process is based on the assumption that most people take on leadership roles and engage in learning development processes to fulfill commitments to social entities, such as organizations, volunteer or social groups, neighborhoods, and professional groups (McCauley, Moxley, & Van Velsor, 1998). Rather than distinguishing leaders from non-leaders, the model assumes everyone can learn, grow, and change.

The ability to learn from experience entails recognizing when new behaviors, skills, or attitudes are needed, engaging in a variety of developmental experiences to learn new skills, and developing and using a variety of learning tactics to acquire new skills, approaches, or attitudes (McCauley, Moxley, & Van Velsor, 1998). The leadership

development process Part B illustrates how the development experiences and ability to learn have a direct impact on each other. Engaging in developmental experiences can enhance a person's ability to learn (McCauley, Moxley, & Van Velsor, 1998).

Leadership Defined

Leadership has been widely defined over the years; however, a consensus among researchers has not been established. Researchers have examined leadership from a variety of perspectives; however, there is no universally accepted definition of leadership. The following examples represent the wide gamut of leadership definitions. Kouzes and Posner (1997) defined leadership as "the art of mobilizing others to want to struggle for shared aspirations." Gardner (1990) defined leadership as "the process of persuasion or example by which an individual or leadership team induces a group to pursue objectives held by the leader and his or her followers" (p. 1). Rost (1991) defined leadership as "an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (p. 102). Chemers (1997) characterized leadership as "process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task" (p. 1).

Similarly, Northouse (2001) synthesized leadership theories into four major conceptualizations: leadership is a process that involves influence, occurs within a group context, and involves goal attainment. Based on these concepts, Northouse (2001) defined leadership as a process whereby an individual influences a group of individuals to achieve a common goal.

Overview of Major Leadership Theories

Leadership has been widely defined and conceptualized as a function of the leader, follower, context, and process. Despite diverse viewpoints, leadership theories can be

classified into major categories: trait approach, behavior approach, and situational approach (Yukl, 1981).

Trait approach

The trait approach to leadership has emphasized a specific set of traits that only leaders possess (Northouse, 2001). The assumption of the trait approach has been that leaders are born and not made. The trait has been based on the premise that leaders are different, and their difference is based on special gifts and talents.

The trait approach to leadership emphasizes the importance of having a leader with a certain set of traits essential to effective leadership (Northouse, 2001). The leader's personality is central to the leadership process. Using the trait approach, leaders analyze their traits to determine strengths and weaknesses and to ascertain how they fit into the organizational structure (Northouse, 2001). One of the earliest systematic attempts to study leadership was the trait approach. The trait approach was based on the assumption that leaders are born with qualities and characteristics necessary for leadership.

Research using the trait approach has focused on determining the specific traits that distinguish leaders from followers (Bass, 1990). Stodgill's (1974) work identified six categories of personal factors of leadership: capacity, achievement, responsibility, participation, status, and situation.

The strengths of the trait approach to leadership have been appeal, research base, emphasis on leader, and benchmarks for effective leaders (Northouse, 2001; Smith & Peterson, 1988). The trait approach has been appealing because it is based on the premise that leaders are different, and their difference is based on the special gifts and talents they possess. People have a need to view their leader as a gifted individual, and the trait approach satisfies this need. A second strength of the trait approach has been its

research base (Northouse, 2001). The trait approach has more breadth and depth in its research base than any other leadership theory. This research base has produced a body of knowledge and data that emphasize the significance of personality traits in the leadership process.

Another strength of the trait approach is the emphasis on leader qualities necessary for effective leadership (Northouse, 2001). Despite the potential weakness by focusing solely on leader qualities, the trait approach has provided an in-depth understanding of how the leader's personality relates to the leadership process. Lastly, the trait approach has provided benchmarks for leadership qualities desired for effective leaders (Northouse, 2001). Using this approach, personality and assessment procedures can be used to provide invaluable information to leaders about their strengths and weaknesses, as well as strategies to improve their leadership effectiveness (Northouse, 2001). Early attempts to identify individual traits led to the conclusion that no single trait can distinguish leaders from non-leaders.

Situational approach

The situational approach to leadership has addressed the situation as the determinant of leadership abilities. Researchers have studied leadership by examining the influence of the follower and context. Leadership theories in this category include situational leadership, contingency theory, and path-goal theory. The situational approach to leadership was developed by Hershey and Blanchard (1969), whose research was based on Reddin's (1967) management style theory. This approach has been widely used in training and development leadership in organizations nationwide (Northouse, 2001). Situational leadership emphasizes the balance between directive and supportive roles of a leader. The leader's task is to analyze a particular situation and determine the

appropriate degree of directive and or supportive behaviors necessary to address employee needs (Northouse, 2001).

Transformational and transactional leadership

Burns developed the concept of transformational leadership. Burns (1954) further noted that the result of transformational leadership is mutual stimulation and elevation that "converts followers into leaders and may convert leaders into moral agents" (pp. 23). Transformational leadership involves a process whereby an individual interacts with followers and creates a connection that increases motivation and morale in both the leader and follower (Northouse, 2001). A transformational leader is attuned to the needs and motives of followers and attempts to help followers reach their fullest potential (Northouse, 2001).

Burns provided a comprehensive theory to delineate between transactional and transformational leaders (Bass, 1990). He stated that transactional leaders

> approach followers with an eye to exchanging one thing for another: jobs for votes, or subsidies for campaign contributions. Such transactions comprise the bulk of the relationships among leaders and followers, especially in groups, legislatures, and parties (pp. 23).

Burns classified transactional leaders as opinion leaders, bargainers, bureaucrats, party leaders, legislative leaders, and executive leaders (Bass, 1990). In contrast, he categorized transformational leaders as intellectual leaders, reform or revolutionary leaders, and heroes (Bass, 1990). According to Burns, transformational leaders recognize the need for the follower to satisfy higher needs, as identified by Maslow's Hierarchy of Needs (1954).

Theory X and Theory Y

McGregor (1960, 1966) formulated two types of organizational leadership – Theory X and Theory Y. Theory X is an autocratic belief based on the assumption that people are passive and resistant to organizational needs (Bass, 1990). Leaders attempt to direct and motivate people to fit these needs. Theory Y is a democratic belief based on the assumption that people possess motivation and a desire for responsibility; it attempts to arrange organizational conditions to fulfill their needs while directing their efforts toward achieving organizational goals (Bass, 1990).

Psychodynamic approach

Using a psychodynamic leadership approach, the leader's role is to bring to the consciousness of team players the nature of the transactions and to present these issues in an open forum to generate discussion (Northouse, 2001). Strengths of this approach include leader-follower relationship, universality of the leadership approach, and emphasis on the need for insight on the part of the leader (Northouse, 2001). Criticisms of this approach include research efforts focused on case studies from individual psychiatrists and traditional two-parent family of origin. Northouse (2001) argued that any leadership model based on this approach is likely to be applicable to white, middle-class individuals with Judeo-Christian beliefs.

Exemplary Leadership Practices

Northouse (2001) synthesized leadership theories into four major conceptualizations as follows:

- Leadership is a process.
- Leadership involves influence.
- Leadership occurs within a group context.
- Leadership involves goal attainment.

Based on these concepts, Northouse (2001) defined leadership as a process whereby an individual influences a group of individuals to achieve a common goal.

Researchers have studied leadership and defined it in terms of its process. Kouzes and Posner (1997) interviewed CEO executives regarding their organizational success and personal best leadership experiences. Upon interviewing executives throughout the nation, Kouzes and Posner (1997) categorized the responses to compile five exemplary practices of leadership:

- Challenge the process
- Inspire a shared vision
- Enable others to act
- Model the way
- Encourage the heart

Leaders who "challenge the process" are innovative and constantly seek to improve the organization, including its processes. These leaders acknowledge that the leaders who do the work are a good source of ideas. They treat mistakes as learning opportunities (Kouzes and Posner, 1997). This exemplary practice is characterized by leaders who exhibit the following:

- searching out challenging opportunities to change, grow, innovate, and improve
- experimenting, taking risks, and learning from mistakes;
- exploring new and different ways of solving problems or improving processes;
- going beyond the boundaries of the organization to improve processes; and
- utilizing opportunities to change the status quo (Kouzes & Posner, 1997).

The second exemplary leadership practice is inspiring a shared vision. Leaders seek to mobilize others to strive toward a shared vision. This leadership practice includes the following:

- envisioning and uplifting a promising future;
- enlisting others in a common vision by appealing to their values, interests, hopes, and dreams;
- communicating and sharing expectations using vivid, clear, and concrete images;

- exhibiting enthusiasm about future possibilities; and
- envisioning the future of what the organization can become.

Enabling others to act involves emphasis on the supportive roles necessary to help others develop (Kouzes & Posner, 1997). This is accomplished by recognizing the achievements of others. Another important aspect of exemplary leadership is modeling the way. Leaders in these roles model behaviors that are acceptable to the organizational culture and achievement of shared goals and objectives. Kouzes and Posner (1997) highlighted the following characteristics of leaders who enable others to act:

- fostering collaboration by promoting cooperative goals and building trust;
- strengthening people by giving power away, providing choice, developing competence, assigning critical tasks and offering visible support;
- providing individuals with as much control over resources as needed to do the job;
- helping people learn and develop in their work; and
- listening to diverse points of view.

Modeling the way can cause others to want to follow and emulate the leaders' behavior. Kouzes and Posner (1997) highlighted the following characteristics of leaders who model the way:

- setting the example by behaving in ways consistent with shared values;
- achieving small wins that promote consistent progress and build commitment;
- making the connection between individual performance expectations and organizational mission, vision, and values;
- planning thoroughly by dividing projects into achievable steps, thus creating opportunities for small wins; and
- keeping people and projects on task by behaving consistently according to personal values.

Faculty Characteristics

A national study of departments of agricultural education revealed that 36 (67%) of the 53 departments surveyed offered courses in leadership and human resource management and development (Fritz & Brown, 1998). The departments that did not offer leadership courses indicated reasons such as resource scarcity, institutional policy barriers and resistance, and lack of student demand.

Researchers found that one-half of the faculty taught leadership courses and had traditional agricultural education backgrounds (Fritz & Brown, 1998). Other faculty had agricultural education backgrounds, as well as special training or skills in leadership or management, and the remaining had backgrounds in fields other than agricultural education. To address this concern, researchers recommended that departments provide faculty with "specific preparation and academic grounding in the research and behavioral foundations of leadership" (p.61). The researchers recommended that departments with leadership education programs employ agricultural education faculty with different educational backgrounds than in the past. Similarly, Newcomb (1993) stated that "departments with doctoral programs will serve graduate students well if they encourage them to develop sub-specialties beyond teacher education and extension."

Various research studies have examined agricultural education curricular revisions necessary from an industry perspective (Arndt, Barrett, & Bosshammer, 1997; Brown & Fritz, 1994; Scanlon, Bruening, & Cordero, 1996; Harris, 1989; Spontanski & Foster, 1989).

Bowen and Thomson (1995) stated that instructors at the secondary and post-secondary levels have been preparing students for entry-level agribusiness employment since the 1960s. Although university faculty groups have prepared students for such

employment, researchers argue that university faculty members have not viewed the agribusiness industry as a prospective clientele audience (Bowen & Thomson, 1995).

Industry Characteristics

A review of relevant literature revealed that industry characteristics influence curriculum development, including the preparation of society-ready graduates. The following section is divided into the sub-categories: leadership training and development and HRD competencies.

Leadershipt and development

According to Zemke and Zemke (2001), "contemporary leadership development aims to build the capacity of potential leaders to move the organization along a path that will ensure success and survival in a rapidly changing, competitive world." A University of Michigan business school professor asserted that the best leadership development efforts are led by a senior level manager of the organization in support of, rather than in charge of, employees' training and development (Zemke & Zemke, 2001). He further identified the following questions for executives who head leadership efforts:

- Do you have a teachable point of view?
- Will you spend the time?
- Are you a role model and a coach?
- Can you create a learning program with real business projects?
- Can you blend hard and soft?
- Can you energize others to learn (Zemke, 2001)?

Two studies were conducted determining the educational background required for entry-level training positions. Fulkert (1997) found that typical trainers held at least a Master's degree. Typically their experience was gained through train-the-trainer programs, external seminars and workshops, professional journals and magazines, and

formal on-the-job training (Fulkert, 1997). Dingus (1990) surveyed Fortune 500 executives to determine the competencies of entry-level trainers. His study found that the recommended education requirements as identified by respondents were 78.9 % bachelor's, 17.9 % master's, and 0.8% doctoral degrees (Dingus, 1990).

HRD competencies

Human resource development includes training, organization, and career development. McLagan (1996) purported that the nine roles that trainers must perform are human resource (HR) strategic advisor, HR systems designer and developer, organization change consultant, organization design consultant, learning program specialist, instructor/facilitator, individual development/career consultant, performance consultant, and researcher. Roles of human resources professionals include manager, analyst, selector, designer and developer, implementer, change leader, and evaluator (http://www.astd.org/virtual_community, 2003).

McLagan's (1983) study 'Model for HRD Practice' highlighted 31 competencies for human resource professionals. This competency list has been heavily supported by the American Society for Training and Development (ASTD). For the purposes of this study, only 18 of the 31 competencies were deemed relevant to this study. The competencies used for this study are as follows:

1. adult learning;
2. instructional design,
3. performance gap analysis,
4. change management,
5. leadership,
6. industry awareness,
7. buy-in/advocacy,
8. interpersonal relationship building and collaboration,
9. consulting,
10. business knowledge,
11. systems thinking,

12. contracting,
13. project management,
14. awareness of e-learning industry,
15. communication,
16. program evaluation,
17. design and development, and
18. implementation and support.

Adult learning. Adult learning involves how adults learn and how they use knowledge, skills, and attitudes (McLagan, 1983). Skills and knowledge that make up this competency include understanding learning styles, problem solving skills, facilitation of self-directed learning, and appreciation of the diverse experiences of adult learners (McLagan, 1983).

Instructional design. The instructional systems design (ISD) model is comprised of the following six phases: analysis, design, development, delivery and evaluation (McLagan, 1983). This competency is necessary to create adult education classes that fulfill organizational goals. Knowledge areas that comprise this competency are an understanding of the six phases of the ISD model, integral role of each stage, and learning styles (McLagan, 1983). Skills that make up the competency are gap analysis, evaluation, design, material development, implementation, and support skills (McLagan, 1983).

Performance gap analysis. Performance gap analysis entails performing front-end analysis by comparing actual and ideal performance levels in the workplace (McLagan, 1983). Skills and knowledge that make up the competency include: (1) gap analysis skills; (2) intervention selection skills; (3) ability to assess the reasonableness of desired performance levels; (4) ability to present findings of analysis; (5) interviewing skills; (6) focus group facilitation skills; (7) statistical analysis skills; (8) ability to write

valid data collection instrument; and (9) ability to analyze historical documentation (McLagan, 1983).

Change management. Change management is helping people adapt to the changes brought on by new technologies and helping them to see the value and benefits of new technologies (McLagan, 1983). Skills and knowledge that make up this competency include: understanding of organizational goals and culture, ability to assess human behavior objectively, interviewing skills, focus group facilitation skills, ability to analyze historical documentation, understanding of factors of human motivation, and ability to discover the root cause of human behavior (McLagan, 1983).

Leadership. Northouse (2001) defined leadership as a process whereby an individual influences a group of individuals to achieve a common goal. According to McLagan (1983), leadership is leading, influencing, and coaching others to help them achieve desired results. Specific skills and knowledge relevant to leadership are ability to see the big picture, ability to inspire and motivate others, organizational skills, delegation skills, ability to monitor progress toward organizational goals, understanding of the benefits and risks associated with empowering workers, ability to see one's own behavior as an example for others, and ability to maintain a clear vision for the organization's future (McLagan, 1983).

Industry awareness. Industry awareness is an important competency for human resource professionals (McLagan, 1983). It is defined as understanding the current and future climate of the company's industry and formulating strategies that respond to that climate (McLagan, 1983). Skills and knowledge that make up the competency include: (1) knowledge of the company's position within the industry; (2) knowledge of

competition's position within the industry; (3) understanding of future forces affecting the industry; (4) understanding of competition that exists outside the normal bounds of one's industry; and (5) ability to create strategies and contingency plans that allow the organization to have a competitive advantage in this environment (McLagan, 1983).

Buy-In/Advocacy. Buy-In or advocacy refers to building ownership and support for workplace initiatives (McLagan, 1983). Specific skills and knowledge required for this competency are negotiation skills, verbal, written and nonverbal communication skills, and ability to understand clearly the subject that's being advocated (McLagan, 1983).

Interpersonal relationship building and collaboration. Interpersonal relationship building and collaboration refer to interacting effectively with others in order to produce meaningful outcomes (McLagan, 1983). Skills and knowledge that make up the competency include: (1) ability to assess accurately other people's needs; (2) understanding of other people's goals and objectives; (3) understanding of the informal structure of an organization and the demands it places on individuals; (4) ability to respect other people's values; and (5) verbal, nonverbal, and written communication skills (McLagan, 1983).

Consulting. Consulting is helping clients and stakeholders to question their assumptions, determine their needs, and plan implementation strategies for achieving their goals (McLagan, 1983). This competency involves listening skills, understanding of stakeholder concerns, analytical skills, ability to maintain confidentiality, and presentation skills (McLagan, 1983).

Business knowledge. Business knowledge refers to demonstrating awareness of business functions (McLagan, 1983). Specific skills and knowledge that encompass the competency include:

- ability to see the big picture;
- understanding of how each section of the business interrelates with others;
- understanding of the corporation's financial resources and limitations;
- understanding of the various processes that drive the business;
- understanding of the types of individuals who work within the business;
- understanding of the history of the business; and
- understanding of the likely future of the business (McLagan, 1983).

Systems thinking. Systems thinking involves recognizing the interrelationships among the driving forces that connect seemingly isolated incidents within the organization (McLagan, 1983). This holistic viewpoint addresses performance problems in order to find the root causes. Skills and knowledge of this competency are ability to organize patterns among events, ability to analyze cause-and-effect relationships accurately, and development of research skills (McLagan, 1983).

Contracting. Contracting involves negotiating, organizing, preparing, monitoring and evaluating work performance by vendors or consultants (McLagan, 1983). This competency comprises consensus-building, compromising, and communication skills. It also encompasses the ability to write contracts and requests for proposals, analyze and assess vendor proposals, maintain accurate records, and monitor compliance to contract specifications (McLagan, 1983).

Project management. The project management competency includes assessing, planning, negotiating, organizing, monitoring, and evaluating the training delivery process (McLagan, 1983). Effectively managing human capital and financial resources. Skills and knowledge that comprise this competency include:

- budgeting
- organizational
- return on investment (ROI)
- scheduling
- planning
- consensus building.
- ability to collaborate on a team
- communication skills
- research skills and
- the ability to assess ideas objectively and determine their relevance to the project (McLagan, 1983).

Awareness of e-learning industry. An awareness of e-learning is possessing general knowledge about trends and issues of existing and emerging technologies in training and development (McLagan, 1983). Skills include understanding the history of the industry, knowledge of current and emerging trends, current limitations of technology, cost/benefit analysis skills, networking skills, knowledge of vendors and their standing in the industry, and the ability to understand the practical applications of each technology's features (McLagan, 1983).

Communication. The communication competency includes applying effective verbal, nonverbal, and written communications methods to achieve the desired results (McLagan, 1983). Skills and knowledge required for this competency are writing skills, knowledge of proper grammar, listening skills, speaking skills, nonverbal skills, knowledge of diverse communication styles, and understanding of the barriers to effective communication (McLagan, 1983).

Program evaluation. Program evaluation is measuring the success of learning interventions (McLagan, 1983). Skills and knowledge that comprise this competency are as follows:

- knowledge of statistics
- survey instrument design skills

- four evaluation levels
- various types of evaluation
- various types of measurement
- what is or isn't important to measure, and
- evaluate the program within the broader context of the organizational goals (McLagan, 1983).

Design and development. Design and development is outlining and creating instructional materials suitable for e-learning. It includes deciding what combination of instructional, presentation, and distribution methods will provide the best program delivery to the learner (McLagan, 1983). Skills and knowledge include the following:

- Ability to create a design document
- Ability to create electronic materials
- Ability to select instructional, presentation, and distribution methods
- Ability to understand distribution methods
- Graphic design skills
- HTML design skills
- Knowledge of performance objectives
- Programming and authoring skills
- Resource identification skills, and
- Storyboarding skills (McLagan, 1983).

Implementation and support. The competency of implementation and support includes coordinating the installation and maintenance of learning technologies (McLagan, 1983). Skills and knowledge of the competency include:

- Presentation skills
- Ability to understand distribution methods
- Ability to setup and use electronic software and hardware
- Ability to diagnose problems that learners experience with the technologies
- Ability to coordinate assignments with the technical staff
- Understanding the design specifications of the hardware and software, and
- Ability to monitor effectiveness of the hardware and software (McLagan, 1983).

Academia and Industry Partnerships

Academia and industry partnerships have been beneficial to enhancing the quality of education. Private sector collaboration is a method of providing innovation and

quality education for instructional programs (Sherman, 1983). As federal grants become more competitive, universities across the nation are approaching corporate partners to sponsor research efforts. According to a survey of the Association of University Technology Managers, companies contributed approximately $2.2 billion, or 9.4%, of all research performed at colleges throughout the United States (Basinger, 2001).

According to Santoro and Betts (2002), industry-university partnerships can be beneficial in helping firms to generate new knowledge and technologies, including patents, licenses, and non-patented and non-licensed new products and processes. An illustration of a successful industry-university partnership involved Monsanto and Washington University. Monsanto conducted over 50 pharmaceutical research projects that resulted in 16 patents, 24 patents pending, and 5 commercialized products that yielded substantial revenues in 1995 (Petrick & Reischman, 1997).

The National Alliance of Business presented the following mutual benefits of partnerships with education and industries:

1. Partnerships provide other individuals and institutions opportunities to perceive another organization's point of view and a chance to win an ally.
2. Partnerships can help build the kind of understanding that creates support.
3. Partnerships represent a means of contributing to quality education programs. The challenge to industry to succeed in an increasingly competitive world market is contingent upon skilled personnel who learn, grow, and adapt to changing markets and technologies. Clearly, industry has a survival stake in quality education.
4. Partnerships bring increased access to knowledge, time, human resources, and financial assistance from other sectors in the community and may well reduce the costs and liability of doing business for each participant (Roth, 1987).

An example of a successful tripartite partnership occurred in Illinois and involved the Illinois State Board of Education Department of Adult, Vocational, and Technical Education (DAVTE); Westinghouse Nuclear Training Center; and personnel in the Office

for Vocational, Technical, and Career Education at Northern Illinois University (NIU). The partners joined forces to provide educational equity through an initiative titled Women's Access to Nuclear Technology (Project WANT). Project WANT developed five principles using the works of Hemmings (1984), the Council on Foundations (1986), and Open Entries (1986). The guidelines were as follows:

- Identify the focus of the partnership.
- Create a team of stakeholders.
- Scrutinize the many facets of the issue.
- Carry through the action plan.
- Maintain a high level of flexibility (Tornatzky, 2001).

The Southern Technology Council (STC) examined benchmarking research on the topic of university-industry relationships. In a recent longitudinal study, the STC team conducted benchmarking as a behaviorist approach that includes: (1) identifying an important domain of organizational activity; (2) gathering performance data; (3) identifying and describing best practices used in exemplary organizations to enhance performance in that domain of activity; and (4) encouraging the adoption of those practices among organizations participating in the benchmarking effort. The Southern Technology Council highlighted best practices for university-industry relationships, which included utilizing practical data from competitive programs and rewarding faculty participation in technology transfer (Tornatzky, 2001).

Corporate sponsorship of education becomes most appealing when the goals and objectives of both industry and education are acknowledged. Corporate donors want their contributions to be reciprocated by the preparation of well-educated and trained individuals upon whom they can recruit to ensure business success (Roy, 1994).

Corporations are collaborating with colleges to provide management education programs for their executive staff. An example of a successful partnership between John Deere and Indiana University Kelly School of Management included university-offered online courses for corporate finance executives. Meister (2003) described the industry-identified expectations of corporate-college partnerships:

> The days when corporations passively fund tuition-assistance programs are coming to an end. Now, businesses are managing education through strategic relationships with universities to meet their needs for high-quality management education. Corporations are becoming the customers of education and, as such, are managing university partnerships to meet very specific requirements. I have called these requirements the five Cs of corporate-college partnerships: customer service and e-learner support services, cohort-based learning, customized programs, content, and cost-effective pricing.

To summarize this section, academia and industry partnerships are essential in providing a quality higher education to students who will compete for agricultural leadership and related jobs. These partnerships need to be established, maintained, and fostered in a way that is practical and beneficial to all parties involved. In addition, these partnerships should be reviewed and analyzed to determine strategies to enhance and develop the curriculum offerings in post-secondary education programs.

Curriculum Development

Overview of curriculum theories

This section provides an overview of curriculum theories relevant to post-secondary agricultural education programs. The application of curriculum theory affects how the curriculum is delivered, content is taught, and the learning outcomes of students are reached. According to Dewey (1944) learning is based upon experience and begins at the learner's comprehension level.

The American higher education system has been accused of failing to encourage students to think critically. Freire (1970) criticized educators of being "bankers of knowledge" who deposit information to be withdrawn as needed. Similarly, Halpern (1984) stated, "Traditionally instruction in how to think has been a neglected component in American education" (p. ix). Many colleges and universities have identified the use of thinking skills as a prominent objective.

Black (1966) recognized the diversity of educational philosophies and synthesized them into four categories: traditionalist, progressive, learning product, and learning process. The traditionalist approach emphasizes subject-centered learning and is authoritarian and hierarchical. This approach also emphasizes products that are objectively measured. The progressive approach acknowledges the individual and places emphasis on the transmission of social heritage. Designing curriculum using the learning product approach involves an emphasis on producing a given set of skills, knowledge, and competencies in a typical student. The learning process emphasizes the individual but recognizes the role of transmitting the cultural heritage.

Tyler's rational model

Tyler formulated a curriculum development model commonly known as the Tyler Rational Model. Tyler's model is based upon the idea that the process of curriculum development rests with the educational program. To develop an effective curriculum, Tyler asserted that programs must identify their purpose, goals, and objectives, and then design curricula to fulfill these goals and objectives (Tyler, 1949). With this model, Tyler (1949) focused curriculum design to satisfy specific purposes or objectives. He proposed the following rationale for consideration from the educational program's perspective for developing an effective curriculum:

- What educational purposes should the school seek to attain?
- What educational experiences can be provided that are likely to attain these purposes?
- How can these educational experiences be effectively organized?
- How can we determine whether these purposes are being attained (Tyler, 1949)?

Tyler (1949) argued that educational objectives need to be well defined; however, he contended that many educational programs do not have concise purposes, goals, or objectives. The objectives established become the premise upon which curriculum is established. Further, he believed that in certain circumstances, curriculum development should begin with a debate over the educational program. Sharpes and Dewey agreed that each entity can serve as the basis for curriculum, but each entity is independent of the influences of the learners, society, and subject disciplines (Sharpes, 1988).

Gagne's model

Competency-based education and instructional design reflect the transmission position. These models reduce the curricular components into elements that are clearly defined and measurable. Gagne's model is designed to provide a basis for accountability (Gagne & Briggs, 1979). His model included the following twelve (12) steps: (1) analyzing needs; (2) analyzing goals and objectives; (3) analyzing alternate ways to meet needs; (4) designing instructional components; (5) analyzing resources and restraints; (6) constraining removal action; (7) selecting or developing materials; (8) designing student-performance assessment; (9) field testing and evaluating; (10) adjusting, revising and evaluating further; (11) providing a summary evaluation system; and (12) implementing the plan (Gagne & Briggs, 1979).

The instructional systems design (ISD) is a systematic approach to training (See Figure 3). The ISD model includes people, technology, material, and time. This training approach consists of five processes: analyze, design, develop, implement, and evaluate, or ADDIE (ASTD, 1999).

The first step of the ISD model is to analyze the educational program or department. This process also involves creating a task inventory of all tasks and building performance measures for the tasks to be trained. Other aspects of this process include cost estimation, selection of instructional setting, and compilation of a task inventory (ASTD, 1999).

The second phase of the ISD model is design. During this phase, learning objectives, expected behaviors, and sequence and structure of the learning objectives are developed. Upon completion of the design phase, it is necessary to develop the instruction. This process also involves a review of existing materials, synthesis of materials, and validation of the appropriateness of the instruction to meet the goals and objectives. Implementation involves conducting the training or educational program (ASTD, 1999).

Finally, an evaluation must be conducted to determine if a program meets stated goals and objectives. Evaluation is an essential part of this model because it determines how programs will be delivered and implemented in the future (ASTD, 1999).

In summary, curriculum planning efforts should incorporate a holistic perspective involving faculty, students, administrators, alumni, and leaders in agricultural business

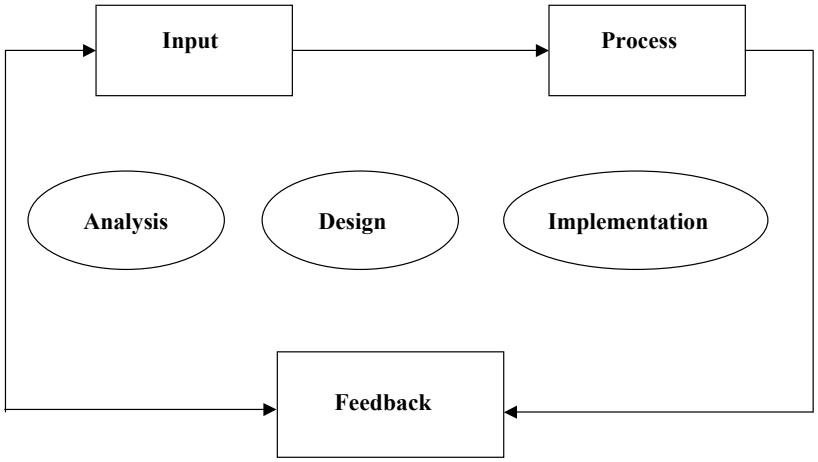

Figure 3. An instructional system design model (ASTD, 1999)

and industry (Bjoraker, 1987). Several curriculum design and planning models can be identified to assist faculty and administrators in improving the quality of degree programs and graduates. Each curriculum model emphasizes the importance of the product and the process.

Trends in curriculum reform in agricultural sciences

The North Central Curricular Project, comprised of representatives from the University of Wisconsin-Madison, University of Nebraska-Lincoln, and University of Minnesota, initiated discussion forums to dialogue about curriculum changes. This project yielded the publication *Curricular Innovation for 2005: Planning for the Future of Food and Agricultural Sciences* (Krantz, 1996). This publication became widely used, as it documented conceptual and policy issues relevant to curriculum revitalization in the agricultural sciences. Two years later another publication, titled *Educating for a Global Perspective: International Agricultural Curricula for 2005* (1989), was published. The publication highlighted strategies applicable for the implementation of global curricula in colleges of agriculture nationwide (Lunde, 1987).

The Curricular Revitalization Project, also known as CRP, brought together various stakeholders to address curriculum development issues as a team (Lunde, 1987). Acknowledging the unique needs of different groups, including employers, farmers, environmentalists, students, college faculty, and administrators. CRP established the following guidelines to direct the curricular development model:

- Carefully consider institutionally specific educational trends and the unique ethos and strengths of the institutional and external environments; and
- At every step of the revitalization process, consult the stakeholders about the curriculum (Lunde, 1987).

Colleges of agriculture across the nation are recognizing the need to solicit an industry perspective to adequately prepare students for agricultural leadership positions (Dodge & Foster, 1990; Smith, 1989; Love & Yoder, 1989; McKinley, Birkenholz, & Steward, 1993; Schumacher & Swan, 1993). Increasingly, departments of agricultural education are revitalizing curricula to reflect industry perspectives. Agricultural education departments have begun to include industry representatives in the curriculum planning process (Coorts, 1987; Etling, 1994; Fritz & Brown, 1998; Graham, 2001).

Crawford, Brungardt, Scott, and Gould (2002) studied graduate programs in organizational leadership nationwide. Credit hours required for the degree ranged from 30 to 58 credit hours. In addition, the number of faculty in graduate organizational leadership programs ranged from 3 to 26. The study concluded that organizational leadership programs are in the early stages of development (Crawford et al., 2002).

Curriculum revisions in leadership education programs include transformational leadership approaches and interpersonal leadership development. Leadership education and training are based on traditional leaders' traits, styles, and behaviors; however, recent education and training programs have expanded to incorporate leaders' thought

processes, application approaches to complex social environments, and interpersonal human dynamics that define educational and human service organizations (Aiken, Prue, & Hasazi, 1999).

The Educational Leadership and Policy Studies program at the University of Vermont revised its doctoral program to meet the needs of leaders in both educational and human service organizations within an interprofessional learning environment (Corrigan & Bishop, 1997). Curriculum development of this program included changes in program content, learning experiences, core course competencies, faculty resources and development, and instructional strategies. The theoretical framework for this program revolved around learning outcomes, such as "knowledge, skills, values, and commitments necessary to be interprofessional leaders" (Corrigan & Bishop, 1997).

In summary, various efforts to enhance curricula in colleges of agriculture nationwide were cited. In an effort to keep up with industry trends and requirements, university faculty and administrators are collaborating to determine curricula changes necessary to prepare competitive graduates. To achieve this goal, a comprehensive review of current curricula, industry requirements and trends must be pursued. The solicitation of the industry perspectives is essential to adequately prepare graduates for agricultural industry leadership. Research efforts to expand the knowledge base should incorporate academia and industry perspectives.

Competency defined

Competency is defined as a cluster of related knowledge, attitudes, and skills that affects a major part of one's job (Parry, 1998). Similarly, Davis, Naughton, and Rothwell (2004) stated the following: "Competencies encompass clusters of skills, knowledge, abilities, and behaviors required for people to succeed" (p. 28).

Competency is correlated with job performance that can be measured against standards and enhanced through training and development (Parry, 1998). Competencies are important to study to establish benchmarking data (Parry, 1998), develop curricula models, and determine job-specific competencies (Rothwell & Lindholm, 1999). In training and development, competency models are used to clarify organization-specific competencies to improve human performance and align individual capabilities with organizational core competencies (Rothwell & Lindholm, 1999).

Competency assessment

Competency assessment is defined as the process of comparing individuals in a job category, department, industry, or organization to the competency model for the targeted group (Rothwell & Lindholm, 1999). Competencies can be assessed using the three common methods, including 360-degree feedback, assessment labs, and interactive multimedia (Parry, 1998). First, 360-degree feedback is used to evaluate performance with ratings by the individual's peers, manager, and work group or anyone who knows the person well. Using assessment labs, an individual assumes a new role and interacts with trained evaluators who fill other roles. Interactive media can be used wherein individuals view video modules, respond to several situations, and are assessed based on their responses (Parry, 1998).

Competency models

Various research efforts in competency modeling have been undertaken in public education and government to study competency modeling. Three major efforts are the Secretary's Commission on Achieving Necessary Skills (SCANS) study, the voluntary Skills standard, and the Leadership Effectiveness Framework (Rothwell & Lindholm, 1999).

One major government initiative is the Secretary's Commission on Achieving Necessary Skills (SCANS) study. The study, commissioned by the U.S. Secretary of Labor, was designed to determine the skills needed by young people to succeed in the workforce. The SCANS researchers examined the workforce demands of young people in the manufacturing, health services, retail trade, accommodations and food service, and office services sectors. The researchers conducted behavioral event interviews (BEI) with approximately five people in each of the fifty occupations across the aforementioned five sectors of the U.S. economy. The study's results have been instrumental, particularly in two-year community college curriculum development efforts (Rothwell & Lindholm, 1999).

Another major governmental initiative in competency modeling was Voluntary National Skills Standard. In 1996, the National Skills Standards Board awarded grants to industry and research groups, including BioScience, Healthcare, Human Services, Chemical Process, Heavy Highway Construction, Photonics, Electronics, Hospitality and Tourism, and Retail Trade. The goal of this initiative was to "improve the integration of academic and industry recognized skill standards" (Rothwell & Linddholm, 1999, p. 101).

The third major governmental initiative in competency modeling was Leadership Effectiveness Framework (LEF). Original research for the LEF was conducted with over 20,000 supervisors, managers, and executives in the U.S. Federal Government. In 1995, the Leadership Effectiveness Framework, including the assessment tool (the Leadership Effectiveness Inventory [LEI]) was given to the U.S. Department of Agriculture Graduate School. The LEF is comprised of twenty-seven competencies essential for governmental

leadership and has been widely used for training and development initiatives with federal executives (Rothwell & Lindholm, 1999).

The United States Department of Agriculture Graduate School developed the leadership effectiveness inventory, "a systematic assessment tool designed to measure competency and determine developmental needs for organizations and individuals in public service" (USDA Graduate School, 2003). The leadership effectiveness inventory was designed to gain feedback from the participant and five peers to eliminate perceptual biases. There are twenty-seven competencies that comprise the Leadership Effectiveness Framework (LEF) which are divided into the categories: leading change, leading people, results driven, business acumen, and building coalitions/communication (see Table 2-1). The USDA Graduate School recommends that the inventory be used by individuals planning their own leadership development, organizations reengineering for greater effectiveness, and trainers identifying priorities and developing curriculum (USDA Graduate School, 2003). The competencies listed below are used in executive leadership development.

Table 2-1. Competencies in the Leadership Effectiveness Framework as identified by the USDA Graduate School.

Core Competencies	Sub-Competencies
Leading Change	Vision
	External awareness
	Creativity and innovation
	Strategic thinking
	Continual learning
	Resilience
	Flexibility
	Service motivation
Leading People	Change management
	Cultural awareness
	Team building
	Technology management

Table 2-1. Continued.

Core Competencies	Sub-Competencies
Results-Driven	Accountability
	Problem-solving
	Decisiveness
	Customer service
	Entrepreneurship
Business Acumen	Financial management
	Human resources management
	Technology management
Building Coalitions	
Communication	Oral Communication
	Written communication
	Influencing/negotiating
	Partnering
	Political savvy
	Interpersonal skills

Student Characteristics

Numerous studies (Goecker, 1992; Moody, 2001; Scanlon, 1996; Sprecker & Rudd, 1997; Timko et al., 1991) in agricultural education have been conducted to identify specific competencies necessary for students to possess within various contexts. According to Goecker (1992), agricultural education graduate students needed, but did not possess, higher levels of teaching and learning competencies to be effective and productive professionals. Timko, Linhardt, and Stewart (1991) examined the communication strategies of international students and found that they have challenges regarding communication and social competencies. Other studies have examined agricultural leadership acquisition from the student perspective (Radhakrishna & Bruening, 1994; McKinley, Birkenholz, & Stewart, 1993).

Requisite skills required by industry

In 1990, the Secretary's Commission on Achieving Necessary Skills (SCANS) studied the skills need by young people to succeed in the world of work, specifically in the areas of manufacturing, health services, retail trade, accommodations and food service, and office services. The purpose of this commission was to encourage high-skill, high-wage employment.

Numerous research studies have identified the requisite skills and competencies required by agribusiness employers. Many research studies emphasize the importance of communication and human relation skills. Other studies indicate the importance of problem-solving or critical thinking skills (Scanlon et al., 1996; Brown & Fritz, 1994; Birkenholz et al., 1994), business management skills (Scanlon et al., 1996; Brown & Fritz, 1994), computer technology skills (Harris, 1989), and other technical skills (Merritt & Hamm, 1994; Harris, 1989).

Leadership training and development

According to Clark (2001), conservation biology curricula need to be updated and expanded to prepare students to become successful leaders and practitioners in biodiversity conservation. Current curricula in conservation biology place too much emphasis on positivism and technical competence rather than on problem-focused analysis, contextuality, and actual interdisciplinary methods (Clark, 2001). Similarly, Newcomb (1993) asserted that graduate students are adequately prepared as scientists but need to develop their leadership capacity.

According to Graham (2001), agricultural education curricula can be modified to provide students with the skills and abilities necessary for industry leadership by obtaining feedback from industry to prepare society-ready graduates. Ensuring that

graduate students are prepared for positions in teaching, research, and communication areas is essential for increasing students' marketability and enhancing business partnerships.

Leadership development is most effectively cultivated through relevant work and learning experiences that shape the individual (Zemke & Zemke, 2001). Various research efforts have found that agribusiness employers require that students have adequate work experiences in order to be competitive. According to Harris (1989), industry employers value experience obtained from farm backgrounds, industry internships, cooperative education programs, and extracurricular activities.

Competencies

Moody (2001) recommended leadership competencies that should be incorporated into agricultural and natural resources curriculum. Agricultural education faculty indicated that the leadership development content should include opportunities for students to define leadership, identify leadership characteristics and traits, and assess their personal leadership style (Moody, 2001).

Leadership competencies deemed important for the development of an agricultural and natural resources curriculum include increased student's awareness of their behavioral preferences; understanding their strengths and opportunities for improvement; appreciating differences; identifying opportunities and strategies for improving self-confidence; understanding and practicing effective listening; listing short-term and life goals; identifying and assessing personal values; identifying sources of and strategies for gaining non-coercive power and influence in relationships; and practicing using interpersonal skills to improve personal performance, the quality of relationships, and helping others (Moody, 2001).

A review of literature revealed that colleges of agriculture nationwide are revamping curricula to reflect an industry perspective. The aggregate findings of these studies are presented in Table 2-2. As shown in the table, the studies represented are not in total agreement of the competencies and skills required by the agribusiness industry. The most prevalent competencies and skills desired by agribusiness representatives are critical thinking, communication, business and economics, interpersonal, and human relations (Dooley & Lindner, 2002; Graham, 2001; Linder & Dooley, 2002).

Table 2-2. Review of agricultural education research on competencies required for professionals and graduate students.

Authors	Population	Core Competencies
Dooley & Lindner (2002)	Doctoral students Distance education	Adult learning theory Technological knowledge Instructional design Communication skills Graphic design Administrative issues
Graham (2001)	Arkansas Alumni	Teamwork Decision-making Leadership Initiative Access/use of Internet Presentation skills
Lindner & Dooley (2002)	Doctoral students Distance education	Teaching strategies Foundations knowledge Applications knowledge International knowledge

Conceptual Model for the Study

The conceptual model shown below illustrates the factors influencing an agricultural leadership graduate student's competitive edge for HR/training and development employment (see Figure 4). As shown in the model, the key factors include

faculty characteristics, partnerships, industry characteristics, curriculum, and student characteristics. Each combined factor plays an important role in student competitiveness.

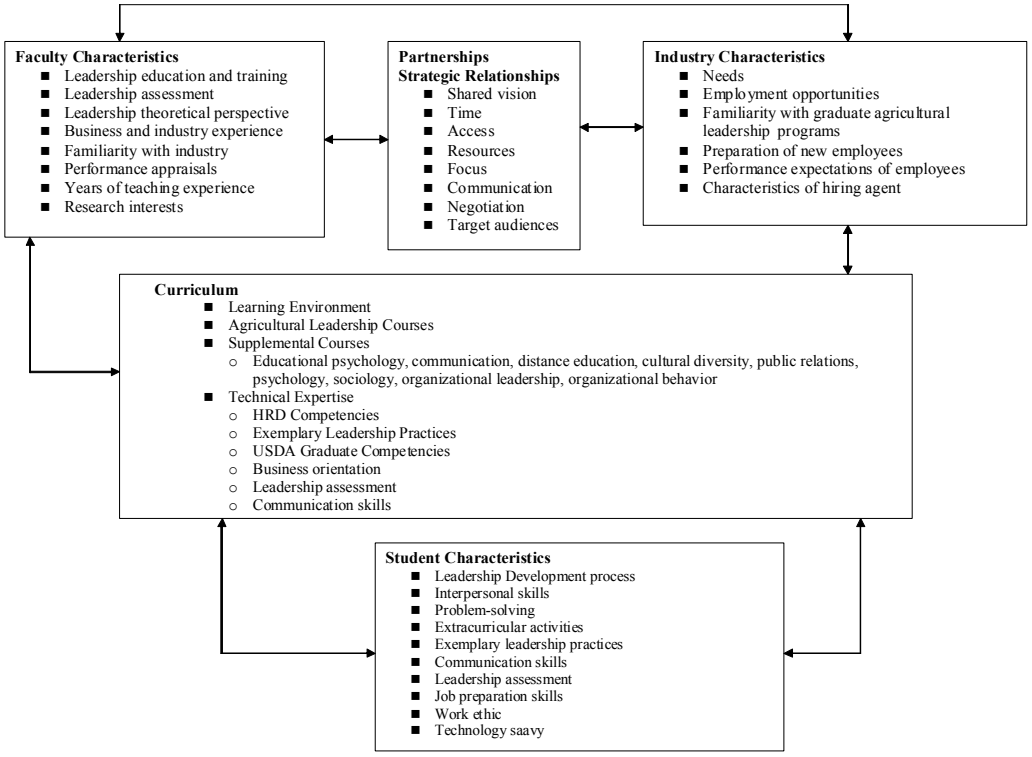

Figure 4. Conceptual model of the preparation of society-ready graduates for HR/training and development positions (Jones, 2004).

The conceptual model presented above is drawn from Gagne's model for competency-based education. The model addresses three of twelve steps for building curricula: (1) analyzing needs, (2) analyzing goals and objectives, and (3) analyzing alternate ways to meet needs of students (Gagne, 1979). Since the conceptual model is presented as merely a guide, the remaining nine steps of the Gagne model can be addressed by individual curriculum planners.

The preparation of society-ready graduates prepared for HR/training and development jobs is multi-faceted and involves the influence of faculty characteristics, partnerships, industry characteristics, curriculum attributes, and student characteristics.

The model depicts a circular relationship to show that the relationships of each factor are interdependent.

Faculty characteristics directly impact curriculum content of agricultural education programs. For instance, university faculty's leadership education and training determine familiarity with leadership theorists and leadership assessments deemed essential for professional development. Thus, the theoretical perspective on leadership determines how university faculty select required textbooks, incorporate leadership assessment, and determine theoretical foundations for leadership courses.

The faculty characteristics directly impact the curriculum which impacts student characteristics. Any agricultural leadership curricula should include agricultural education and supplemental courses upon which students can build leadership knowledge. Leadership and supplemental courses can provide opportunities for students to interact with guest speakers, participate in group projects, and develop leadership potential. Therefore, students are influenced by exposure to developmental experiences which enhance leadership development. Additionally, the knowledge, skills, and abilities of a student impact the leadership developmental experiences (assessment, challenge, and support). The student characteristics can also influence the course offerings.

University faculty members in agricultural education and communication have begun revamping curricula to incorporate industry perspectives (Graham, 2001; Moody, 2001). Similarly, industry characteristics can be influenced by familiarity with agricultural education and communication departments.

Academia and industry partnerships are beneficial to enhancing the quality of education. Incorporation of private sector collaboration is a method of providing

innovation and quality education for instructional programs (Sherman, 1983). Both faculty and industry groups are involved in leadership education in various contexts. This commonality presents opportunities for mutually beneficial partnerships. Therefore, the existence of partnerships is influenced by the characteristics of industry and faculty.

Summary

The review of literature revealed that there have been limited research efforts examining the industry perspective on necessary curriculum revisions for the agricultural leadership component. This research study addressed the concern by soliciting an industry perspective from individuals representing a gamut of agribusinesses and related business occupations to determine their perspective on curricula changes necessary to adequately prepare graduate students to compete for leadership positions.

Numerous studies examining the skills and competencies required by agribusiness corporations in the late 80s and early 90s were cited. Additional research efforts should be conducted to update the current research base to include empirical data on the marketability of agricultural education graduate students for industry leadership positions.

It was noted in the research that curriculum development in post-secondary agricultural education programs should include all involved stakeholders. Each group has a unique contribution to make, however, they must come together to synthesize their interests toward a common goal of curriculum revitalization

The literature base in the areas of training and development and agricultural education has limited information on methods of establishing and maintaining partnerships between academia and industry entities. Few collaborative efforts could be cited. More research is needed in this area to expand the knowledge base in this area.

A review of literature revealed the following deficiencies: (1) a lack of empirical data providing evidence on the marketability of agricultural education graduates for industry leadership positions; (2) few documented strategies on enhancing graduate curricula in agricultural education to reflect industry trends; (3) limited research on specific strategies to incorporate industry-identified competencies into agricultural education curricula; and (4) limited research on effective strategies for establishing and maintaining partnerships with agribusinesses.

CHAPTER 3
METHODOLOGY

Chapter 1 provided an overview of competencies required for society-ready graduates. The chapter included background for studying human resource development and leadership competencies required for graduate students in agricultural leadership. Other topics included definition of terms, limitations, assumptions, and importance of the study.

The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. To accomplish this goal specific objectives were to:

1. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses.

2. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by selected industry representatives.

3. Compare and contrast the importance of HRD/leadership competencies necessary for agricultural education graduate students to obtain employment in training and development as perceived by university faculty and industry representatives.

4. Identify key components of a graduate level agricultural leadership curriculum as recommended by industry and academia representatives.

5. Propose a model for graduate-level agricultural leadership curricula based on research and findings of the study.

6. Determine the profile of graduate agricultural leadership programs.

Chapter 2 presented a discussion of previous research related to this study. Chapter 2 discussed literature in the following areas: (1) leadership and leadership development,

(2) academia-industry partnerships, (3) curriculum theory, and (4) competencies. Theoretical frameworks, conceptual frameworks, and empirical research relevant to this study were also presented.

This chapter summarizes the research design, procedures, population and sample, instrumentation, and data collection for this study.

Population and Sample

The populations for the study included university faculty teaching graduate agricultural leadership courses (N=35) and industry representatives from Fortune 500 companies. The industry representatives (N=86) were human resource professionals employed at agriculturally related Fortune 500 companies categorized by industry including, Food and Consumer Products, Forest and Paper Products, Food Production, Industrial and Farm Equipment, Tobacco, and Waste Management (http://www.fortune.com/lists/F500/index.html, 2002). This was a census study so data were sought from all members of the population. In addition, two university career resources professionals and three human resource professionals employed at agribusinesses were also included as industry representatives. The career resource professionals were nominated by university faculty participating in the study. The industry human resource professionals were nominated by pilot participants in the study. It was deemed necessary to include human resources and career services professionals because of their familiarity with hiring practices, attributes of college graduate entering the profession, and industry perspectives on leadership competencies.

Five university faculty were selected from the twenty-two faculty respondents for participation in a long interview. Ten industry representatives were randomly selected

for participation a long interview. Only five participants responded, and the remaining five participants were selected based on nominations from the pilot participants.

Seven agricultural leadership faculty indicated that they were in departments with graduate agricultural leadership programs; these faculty members provided data on profiles and trends of their graduate agricultural leadership curricula through an additional questionnaire (see Appendix L). Seven department chairs/unit leaders representing the thirty-five agricultural leadership programs were invited to participate in the study. The department chairs/unit leaders provided data on profiles and trends of their graduate agricultural leadership program through an additional questionnaire (see Appendix K).

Instrumentation

A web-based survey was developed by the researcher as a self-reporting questionnaire consisting of three parts: (a) human resources development competencies; (b) exemplary leadership practices; and (c) company or program information. The first part of the survey contained 18 of the 31 human resource development (HRD) competencies as identified by McLagan (1983). Only 18 of the 31 HRD competencies generalizable to training and development positions were deemed relevant to this study. The thirteen HRD competencies not included were management competencies specific to an instructional technologist position. The eighteen competencies studied were: (1) adult learning; (2) instructional design; (3) performance gap analysis; (4) change management; (5) leadership; (6) industry awareness; (7) buy-in/advocacy; (8) interpersonal relationship building and collaboration; (9) consulting; (10) business knowledge; (11) systems thinking; (12) contracting; (13) project management; (14) awareness of e-learning industry; (15) communication; (16) program evaluation; (17) design and development;

and (18) implementation and support. Respondents were asked to rank the competencies deemed to be important for beginning employees who hold graduate degrees. The 5-point Likert-type scale used was as follows: 1=not important, 2=of little importance, 3=moderately important, 4=very important, and 5=extremely important.

The second part of the survey instrument contained five constructs (challenging the process, inspiring a shared vision, encouraging the heart, modeling the way, and enabling others to act) measuring the five exemplary leadership practices as identified by Kouzes and Posner (1997). Respondents were asked to rank the competencies deemed to be important for beginning training and development employees who hold graduate degrees. The 5-point Likert-type scale used was as follows: 1=not important, 2=of little importance, 3=moderately important, 4=very important, and 5=extremely important.

The third section differed based on whether or not it was an academia or industry survey. For the industry group, the section asked respondents to answer questions concerning whether or not their company had previously hired agricultural education graduates, current positions applicable to agricultural education graduates, job titles, preferred degrees, and qualifications required. The section also included highest degree obtained, type of company, gender, area of degree, job title, and number of years employed with the company. For the academia survey, the third section included questions concerning agricultural leadership specialization, number of years teaching graduate leadership, business industry experience, job title, number of years of industry experience, area of degree, highest degree obtained, and gender.

Research Design

This study utilized both quantitative and qualitative research methods. The quantitative research method used was descriptive, survey research. The qualitative research method used was long interviews.

A mixed-methods study allows the researcher to combine rich text with numerical data providing scope and breadth to a study (Creswell, 1994; Green, Caracelli, & Graham, 1989). Creswell noted that a mixed-method study is a study combining at least one quantitative method and one qualitative method in data collection, analysis, and reporting findings. The advantages of conducting a mixed-methods study are utilization of a plethora of methods or instruments (triangulation); the results of one research method complement the other methods allowing for multi-facets of the phenomenon and sequential use of methods that build on each other. All of these advantages result in breadth and depth of the phenomenon being studied (Green et al., 1989; Creswell, 1994; Sydenstricker-Neto, 1997).

The quantitative portion of this research used descriptive, survey research methods to collect data. Descriptive surveys are advantageous because of the large amounts of data that can be collected in a timely and cost effective manner (Dillman, 2000). The advantages of utilizing web surveys include elimination of paper, postage, mailing, and data entry costs (Dillman, 2000). According to Dillman (2000),

> Web surveys in contrast, not only have a more refined appearance to which color may be added, but also provide survey capabilities far beyond those available for any other type of self-administered questionnaire (pp. 354).

The advantages of electronic surveys are interaction between the respondent and the research, as well as formatting options, such as drop-down boxes (Dillman, 2000). Drop-

down boxes with long lists of answer choices can be used for convenient coding of answers that would otherwise be asked in an open-minded manner (Dillman, 2000).

Dillman (2000) recommended sending a pre-notice e-mail message, since it is easy to discard an e-mail message before reading it. The purpose of this notification is leaving a positive impression of importance so that the respondent will not immediately discard it.

The qualitative portion of the study used interviews to explore the employability of graduate students in agribusiness industry careers. The interviews used semi-structured questions (Glesne, 1999) to obtain a broad perspective on competencies required for training and development employment. The interviews were audio-taped and transcribed. Additional data such as cultural reflection, field notes, journal entries, and e-mails provided by some academia and industry participants were also analyzed.

Validity and Reliability

According to Oppenheim (1969), a panel of experts should be selected to agree on the content validity of the statements in a questionnaire. Oppenheim (1969) stated that content validity, based on experts' judgment, is essential. Thus, a panel of experts from the Department of Agricultural Education and Communication at the University of Florida was used to establish content and face validity of the instrument used in the study. Based on the comments and suggestions made by the panel of experts (see Appendix A), the researcher modified or reworded some statements for clarity.

Threats to internal validity include history, maturation, pre-testing, instrumentation, statistical regression, differential selection of subjects, experimental mortality, and selection-maturation interaction (Ary, Jacobs, & Razavieh, 2000). This study had one threat to internal validity – differential selection of subjects. To address the potential

threat, academia respondents were selected from the population frame, American Association of Agricultural Educators (AAAE) directory, and industry respondents were selected from the population frame, agriculturally-related Fortune 500 companies. Each respondent was selected using a random number generator. Due to the low response rate of the industry respondents, each was asked to participate in an interview.

To establish internal consistency, the researcher pilot tested the survey instrument with university agricultural education faculty and industry participants of the College of Agricultural and Life Sciences career fair. The researcher entered the resulting data into the computer and analyzed them using the Statistical Package for the Social Sciences (SPSS) to calculate Cronbach's reliability coefficient. The Cronbach's Alpha reliability test was used to determine if the survey instrument was sufficiently constructed to obtain internal consistency for the study. The Cronbach Alpha score for the HRD competencies was .85. Kouzes and Posner (1997) exemplary leadership practices yielded the following construct scores:

Table 3-1. Cronbach's Alpha for Exemplary Leadership Practices (n=15)

Leadership Practice	
Challenging the process	.84
Inspiring a shared vision	.76
Enabling others to act	.78
Modeling the way	.80
Encouraging the heart	.79

The Cronbach Alpha score for the 18 human resource dev elopement competencies was .85. According to Ary et al. (1996), if the measurement results are used for making a

decision about a group or for research purposes, a reliability coefficient of at least .50 is acceptable. Therefore, the survey instrument met the requirement for internal consistency.

Pilot Study

A pilot study was used to verify the internal and external reliability of the instrument. Both university faculty and industry representatives were recruited to pilot test the questionnaire. University faculty participants in the pilot study were faculty in agricultural education departments nationwide. The industry representatives for the pilot study were selected from a population frame of participants of the 2002 College of Agricultural and Life Sciences career fair attendees (N=30). Pilot participants were not members of the population and did not participate in the study.

Web surveys were e-mailed to industry respondents (n=30). A response rate of 50% (n=15) was received for the pilot study over a three-week time period. A few minor suggestions were given by the pilot study participants. Upon completion of the pilot survey, there were slight mechanical and typographical adjustments necessary to refine the instrument to ensure clarity and understanding.

To further explore industry perspectives on leadership and human resource development competencies required for graduate students pursuing industry employment in agribusinesses, the researcher interviewed five career fair participants. Pilot study participants (n=5) were industry employees at the 2002 College of Agricultural and Life Sciences (CALS) career fair. The data consisted of two long interviews and one focus group with three industry participants. Based on the findings from these interviews, the human resources perspective proved to be comprehensive. Thus, human resource

professionals were included in this study to provide direct knowledge about the competencies and skills required for industry hiring trends and required competencies.

Data Collection

A pre-notification e-mail or postcard was sent to university faculty and industry representatives. On May 9, 2003, the Web survey was e-mailed to university faculty participants (N=35). Due to the unavailability of industry representatives' complete contact information, the researcher sent hard copies of the questionnaire to sixty-one industry representatives and e-mailed the questionnaire to twenty-five respondents of the total population (N=86). The researcher mailed a cover letter, a copy of the instrument, and a self-addressed, stamped, return envelope to sixty-one industry subjects on May 9, 2003. The cover letter explained the purpose of the study, ensured anonymity, and requested participation in the study (see Appendix F). The cover letter also gave directions for completing and returning the questionnaire and stated that participation in the study was strictly voluntary. Each instrument contained a code number for follow-up purposes only.

One week after the initial mailing, on May 16, 2003, a second e-mail and mailing was sent to university faculty and industry representative non-respondents. The researcher then sent a postcard reminder, a second cover letter, and another survey instrument to the remaining non-respondents on May 23, 2003. On June 7, 2003, a third mailing and e-mailing to university faculty and industry representatives was conducted. Since the response rate for industry representatives was low, follow-up calls were made to every non-respondent to determine if the surveys were received and to find out whether or not they would be willing to participate in the study.

To increase the industry representative response rate, the panel of experts (see Appendix A) recommended revising the cover letter to include an administrator's endorsement. The cover letter was revised to emphasize the importance of the study in maintaining university and industry linkages crucial to preparing society-ready graduates. The letter was signed by the Associate Dean for Academic Programs in the College of Agricultural and Life Sciences at the University of Florida (see Appendix I). The letter urged industry representatives to contact the researcher even if participation was prohibited due to a company survey policy. As a result, industry representatives informed the researcher of their inability to participate due to company survey policies prohibiting their participation in university research studies (n=30) or policies against participation in internet surveys (n=5).

On July 11, 2003, another mailing was sent to industry non-respondents that included a cover letter, postcard, and a survey instrument. Another five industry representatives informed the researcher that they were unable to participate due to a company policy prohibiting their participation in university-related research.

Alternatively, companies with policies against internet surveys were mailed a paper version of the survey. Other strategies used to increase response rate were conducting follow-up telephone calls and e-mails, sending reminder post cards, and mailing paper versions of the survey (Dillman, 2000). According to Dillman (2000), a combination of these strategies should increase the response rate. Employing these various strategies yielded final response rates of 73% for university faculty and 20% for industry representatives. Non-response error was a threat to the findings of the study because of the difficulty in securing the participation of the industry representatives.

Qualitative research component

Due to the low industry response rate, it was deemed necessary to incorporate a qualitative component to add to the depth of this study. The purpose of the interviews was to further explore the scope and nature of training and development opportunities for agricultural education and communication graduate students.

Five university faculty were selected from the original twenty-two faculty participants using a random number generator. The ten industry representatives were selected; of which, five were selected using a random number generator, and five were selected from nominations from pilot participants. Given the low industry response rate, the researcher interviewed human resources and career resource professionals familiar with agribusinesses to explore the competencies required for industry employment. The researcher e-mailed the selected participants to solicit participation and schedule a telephone interview. All interviews were audio-taped and transcribed. Data were analyzed by common themes.

Profiles and trends of graduate agricultural leadership programs

To address the low industry response rate in this study, a second survey was developed by the researcher and approved by a panel of experts (see Appendix A). The purpose of the survey was to gather information on the development of agricultural leadership programs, existence of agricultural leadership specializations, employment trends of recent graduates, and the leadership education background of university. The questionnaire was mailed to university faculty and department chairs/unit leaders of selected agricultural education programs on January 26, 2004. Ten respondents replied that they would not participate in the study for various reasons such as time constraints (n=1), program focus relative to teacher education only (n=2), no graduate program on

leadership (n=4), sabbatical leave (n=1) and no longer teaching leadership (n=2). Two surveys were undeliverable to the e-mail addresses. E-mail follow-ups were conducted for three weeks. Additionally twenty telephone calls were conducted to increase response rates.

Low response rates

The researcher took the appropriate measures as recommended by Dillman (2000) to increase response rates. Examples of methods used to increase response rates were: use of a deadline, survey appearance, pre e-mail, telephone follow-ups, availability of paper and Web survey formats, availability of survey results, revision of the cover letter, appealing, questionnaire color, and ensured confidentiality (Dillman, 2000). Similar studies (Fulkert, 1997; Mahoric, 1997) examining the scope and nature of competencies required for training and development careers have yielded low response rates as well.

Data Analysis Procedures

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means, and standard deviations of item responses, were calculated. Open-ended questions contained in the qualitative portion of the study were analyzed via content analysis and categorized into response patterns based upon theoretical components of HRD/leadership competencies. The responses were grouped into emergent themes. The results of the data analyses are reported in Chapter 4.

The following measures were utilized to ensure confidentiality of responses; respondents were assigned a code number to allow for follow-up purposes only. Data collected through the web-based survey was analyzed with the following procedures:

1. Questionnaires were reviewed for missing data. If data were missing on an individual item, it was coded as missing and not used in the statistical computations.

2. Data were electronically submitted into a database. Data were then transferred into text files.

3. Descriptive statistics were calculated and reported on the variables.

Summary

This chapter has described both the quantitative and qualitative research methods used in this study. Online data collection and mailed instruments were used to collect data from thirty-two respondents, twenty-two agricultural education faculty and ten industry representatives. Data analysis procedures included descriptive statistics and content analysis. The next chapter will report the findings of the study.

CHAPTER 4
RESULTS

Chapter 1 described the background for studying academia and industry perspectives on graduate competencies necessary for training and development employment. The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. To accomplish this goal specific objectives were to:

1. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses.

2. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by selected industry representatives.

3. Compare and contrast the importance of HRD/leadership competencies necessary for agricultural education graduate students to obtain employment in training and development as perceived by university faculty and industry representatives.

4. Identify key components of a graduate level agricultural leadership curriculum as recommended by industry and academia representatives.

5. Propose a model for graduate-level agricultural leadership curricula based on research and findings of the study.

6. Determine the profile of graduate agricultural leadership programs.

Chapter 2 provided a theoretical framework, and empirical research relevant to this study. An extensive review of agricultural leadership and training/development literature was presented. Topics addressed included overview of leadership theories, leadership styles, university faculty and industry partnerships, curriculum development and theory, and human resource development competencies.

Chapter 3 described the quantitative and qualitative research methodology used to conduct this study. Specifically, research design, population and sample, instrumentation, procedures, and data analysis were discussed.

Chapter 4 summarizes the demographic data and is organized by the six research objectives. Data are reported for university faculty, agricultural leadership faculty, department chairs/unit leaders, and industry representatives who participated in this study.

Overview of University and Industry Participants

The purpose of this section is to clarify the terminology used to distinguish the university and industry groups. Throughout this chapter, university participants in this study will be described as follows: university faculty (n=22), agricultural leadership faculty (n=8), and university department chairs/unit leaders (n=8). University faculty (n=22) refers to the original respondents who provided data regarding the human resource development and leadership competencies. Agricultural leadership faculty (n=8) refers to respondents who provided data on the history and development of their graduate agricultural leadership curriculum. University department chairs/unit leaders (n=8) refer to respondents who were department chairs or unit leaders of graduate agricultural leadership programs. The term industry representative (n=10) will be used to reference representatives of human resources of Fortune 500 companies (n=5), agribusiness firms (n=3), and career services professionals (n=2).

Description of University Faculty Respondents

Gender

Thirty-five university faculty participants made up the original population for this study. Of the thirty-five university faculty, five responded by declining participation in the study. Of the remaining thirty university faculty, twenty-two provided data for this study. Of the twenty-two university faculty respondents, nineteen (86%) were male, and three (14%) were female. The aforementioned percentage is representative of the agricultural education profession, where approximately 89% are male (American Association for Agricultural Educators Directory, 2003).

Sources of leadership training

University faculty in this study received their leadership training from a plethora of sources (see Table 4-1). A majority of university faculty received leadership training from personal reading and professional conferences/workshops. Fifty percent of the respondents reported that they had received leadership training via corporate seminars. Few respondents indicated that they received leadership training from extension in-service training (n=6) and sabbatical leaves (n=2). Other sources of leadership training included audio and videotapes (n=1), courses (n=2), FFA (n=2), professional activities (n=1), military service (n=1), National Extension Leadership Development (NELD) (n=1), practical experience (n=1), and research (n=2).

Table 4-1. Sources of leadership training of university faculty respondents (n=22).

Sources of leadership training	Frequency	Percent
Extension in-service training	6	27.3
Sabbatical leave	2	9.1
Corporate professional development seminars	11	50.0
Personal reading	20	90.9
Conferences/workshops	19	86.4
Other	10	45.5

Note: The total percentage is greater than 100 due to multiple responses.

Graduate agricultural leadership programs

University faculty respondents were asked whether or not their department offered a graduate agricultural leadership degree. One-third of the respondents indicated that their department offered a graduate agricultural leadership degree (Table 4-2).

Table 4-2. Graduate agricultural leadership programs as reported by university faculty (n=21).

Offer agricultural leadership	Number	Percentage
Yes	7	33.3
No	14	66.7

Agricultural leadership teaching experience

University faculty respondents were asked to indicate their years of experience teaching graduate agricultural leadership courses, and results ranged from 1 to 20 years. The findings shown in Table 4-3 reveal that the average number of years of experience was 7.12 years. Of the 17 university faculty respondents, few were beginning teachers, and most of them had been teaching graduate-level agricultural leadership courses for over 3 years.

Table 4-3. Years of experience teaching graduate agricultural leadership courses (n=17).

Years	Frequency	Percentage
1	3	17.6
2	2	11.8
3	1	5.9
4	1	5.9
5	1	5.9
6	2	11.8
7	2	11.8
11	1	5.9
12	1	5.9
13	1	5.9
20	2	11.8

Business/Industry work experience

The majority of university faculty in this study indicated that they had worked in business/industry jobs prior to becoming a professor (see Table 4-4).

Table 4-4. Business and industry experience of university faculty (n=20).

Business/industry experience	Frequency	Percentage
Yes	13	59.1
No	7	31.8

Table 4-5 illustrates the industry jobs previously held by university faculty. The job titles were grouped into the following categories: training and development (n=5), management (n=6), sales (n=4), skilled labor (n=2), residence life director (n=1), and research director (n=1). The majority of university faculty (n=15) held training and development, management, or sales positions; all of which provide employees with an orientation of the business world.

Table 4-5. Job areas of industry positions held by university faculty (n=20).

Industry job areas	Frequency
Training and Development	5
Management	6
Sales	4
Skilled labor	2
Residence life director	1
Research director	1

Highest degree obtained

University faculty participants were asked to indicate their highest degree completed (see Table 4-6). Nearly all of the university faculty respondents held a Ph.D. or Ed.D. degree. This finding is consistent with the Fritz and Brown (1998) study which found that the majority (92%) of university faculty teaching leadership courses held doctoral degrees.

Table 4-6. Frequency and percentage of highest degree completed by university faculty (n=21).

Highest degree completed	Frequency	Percentage
Master's degree	1	4.8
Ed.D.	4	19.0
Ph.D.	16	76.2

Area of Highest Degree

University faculty participants were asked to indicate the area of the highest degree earned. Responses varied from education to agriculture to other degree areas. More than half of the respondents (57.2%) earned their highest degree in education, and one-third of the respondents (33.3%) earned their highest degree in agriculture. Few respondents (9.5%) held degrees in areas outside of education or agriculture (see Table 4-7).

Table 4-7. Frequency and percentage of area of highest degree completed by university faculty (n=21).

Degree Area	Frequency	Percentage
Education	12	57.2
Agriculture	7	33.3
Other	2	9.5

Description of Industry Representatives

Initially, the industry representatives included human resource professionals from agricultural Fortune 500 companies only. Due to the low response rate, the definition of industry representatives was expanded to include agribusiness and governmental representatives. Industry representatives providing data for the quantitative portion of this study included human resources professionals from agricultural Fortune 500 companies (n=5), agribusiness firms (n=3), and career resource professionals (n=2).

Demographic Data

The industry representatives were mostly male (see Table 4-8). Seventy percent were males (n=7), and thirty percent were female (n=3). Similarly, there were more male

university faculty respondents (86%) than female university respondents (14%) in this study.

The industry representatives were asked to report their highest degree earned (see Table 4-8). The majority of the respondents (60%) held at least a bachelor's degree. The remaining 40% held a high school diploma (10%), associate (10%), master (30%), or education doctorate degree (10%). Respondents earned their degrees from various areas, including engineering (25%), human resources (12.5%), agriculture (12.5%), business (12.5%), and communication/journalism (12.5%).

Table 4-8. Demographics of industry representatives (n=10).

Variable grouping	Frequency	Percentage
Gender		
Male	7	70
Female	3	30
Degree		
High school diploma	1	10
Associate degree	1	10
Bachelor's degree	4	40
Master's degree	3	30
Ed.D.	1	10

History of hiring agricultural education graduates

Industry representatives were asked to indicate if they hired agricultural education and communication graduates for jobs within their company (see Table 4-9). Six of the industry representatives indicated that they have previously hired agricultural education graduates with a leadership emphasis, and four indicated that they had not.

Table 4-9. Frequency and percentage of industry representatives who have hired agricultural education and communication graduates (n=10).

Hired AEC graduates	Frequency	Percentage
Yes	6	60
No	4	40

Training and development career opportunities for agricultural education graduates

Industry representatives were asked to list the current positions for which graduate students in agricultural education would be strong competitors or preferred candidates. Four positions for which agricultural education graduates would be strong competitors or preferred candidates were listed by respondents (see Table 4-10). The various job titles provided required a minimum of a bachelor's or master's degree.

Table 4-10. Job titles, preferred degrees, and degree areas of positions for which agricultural education and communication graduates are qualified.

Job Titles	Degree	Degree Area
Assistant Director for Career Events	MS	Counseling, Student Personnel, Higher Education or related field
Production Management Trainee	BS, MS	Animal Science, Agribusiness
Assistant Director of Experiential Learning	MS	Counseling, Student Personnel, Higher Education or related field
Assistant Director, Employee Relations and Research	MS	Counseling, Student Personnel, or related field
Assistant Director Client Services	MS	Counseling, Student Personnel, or related field

Company type

The industry representatives worked for companies such as industrial and farm equipment (n=2), food and grocery (n=1), career development and planning education (n=1), human resources consulting (n=1), and manufacturing (n=3) (see Table 4-11).

Table 4-11. Frequency and percentage of type of company by industry representatives (n=8).

Type of Company	Frequency	Percentage
Industrial and Farm Equipment	2	25
Food and Grocery	1	12.5
Education, Career Development /Planning	1	12.5
Human Resources Consulting	1	12.5
Manufacturing	3	37.5

Current job titles

Of the ten industry representatives, five (50%) held positions as a manager, four (40%) as director, and one (10%) as an assistant director (see Table 4-12). These were the current positions held by respondents in their companies.

Table 4-12. Frequency and percentage of current job titles held by industry representatives (n=10).

Job titles	Frequency	Percentage
Manager	5	50
Director	4	40
Assistant Director	1	10

Years employed in current position and at company

Industry representatives were asked to indicate the number of years they have been employed in their current position and the number of years employed at their present company (see Table 4-13). Three respondents (37.5%) indicated that they were employed in their current position for two years, and two respondents (25%) indicated that they have been employed in their current position for five years. One respondent (12.5%) reported that he/she had worked for one year, and another respondent (12.5%) indicated he/she had been employed for 20 years in current position. The time employed at a particular company ranged from 2 to 25 years, with three-fourths of the respondents working at their present company for six or more years.

Table 4-13. Years employed in current position and at current company (n=7).

Variable grouping	Frequency	Percentage
Years in current position		
1	1	12.5
2	3	37.5
5	2	25
20	1	12.5
Years employed at company		
1-5	2	25
6-10	1	12.5
11-15	3	37.5
21-25	1	12.5

Job titles of industry representatives

The industry representatives (n=10) held various job titles within their company prior to obtaining their current position. The job titles included Assistant Director for Careers (n=1), Engineering Designer (n=1), Human Resource Representative (n=2), Human Resource Consultant (n=1), Supervisor of Human Resources (n=1), Manager (n=2), Marketing Representative (n=1), Production Trainer (n=1), and National Accounts Sales (n=1). Job titles held at other related companies included Director of Human Resources (n=1), Human Resources Manager (n=2), Supervisor (n=1), and Manager (n=1).

Objective One

Objective one sought to ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses. University faculty felt that nearly all of the HRD competencies as identified by McLagan (1983) were very or extremely important.

University faculty respondents were asked to rate eighteen human resource development competencies on a Likert-type scale with a range of one to five, with 5 representing extremely important. The summated mean score for the university faculty rating of the HRD competencies was 70.80, indicating an overall rating of the 18 HRD competencies as very important (see Table 4-14). Individual mean ratings for the eighteen HRD competencies (McLagan, 1983) ranged from 3.09 to 4.77. University faculty (n=22) rated sixteen competencies as very important or extremely important. The "communication" competency was rated the highest (M=4.77, Extremely important) and also had one of the lowest standard deviations (.61) of the 18 HRD competencies

comprising the scale. The remaining two competencies, business knowledge and contracting, were rated as moderately important. University faculty did not rate any of the competencies as not important or of little importance.

Table 4-14. Mean and standard deviations of perceptions of HRD competencies required for training and development positions as rated by university faculty (n=22)

HRD Competencies	M	SD
Communication	4.77	.61
Interpersonal relationship building and collaboration	4.67	1.20
Leadership	4.41	.85
Industry awareness	4.33	1.02
Program evaluation	4.23	.53
Instructional design	4.18	.80
Change management	4.14	.99
Adult learning	4.09	.97
Buy-In/Advocacy	3.95	1.09
Design and development	3.91	1.06
Project management	3.77	1.02
Systems thinking	3.73	1.03
Consulting	3.68	1.09
Awareness of e-learning industry	3.55	.86
Implementation and support	3.50	1.06
Performance gap analysis	3.50	.86
Business knowledge	3.27	.94
Contracting	3.09	1.02
Summated mean	70.80	

Scale for interpreting item means: Not important (1-1.49); Of little importance (1.50-2.49); Moderately important (2.50-3.49); Very important (3.50-4.49); Extremely important (4.50-5.00)

University faculty respondents (n=22) were asked to rate twenty-five items representing the five exemplary leadership practices identified by Kouzes & Posner (1997). Perceptions about each exemplary leadership practice were measured with a set of five Likert-type items, with “5” representing “extremely important. The summated mean scores for university faculty are reported in Table 4-15. The summated mean scores for leadership competencies (McLagan, 1983) ranged from 20.50 to 21.52, placing all the five exemplary practices in the “very important” range. In addition, faculty ratings

of all but two of the twenty-five items representing exemplary leadership practices fell into the "very important" range. The other two items-"setting the example by behaving in ways consistent with shared values" and "being as dedicated as you expect others to be" were rated as "extremely important."

Table 4-15. Means and standard deviations of exemplary leadership practices required for training and development positions as rated by university faculty (n=22).

Leadership Practices	M	SD
Challenging the process		
Searching out challenging opportunities to change, grow, innovate and improve	4.27	.94
Experimenting, taking risks, and learning from mistakes	4.05	1.05
Exploring new and different ways of solving problems or improving processes	4.38	1.02
Going beyond boundaries of the organization to improve processes	4.00	.98
Utilizing opportunities to change the status quo	3.86	1.04
Inspiring a shared vision		
Envisioning an uplifting and ennobling future	4.18	.66
Enlisting others in a common vision by appealing to their values, interests, hopes, and dreams	3.95	.95
Communicating and sharing expectations using vivid, clear, and concrete images	3.91	.97
Exhibiting enthusiasm about future possibilities	4.32	.95
Envisioning the future of what the organization can become	4.23	.97
Enabling others to act		
Fostering collaboration	4.27	.63
Cooperative goals and building trust	4.09	1.02
Strengthening people by giving power away, providing choice, developing competence, assigning critical tasks, and offering visible support	3.86	.89
Providing individuals with as much control over resources as needed to do the job	4.05	.95
Listening to diverse points of view	4.23	.97
Modeling the way		
Setting the example by behaving in ways consistent with shared values	4.68	.57
Achieving small wins that promote consistent progress and build commitment	4.24	.62
Making the connection between individual performance expectations and organizational mission, vision, and values	4.23	.75

Table 4-15. Continued

Leadership Practices	M	SD
Planning thoroughly by dividing projects into achievable steps, thus creating opportunities for small wins	4.14	.77
Keeping people and projects on task by behaving consistently according to personal values	4.18	.96
Encouraging the heart		
Recognizing individual contributions to the success of every project	4.18	.91
Celebrating team accomplishments regularly	4.09	.87
Being as dedicated as you expect others to be	4.50	.80
Providing team members with support and appreciation for their contributions	4.24	.83
Recognizing people who exemplify commitment to shared values	4.18	.85

Scale for interpreting item means: Not important (1-1.49); Of little importance (1.50-2.49); Moderately important (2.50-3.49); Very important (3.50-4.49); Extremely important (4.50-5.00)

*Summated means of exemplary practices	
Challenging the process	20.81
Inspiring a shared vision	20.69
Enabling others to act	20.50
Modeling the way	21.50
Encouraging the heart	21.40

Qualitative Interviews

To further explore the HRD/leadership competencies required for training and development, qualitative interviews were conducted with selected university faculty (n=5). One university faculty respondent indicated that his or her department has core leadership competencies built into the curriculum. When asked about the competencies required for training and development positions, this respondent replied:

> We use eight leadership competencies … communication, diversity, visioning, mentoring, professionalism and ethics, problem-solving, teamwork, and working with change.

Similarly, another respondent stated:

> I think it is imperative that graduate students have the following competencies: communication, oral and written, research, ability to conduct persuasive presentations, and the ability to utilize negotiation skills…They also need to have an understanding of the land-grant philosophy, research and statistics classes, ability to write critical reports for funding, an understanding of international

> development as well as diversity-an understanding of how people from different backgrounds can work together.

Most respondents used the words "influence" (n=4) or "motivate" (n=3) when describing leadership competencies necessary for training and development positions. One respondent defined leadership in terms of a learning process.

> …a learning process by which an individual garnishes information to deal with various challenges…to plan the work and work the plan to bring about change.

Another university faculty respondent stated that leadership entails:

> …learning about people and learning how to motivate people.

Another university faculty respondent provided a definition of leadership that included the terms, influence, planned change, potential, and goals. This respondent commented:

> …my definition of leadership centers around influence. It's a person's ability-definitely not necessarily a title a person carries, but leadership is a person's ability to influence others to bring about hopefully planned change to reach whatever goals, proficiencies, or customer service or whatever to be able to influence others to reach their potential and the goals of the organization.

The similar responses indicate that university faculty generally had the same or similar conceptions about the nature of leadership. One university faculty respondent indicated that the department did not have much contact with industry due to the large size of the program. The responsibility for career planning and industry partnerships rested solely with the university career center instead of the department.

> …we use the university career center and we rely on our students to find their own employment opportunities. We don't have interaction with industry because we rely on our students to do this because our program is so big. So the students when they get their internships and final employment job, we really leave that up to them. We are very student-centered…

Objective Two

Objective two sought to ascertain the HRD/leadership competencies necessary for graduate students pursuing training and development employment, as perceived by selected industry representatives (see Table 4-16). Industry representatives felt that ten of the HRD competencies as identified by McLagan (1983) were very important, and one competency-"leadership"-was rated as extremely important. The industry representatives rated seven of the HRD competencies as moderately important.

Table 4-16. Mean and standard deviations of HRD competencies required for training and development positions as rated by industry representatives (n=10)

HRD Competencies	M	SD
Leadership	4.60	.52
Communication	4.40	.84
Interpersonal relationship building and collaboration	4.40	.84
Change management	4.30	.67
Buy-In/Advocacy	4.10	.99
Business knowledge	3.80	.63
Performance gap analysis	3.70	.95
Industry awareness	3.70	.82
Adult learning	3.70	.67
Systems thinking	3.60	.84
Project management	3.50	.85
Consulting	3.40	1.26
Instructional design	3.30	.95
Program evaluation	3.20	1.03
Contracting	2.80	1.14
Awareness of e-learning industry	2.70	1.06
Implementation and support	2.70	1.25
Design and development	2.60	.97
Summated mean	67.17	

Scale for interpreting item means: Not important (1-1.49); Of little importance (1.50-2.49); Moderately important (2.50-3.49); Very important (3.50-4.49); Extremely important (4.50-5.00)

Industry representatives (n=10) were asked to rate twenty-five items representing the five exemplary leadership practices (Kouzes & Posner, 1997). The five exemplary leadership practices were challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart (Kouzes & Posner, 1997).

Perceptions about each exemplary leadership practice were measured with a set of five Likert-type items, with "5" representing "extremely important." Mean scores for industry representatives are reported in Table 4-17 and ranged from 3.63 to 4.88.

Table 4-17. Means and standard deviations of perceptions of exemplary leadership practices required for entry-level training and development employment as rated by industry representatives (n=10).

Leadership Practices	M	SD
Challenging the process		
Searching out challenging opportunities to change, grow, innovate and improve	4.13	.84
Experimenting, taking risks, and learning from mistakes	3.75	.47
Exploring new and different ways of solving problems or improving processes	4.13	.64
Going beyond boundaries of the organization to improve processes	3.63	.74
Utilizing opportunities to change the status quo	4.00	.53
Inspiring a shared vision		
Envisioning an uplifting and ennobling future	3.75	1.04
Enlisting others in a common vision by appealing to their values, interests, hopes, and dreams	3.88	.64
Communicating and sharing expectations using vivid, clear, and concrete images	4.00	.76
Exhibiting enthusiasm about future possibilities	4.25	.46
Envisioning the future of what the organization can become	3.88	.64
Enabling others to act		
Fostering collaboration	4.13	.64
Strengthening people by giving power away, providing choice, developing competence, assigning critical tasks, and offering visible support	3.75	1.04
Providing individuals with as much control over resources	3.25	.89
Listening to diverse points of view	4.38	.52
Modeling the way		
Setting the example by behaving in ways consistent with shared values	4.38	1.06
Achieving small wins that promote consistent progress and build commitment	3.63	.52
Making the connection between individual performance expectations and organizational mission, vision, and values	4.13	.35
Planning thoroughly by dividing projects into achievable steps, thus creating opportunities for small wins	3.75	.46
Keeping people and projects on task by behaving consistently according to personal values	3.88	.99

Table 4-15. Continued

Leadership Practices	M	SD
Encouraging the heart		
Recognizing individual contributions to the success of every project	4.00	.76
Celebrating team accomplishments regularly	3.88	.65
Being as dedicated as you expect others to be	4.88	.35
Providing team members with support and appreciation for their contributions	4.38	.52
Recognizing people who exemplify commitment to shared values	4.13	.99

Scale for interpreting item means: Not important (1-1.49); Of little importance (1.50-2.49); Moderately important (2.50-3.49); Very important (3.50-4.49); Extremely important (4.50-5.00)

*Summated means of exemplary leadership practices

Challenging the process	19.30
Inspiring a shared vision	19.40
Enabling others to act	19.80
Modeling the way	19.60
Encouraging the heart	21.70

Qualitative Interviews

To further explore the HRD/leadership competencies required for training and development, qualitative interviews were conducted with selected industry representatives (n=10). When asked about the competencies required for training and development employment, one respondent replied:

> One has to be….flexible, maybe that's not a good word. One has to adjust to change and have insight or vision. It is also important to be able to direct even when things are not going right according to your opinion or by procedure. It goes back to motivation because you have got to get them there.

Another industry representative indicated that training and development employment requires communication, work ethic, and experience. When asked about the competencies required for training and development, one respondent recommended:

> Encourage the students to learn communication, good communication skills. Our jobs require a lot of work ethic. It's management, but it's not a sit-behind-the-desk job. This goes back to experience. Definitely have the students participate in the student training positions because some positions require this first before getting the job. That's why students need to start early.

> I think mostly they [industry] want to find students who have demonstrated leadership roles and they have taken on responsibility where the student can demonstrate the example or the change or the effect and sometimes that is very difficult. We have some strong leaders, but that is difficult to quantify but I think the employers look for a group of activities. Hopefully when they get to the interview process through a series of questions [employers] can identify the person's communication abilities and how they communicate and might communicate with others. In that case they want to see what the student has done. So if they have been an officer in an organization or they have had a special project or working on a research project with a group of people and can demonstrate that the team has achieved some goal, not necessarily won an award but was able to start a project, put it together, and show the end product. I think those are the kinds of things [we're] trying to identify.

Another industry representative highlighted the importance of interaction with industry as a means of knowing what is required for training and development employment. When asked about recommendations to prepare students for gainful employment in the training and development profession, one respondent suggested:

> I guess one would be while they are in school, get out and talk to companies, even though they may not be in a job search mode. Talk to HR and different types of staff members to find out (most of these companies are happy to talk to them)…find out exactly early on if the student does this to determine if there are needs and areas the company representatives can help guide them as to the courses. Instead of going through and taking a bunch of courses and then going out looking for a job, start early finding out exactly what are the needs and of course trying to align those with career interests.

Another industry representative highlighted the importance of interaction with industry as a means of knowing what is required for training and development employment. The respondent recommended:

> Students need courses like sociology that address understanding people, relating to cultures, working with small farmers, Hispanic farmers, etc. You have to develop an understanding of their culture. You may have to meet with them based on when they can meet given their time schedule even if it is 7 a.m. So students should take any course that teaches them how to deal with any culture other than what they are used to. Also, any professional development that can be taken would be good. This goes back to the leadership skills which is a plus.

One industry representative reiterated the importance of having "general business orientation" to be competitive for training and development employment.

> It depends on what type of position we are talking about. A lot of them [agribusinesses] try to get someone in an internship or co-op; that's a big plus where they have already gotten some general business orientation. They are more likely to hit the ground running than someone who has the skill set but may not have the general business orientation.

Another industry representative highlighted the importance of appropriate experiences and courses in helping students prepare for industry employment. The respondent was familiar with the agricultural education degree program and spoke highly about the advantages of the flexibility in the degree.

> Make sure the students get experiences early in their academic life, and make sure they are exposed to the different careers in the agency. I recommend that they be required to do an internship. I also recommend that they be diversified. AgEd gives students a diverse background. Make sure the degree is not limited. For example, one student was a good match for the organization, but the individual had not had the minimal soil and plant science courses she needed. Taking courses in only one area pigeon holes the student to one area. Encourage the students to learn communication, good communication skills. Our jobs require a lot of work ethic.

One respondent emphasized the importance of communication as a major part of leadership ability.

> Probably and this is part of leadership is the ability to communicate effectively because if you can't communicate, you are not going to be able to lead. You know someone who possesses a positive attitude, you know, people-oriented and focused on the needs of the people that they are leading and be sensitive to their needs. Of course, they have to be confident in whatever functional area they are in.

Objective Three

Objective three sought to compare and contrast the perceptions of university faculty and industry representatives toward HRD/leadership competencies necessary for agricultural education graduate students to obtain training and development employment. Based on the quantitative data, university faculty and industry representatives felt that a

large majority of the HRD competencies as identified by McLagan (1983) were very or extremely important (item means of 3.50 or higher) (see Table 4-18). The university faculty surveyed rated thirteen HRD competencies higher than the industry representatives rated the HRD competencies, and the faculty summated mean was slightly higher-70.80 versus 67.17. However, again both university faculty and industry representatives rated a large majority of the 18 HRD competencies as very or extremely important. University faculty rated communication, interpersonal relationship building and collaboration, and leadership competencies as more important than industry

Table 4-18. Mean scores of HRD competencies required for training and development positions as rated by university faculty (n=22) and industry representatives (n=10)

HRD Competencies	Faculty Mean	Industry Mean
Communication	4.77	4.40
Interpersonal relationship building and collaboration	4.67	4.40
Leadership	4.41	4.60
Industry awareness	4.33	3.70
Program evaluation	4.23	3.20
Instructional design	4.18	3.30
Change management	4.14	4.30
Adult learning	4.09	3.70
Buy-In/Advocacy	3.95	4.10
Design and development	3.91	2.60
Project management	3.77	3.50
Systems thinking	3.73	3.60
Consulting	3.68	3.40
Awareness of e-learning industry	3.55	2.70
Implementation and support	3.50	2.70
Performance gap analysis	3.50	3.70
Business knowledge	3.27	3.80
Contracting	3.09	2.80
Summated mean	70.80	67.17

Scale: 1=not important; 2=of little importance; 3=moderately important; 4=very important; 5=extremely important

representatives rated them, while industry representatives rated leadership, interpersonal relationship building and collaboration, communication, change management, and buy-in/advocacy competencies as more important.

University faculty (n=22) and industry representatives (n=10) were asked to rate twenty-five items representing the five exemplary leadership practices (Kouzes & Posner, 1997). The five exemplary leadership practices were challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart (Kouzes & Posner, 1997). Perceptions about each exemplary leadership practice were measured with a set of five Likert-type items. The summated mean scores for university faculty and industry representatives are reported in Table 4-19 and ranged from 20.50 to 21.52 and 19.30 to 21.70, respectively. Although university faculty rated four of the five exemplary practices slightly higher than industry representatives, both groups reported that the five exemplary practices are very important in the preparation of agricultural leadership graduate students for industry HRD/training and development positions.

Table 4-19. Mean scores of leadership practices required for entry-level training and development positions as rated by university faculty (n=22) and industry representatives (n=10)

Leadership Practices	University faculty M	Industry representatives M
Challenging the process	20.81	19.30
Inspiring a shared vision	20.59	19.40
Enabling others to act	20.50	19.80
Modeling the way	21.52	19.60
Encouraging the heart	21.43	21.70

Scale for interpreting summated means: Not important (5.00-7.45); Of little importance (7.50-12.45); Moderately important (12.50-17.45); Very important (17.5-22.45); Extremely important (22.50-25.00)

The qualitative interviews from both the university faculty and industry representatives were transcribed and analyzed according to themes. The following table shows the frequency of the most commonly used words in the transcription. Both

industry and university faculty used the words communication, interpersonal, teamwork, and leadership most frequently.

Themes that emerged from the interviews were logged and tabulated to further explore similarities and differences in responses (see Table 4-20). Leadership, communication, influence, experience, interpersonal, and change themes were repeatedly mentioned in the industry interviews. The industry representatives highlighted the importance of internships and work experiences, development of interpersonal skills, and effective communication. Similarly, the university faculty respondents highlighted the themes communication, leadership, interpersonal, experience, and influence.

Table 4-20. Frequency of emergent themes regarding HRD/leadership competencies.

Theme	Industry (n=10)	University faculty (n=5)	Totals
Communication	25	15	40
Interpersonal	10	8	18
Teamwork	5	4	9
Leadership	35	12	47
Influence	13	4	17
Motivation	5	3	8
Experience	10	5	15
Change	5	2	7
Flexibility	3	1	4
Respect	4	2	6
Confident	3	3	6

Objective Four

Objective four sought to identify key components of a graduate level agricultural leadership curriculum as recommended by industry and university faculty representatives. To accomplish this objective, respondents (n=15) were interviewed to gain further insight about the competencies required for training and development employment as well as curriculum recommendations.

Telephone or personal interviews were conducted with five university faculty and ten industry representatives to determine their perspectives on developing graduate agricultural leadership curricula. University faculty respondents recommended that graduate agricultural leadership programs should include the following components: management, youth organizations, organizational leadership, and personal leadership development.

Recommendations from industry representatives included utilizing careers services for job preparation, conducting informational interviews with company representatives, obtaining internship/co-op experience or "some general business orientation," searching career websites to determine hiring trends and issues, and taking the appropriate courses.

The industry representatives noted that there is a continuing demand for students pursuing training and development careers. A respondent stated that:

> … while the economy has not been very robust in the last year or so, we see a continuing demand for students in the HR function. That's probably going to increase. We are already starting to see more activity in the hiring area, particularly in the area of recruiting is probably where we see the greatest demand.… another area that I have seen other students go in to is marketing and sales; there is a high demand.

Industry representatives emphasized the importance of students starting early in choosing courses and interviewing business professionals. Recommended courses were sociology, psychology, and other courses pertaining to "dealing with people from cultures outside of your comfort zone." Other recommended course content areas included an understanding of the land-grant philosophy, research and statistics classes, ability to write critical reports for funding, an understanding of international development, and diversity.

Objective Five

Objective five sought to propose a model for graduate-level HR/leadership curricula based on research and findings of the study. A review of literature revealed that few studies that have specifically addressed graduate competencies (Dooley, 2002; Graham, 2001) in the context of training and development employment. Since this model was based on the literature review and findings, it will be discussed in chapter five.

Objective Six

Objective six sought to determine the profile of graduate agricultural leadership programs. University department chairs/unit leaders (n=7) were asked to provide background information on the year when graduate agricultural leadership courses were offered. Respondents were also asked to report the year when leadership specializations were first offered. The findings revealed that some departments began offering agricultural leadership courses from the 1940s, while others offered their first agricultural leadership course as late as 2000. However, leadership specializations have only been offered since the 1980s (see Table 4-21).

Table 4-21. Frequency and percentage of decade of original development of agricultural leadership programs as identified by unit leaders and department chairs (n=7).

Characteristic	Frequency	Percentage
First leadership course taught (n=8)		
1940-1949	1	12.5
1970-1979	2	25.0
1980-1989	3	37.5
1990-1999	1	12.5
2000-	1	12.5
First leadership specialization offered		
1980-1989	2	28.6
1990-1999	1	14.3
2000-	4	57.1

University department chairs/unit leaders were asked to indicate which degrees or programs in graduate agricultural leadership were offered originally (see Table 4-22). Programs initially offered Bachelor of Science (n=3), Master of Science (n=1), and Doctor of Philosophy (n=1) degrees (see Table 4-24). Other programs offered a seminar (n=3) or certificate in agricultural leadership (n=1). The study's findings revealed that most programs offered either leadership degrees or specializations through the Bachelor of Science degree (n=3) or through seminars (n=3) when the programs first offered agricultural leadership.

Table 4-22. Frequency of original degrees offered with a specialization or major in leadership (n=7).

Original degrees/programs	Frequency
Bachelor of Science	3
Master of Science	1
Doctor of Philosophy	1
Certificate program	1
Seminars	3

Agricultural Leadership Degree and Program Information

University department chairs/unit leaders were asked to indicate the current degrees or programs with a leadership specialization or major (see Table 4-23). Departments offered Bachelor of Science, Master of Science, and Doctor of Philosophy degrees. Additionally, departments offered certificate programs and/or seminars with leadership emphases. The majority of departments offered at least a Bachelor of Science degree (n=6).

Table 4-23. Current degrees/programs with a leadership specialization or major.

Degree	Frequency
Bachelor of Science	6
Master of Science	3
Doctor of Philosophy	3
Certificate program	3
Seminars	2

Original Target Audience

University department chairs/unit leaders were asked to specify which target audiences were included in the original leadership programs (see Table 4-24). Originally, agricultural leadership programs targeted audiences such as extension agents (n=5), community leaders (n=7), teachers (n=4), and industry professionals (n=7). Few programs initially targeted farmers (n=1) and government/agency officials (n=2).

Table 4-24. Frequency of target audience of original agricultural leadership programs (n=7).

Departmental clientele	Frequency
Extension agents	5
Farmers	1
Teachers	4
Community leaders	7
Industry professionals	7
Government/agency officials	2

University department chairs/unit leaders indicated the target audience of current leadership programs. Table 4-25 shows that emphases on extension agents, community leaders, community leaders, and industry professionals have remained a priority, with a growing emphasis on governmental/agency officials.

Table 4-25. Frequency of target audience of current agricultural leadership programs (n=7).

Departmental clientele	Frequency
Extension agents	7
Farmers	1
Teachers	5
Community leaders	6
Industry professionals	6
Government/agency officials	4

Graduate agricultural leadership specialization

University department chairs/unit leaders were asked to indicate whether or not the leadership specialization was a stand alone program emphasis (see Table 4-26). Based on

the responses, some programs (n=5) offered other specializations, such as teacher education. Only three programs had exclusive graduate-level leadership specializations.

Table 4-26. Frequency of graduate leadership specialization only (n=8).

Leadership specialization	Frequency
Yes	3
No	5
Other	
Combined with teacher education	3
No response	2

Graduate leadership minor offered

University department chairs/unit leaders were asked to indicate whether or not the agricultural leadership programs offered a graduate minor (see Table 4-27). None of the agricultural leadership programs offered a graduate minor.

Table 4-27. Frequency of graduate minor in agricultural leadership (n=5)

Graduate minor offered	Frequency
Yes	0
No	5

Graduate Agricultural Leadership Curriculum

Graduate Leadership Courses

University department chairs/unit leaders indicated that a wide variety of courses in agricultural leadership were offered at the graduate level (see Table 4-28). The courses were divided into the following major categories: leadership development and theories (n=11), organizational leadership (n=4), foundation (n=5), change management (n=4), and leadership in a diverse society (n=2). Others included environmental leadership (n=1) and research in leadership education (n=1).

Table 4-28. Frequency of graduate courses in agricultural leadership programs (n=8).

Course Categories and Titles	Frequency
Leadership Development and Theories	
Leadership Development	3
Theoretical Foundations of Leadership	1

Table 4-28. Continued.

Course Categories and Titles	Frequency
Leadership Development and Theories	
Youth Leadership	2
Volunteer leadership	3
Seminar in Leadership Education	1
Classic Figures in Leadership	1
Organizational Leadership	
Developing leadership capacity in organizations…	1
Supervisory leadership	1
Leading Agricultural Agencies & Organizations	1
Critical Thinking & Decision Making	1
Foundations of Agricultural Leadership Education	
Advanced Methods in Agricultural Education	2
Principles of Adult Education	1
Philosophy of Agricultural Education	1
Program Evaluation	1
Change Management	
Methods of Technological Change	1
Transfer of Technology by Institutions	1
Methodology of Planned Change	1
Leading Change in Rural America & Beyond	1
Leadership in a Diverse Society	
Leadership in Cross-Cultural Systems	1
Leadership & Communication Competencies in a Global Society	1
Miscellaneous	
Environmental Leadership	1
Research in Leadership Education	1

Graduate Student Data by Specialization

University department chairs/unit leaders from eight agricultural leadership programs reported a total of 327 graduate students (see Table 4-29). The data were

Table 4-29. Frequency and percentage of total number of graduate students by specialization for Fall 2003 semester.

Specializations	Frequency	Percentage
Leadership	116	35.5
Communication	11	3.4
Extension	38	11.6
Teacher education	75	22.9
Other	82	25.1
Youth and Family Education	5	1.5
Total	**327**	**100.0**

reported by specializations, including leadership (35.5%), communication (3.4), extension (11.6%), other (25.1%), and youth and family education (1.5%). The majority of graduate students had leadership specializations.

Graduate Student Data Trends

University department chairs/unit leaders reported the total number of masters and doctoral students in agricultural leadership over a three year program (see Table 4-30). The number of M.S. students in agricultural leadership rose from the 2001-2002 academic year (n=51) to the 2002-2003 academic year (n=104); however, the total number of graduate students studying agricultural leadership declined from the 2002-2003 academic year (n=104) to the 2003-2004 academic year (n=65). The number of Ph.D. students steadily rose from the 2001-2002 academic year (n=5) to the 2003-2004 academic year (n=38).

Table 4-30. Frequency of trends of graduate enrollment in agricultural leadership over three academic years.

Program Totals	2001-2002	2002-2003	2003-2004
MS	51	104	65
PhD	5	34	38
Total	**56**	**138**	**107**

Companies Hiring Graduate Agricultural Leadership Students

University department chairs/unit leaders reported the companies that have hired graduate students with agricultural leadership specializations (see Table 4-31). The data

Table 4-31. Frequency of companies employing graduate agricultural leadership students.

Companies	Frequency
Cedars Youth Services	1
Missouri Department of Conservation	1
Gallup	1
Universities	4
Williams Gard Center	1
Nebraska Bankers Association	1
Churches	1

above show that graduate students have obtained employment with a variety of companies (n=4), state departments (n=1), universities (n=4), and churches (n=1).

Job Titles of Graduate Agricultural Leadership Students

University department chairs/unit leaders reported that graduate agricultural leadership students have obtained employment in non-university positions (see Table 4-32). Job titles were varied and included staff manager, assistant director, director, associate director of training, corrections counselor, director of organizational development, and education director.

Table 4-32. Frequency of job titles of non-university positions in which graduate students have obtained employment.

Job Title	Frequency
Staff development manager	1
Assistant director	1
Director	1
Associate director of training	1
Corrections counselor	1
Director of organizational development	1
Education director	1

Perceptions of Job Titles for Which Graduate Agricultural Leadership Students Are Well Prepared

University department chairs/unit leaders were asked to indicate the job title(s) for which master's students in agricultural leadership are well prepared (see Table 4-33).

Table 4-33. Frequency of job titles for which M.S. agricultural leadership students are well prepared.

Job Title	Frequency
Education/Training Specialist	4
HR Manager	3
Leadership Educator	3
Director of Education/Training Programs	3
Program Evaluator	2

Respondents reported that master's students are well prepared to become an education/training specialist (n=4), HR manager (n=3), leadership educator (n=3),

director of education/training programs (n=3), and program evaluator (n=2).

Similarly, university department chairs/unit leaders indicated that doctoral-level agricultural leadership students were well prepared for six job titles (see Table 4-34). Respondents reported that master-level agricultural leadership students were well prepared to become an education/training specialist (n=3), HR manager (n=2), leadership educator (n=3), director of education/training programs (n=3), and program evaluator (n=3).

Table 4-34. Frequency of job titles for which Ph.D. agricultural leadership students are well prepared as reported by university department chairs/unit leaders (n=7).

Job Title	Frequency
Education/Training Specialist	3
HR Manager	2
Leadership Educator	3
Director of Education/Training Programs	3
Program Evaluator	3

Projected Changes in Agricultural Leadership Courses

Agricultural leadership faculty respondents indicated whether or not changes in graduate courses could be projected (see Table 4-35). Four respondents projected changes in graduate courses. Specifically, one respondent reported that one change would be the addition of an undergraduate minor in leadership studies.

Table 4-35. Frequency of projected changes in graduate agricultural leadership courses as reported by university department chairs/unit leaders (n=7).

Course changes	Frequency
Yes	2
No	4

Projected Changes in Required Competencies

Agricultural leadership faculty respondents indicated whether or not changes in graduate competencies could be projected during the next three to five years (see Table 4-36). The projected changes in competencies as suggested by three respondents were

increased emphases on technology proficiency and a more pluralistic view of cultural diversity. The other three respondents project no changes in competencies.

Table 4-36. Frequency of projected changes in competencies during the next 3-5 years as reported by agricultural leadership faculty (n=6).

Project changes in competencies	Frequency
Yes	3
No	3

Agricultural leadership faculty respondents indicated whether or not changes in graduate competencies could be projected during the next five to seven years (see Table 4-37). Only one respondent projected changes in graduate competencies; however, six respondents did not project any changes in competencies. One respondent stated that a projected change is the development of a graduate leadership course.

Table 4-37. Frequency of projected changes in competencies during the next 5-7 years as reported by agricultural leadership faculty (n=7).

Project competency changes	Frequency
Yes	1
No	6

Recommended Courses for Graduate Agricultural Leadership Students

The agricultural leadership faculty identified courses essential for graduate agricultural leadership students (see Table 4-38). The graduate courses included

Table 4-38. Frequency of courses essential for graduate agricultural leadership students as reported by agricultural leadership faculty (n=7).

Courses	Frequency
Leadership development theories	3
Learning organizations	2
Leadership and gender	1
Leadership and culture	1
Educational research	1
Data analysis	1
Human growth and development	1
Instructional strategies	1
Program planning and evaluation	1
Do not know	1

leadership development theories, learning organizations, leadership and gender, leadership and culture, educational research, data analysis, human growth and development, instructional strategies, and program planning and evaluation. One agricultural leadership faculty participant responded, "do not know."

Leadership Inventories/Assessment Tools

The agricultural leadership faculty were asked if leadership inventories or assessment tools were used in graduate courses (see Table 4-39). Of the six respondents, four indicated that they use leadership inventories or assessment tools in graduate courses. Only two respondents indicated that inventories or assessment tools were not used in graduate courses.

Table 4-39. Frequency of eadership inventories/assessment tools in graduate courses as reported by agricultural leadership faculty (n=7).

Use inventories/assessment tools	Frequency
Yes	4
No	2

The four respondents who utilized leadership inventories/assessment tools reported using a variety of assessments. Leadership inventories or assessment tools used in graduate courses included situational leadership (n=1), Maslow Motivation Questionnaire (n=1), Leadership Practice Inventory (n=2), and measurement of leadership styles (n=2).

Table 4-40. Frequency of leadership inventories/assessment tools used in graduate courses as reported by agricultural leadership faculty (n=7).

Inventories/assessment tools	Frequency
Situational leadership	1
Maslow Motivation Questionnaire	1
Leadership Practice Inventory (LPI)	2
Measurement of leadership styles	2

Required Textbooks for Graduate Leadership Courses

Agricultural leadership faculty utilize a variety of required textbooks (n=16) to teach graduate leadership courses (see Table 4-41).

Table 4-41. Frequency of required textbooks for graduate leadership courses as reported by agricultural leadership faculty (n=7).

Author	Textbook	Frequency
Shriberg	Practicing Leadership	1
Lussier	Leadership Theory and Practice	1
Nortthouse	Leadership	1
Collins	Good to Great	1
Bennis	Organizing Genius	1
Daft	Leadership Experience	1
Maxwell	The 21 Irrefutable Laws of Leadership	1
Johnson	Who Moved My Cheese	1
	Beyond Race and Gender	1
Blake et al.	Leadership Dilemmas-Grid Solutions	1
Covey	Seven Habits of Highly Effective People	1
Covey	Principle-Centered Leadership	1
Addison	On Becoming a Leader	1
Knowles et al.	The Adult Learner	1
Collins & Porras	Built to Last	1
Buford & Lindner	HRM in Local Government	1

Leadership Education and Training Background of University Faculty

The agricultural leadership faculty were asked if they had held previous industry positions. The majority previously worked as a leadership educator (n=5). Other industry positions were education/training specialist (n=1), human resources manager

Table 4-42. Frequency of industry positions held by agricultural leadership faculty as reported by agricultural leadership faculty (n=7).

Industry position held	Frequency
Education/Training Specialist	1
HR Manager	1
Leadership Educator	5
Director of Education/Training Programs	1
Program Evaluator	1
Farm manager	1

(n=1), director of education/training programs (n=1), program evaluator (n=1), and farm manager (n=1).

Primary areas of research interests

The primary areas of research interests as reported by of agricultural leadership faculty are listed in Table 4-43.

Table 4-43. Frequency of primary areas of research interests of agricultural leadership faculty (n=7).

Research areas	Frequency
Youth leadership	2
Extension	1
Competency assessment and development	1
Training and development	3
Other	
Effectiveness of leadership	1
Effects of culture in leadership	1
Small and limited resource farming	1
Quality of life	1

Professional memberships in leadership organizations

Agricultural leadership respondents (n=7) reported involvement in various professional leadership organizations (see Table 4-47). The professional leadership

Table 4-44. Frequency of professional memberships in leadership organizations (n=7).

Professional leadership memberships	Frequency
Agricultural Education	
American Association of Agricultural Educators	5
Farm Bureau	1
NACTA	1
AIAEE	2
Leadership	
Association of Leadership Educators	1
Honor Societies	
Gamma Sigma Delta	1
Alpha Zeta	1
Phi Delta Kappa	1
Other	
MANRRS	1
Rotary International	1

organizations were divided into the sub-categories: agricultural education (n=9), leadership (n=1), honor societies (n=3), and others (n=2).

Leadership emphasis in doctoral degree

The majority of agricultural leadership faculty obtained a Ph.D. degree that had no leadership education emphasis. Only two of the seven respondents (28.6%) had a leadership emphasis in their doctoral degree program.

Table 4-45. Frequency and percentage of doctoral degree with a leadership education emphasis by agricultural leadership faculty (n=7)

Ph.D. leadership emphasis	Frequency	Percentage
Yes	2	28.6
No	5	71.4

Formal leadership courses

Agricultural leadership faculty reported the formal leadership courses previously taken (see Table 4-46). The leadership courses were divided into the following sub-categories: leadership development and theories (n=8), program development (n=4), adult and extension education (n=2), research (n=2), and leadership in a diverse society (n=2). In addition, some university faculty respondents took specialized on-the-job leadership training (n=3). Thus, the agricultural leadership faculty in this study developed their leadership knowledge from a variety of leadership knowledge areas.

Table 4-46. Frequency of formal leadership courses completed as reported by agricultural leadership faculty (n=7).

Course Category and Focus	Frequency
Leadership Development and Theories	
Youth leadership/advisement	4
Leadership development theories	3
Industrial leadership	1
Program Development	
Curriculum development	1
Program Planning and Evaluation	1
Negotiation and Conflict Resolution	1

Table 4-46. Continued.

Course Category and Focus	Frequency
Program Development	
Instructional Technology	1
Adult and Extension Education	
Adult education	1
Advanced Extension Administration	1
Research	
Educational research	1
Data analysis	1
Leadership in a Diverse Society	
Human Growth and Development	1
Multicultural education	1
Specialized leadership training	
Army Leadership	2
ESCOP Leadership Development	1
Administrative Leadership	1

Summary

Demographic data were gathered and tabulated to ensure a better understanding of agricultural leadership programs, university faculty, and industry representatives in the study. The majority of university faculty respondents were males, had at least 3 years of experience teaching leadership courses, had prior industry work experience, earned at least a Master's degree, and received informal leadership training.

This chapter provided an overview of research findings based on qualitative interviews and online questionnaires. Chapter 5 will provide a more detailed discussion of the results. Further, it will draw the conclusions of the study and make recommendations from the results presented in this chapter.

CHAPTER 5
SUMMARY AND DISCUSSION

Chapter 1 described the background for studying academia and industry perspectives on graduate competencies necessary for training and development employment. The primary purpose of this study was to determine the perceptions of graduate-level agricultural leadership programs by university faculty and industry representatives. To accomplish this goal specific objectives were to:

1. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses.

2. Ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by selected industry representatives.

3. Compare and contrast the importance of HRD/leadership competencies necessary for agricultural education graduate students to obtain employment in training and development as perceived by university faculty and industry representatives.

4. Identify key components of a graduate level agricultural leadership curriculum as recommended by industry and academia representatives.

5. Propose a model for graduate-level agricultural leadership curricula based on research and findings of the study.

6. Determine the profile of graduate agricultural leadership programs.

Chapter 2 presented a discussion of previous research related to this study. Chapter 2 discussed literature in the following areas: (1) leadership and leadership development, (2) academia-industry partnerships, (3) curriculum theory, and (4) competencies. Theoretical frameworks, conceptual frameworks, and empirical research relevant to this study were also presented. Chapter 3 presented a review of methodology used in this

study. Chapter 4 summarized the research design, procedures, population and sample, instrumentation, and data collection for this study. Chapter 5 will present the findings of the study based on data from university faculty, agricultural leadership faculty, and industry representatives.

Problem Statement

Various competency studies (Birkenholz et al., 1994; Brown & Fritz, 1994; Fulkert, 1997; Hansen et al., 1989; Harris, 1989; Mahoric, 1997; Moody, 2001; Scanlon et al., 1996) have been conducted in previous years; however, there was limited research related to graduate-level competencies required for training and development careers. Since research in the context of graduate-level competencies was limited, literature from related fields was reviewed for methodology.

Limited research was available on the marketability of agricultural education graduates for industry leadership positions. While studies have been conducted on the industry perspective of curriculum revisions necessary to prepare undergraduate students for a competitive job market, few studies have been conducted that address the specific curriculum content areas necessary to prepare graduate students for such positions. Therefore, there was a need to study and explain the marketability of graduate students in agricultural education graduates for industry leadership and training and development careers.

Population and Sample

The populations for the study were university faculty and industry representatives. The university population included self-identified faculty in agricultural education and related programs (as listed in the membership directory of the American Association for Agricultural Education) who taught graduate leadership courses (N=35). The university

faculty sample (n=22) included respondents who provided data regarding the HRD/leadership competencies and exemplary practices. Additionally, agricultural leadership faculty and department chairs/unit leaders provided data to enhance the knowledge base on graduate agricultural leadership program development. Departmental chairs/unit leaders of agricultural education departments listed in the American Association of Agricultural Educators Directory were invited to participate in this study. Based on recommendations from the expert panel (see Appendix A), programs with graduate-level agricultural leadership programs were selected. The agricultural leadership faculty (n=7) provided data on the history and development of their graduate agricultural leadership curriculum. University department chairs/unit leaders (n=7) were respondents who were department chairs or unit leaders of graduate-level agricultural leadership programs.

The industry population (N=86) for this study included representatives of human resources departments of agriculturally related Fortune 500 companies. It was deemed necessary to include human resources professionals from agribusiness firms (n=3) and career services professionals (n=2) because of their familiarity with hiring practices, attributes of college graduate entering the profession, and industry perspectives on leadership competencies.

Review of Methods

The study was conducted using descriptive, survey research and long interviews. The independent variables were gender, educational background, years in current position, job title, type of company, leadership courses taught, required textbooks, business/industry experience, primary area of research interest, membership in professional leadership organizations, major of highest degree, formal leadership courses

taken, and leadership emphasis of Ph.D. Other independent variables addressed the history of original leadership program, and employment trends of graduate agricultural leadership students. The primary dependent variables in this study were perceptions of university faculty and industry representatives regarding the importance of HRD competencies and exemplary leadership practices needed for industry leadership positions.

Data were collected through online and mail questionnaires as well as long interviews. The quantitative portion of the study included data from university faculty (n=22) and industry representatives (n=10). The qualitative data were obtained via both university faculty (n=5) and industry representatives (n=10). Descriptive statistics and content analysis were used to analyze the quantitative and qualitative data for interpretation, respectively.

Summary of Results

Description of University and Industry Respondents

University faculty (N=35) self-identified as teaching graduate-level agricultural leadership courses were asked to complete a web-based questionnaire on HRD/leadership competencies required for graduate agricultural leadership students seeking industry leadership positions. The majority of university faculty respondents (n=22) were males (n=19, 86.4%), had experience teaching graduate leadership courses (M=7.1 years), and also had experience working in business/industry (n=13, 59.1%). In addition, all but one university faculty member participating in the study held a Ph.D. or Ed.D. degree.

Industry representatives (N=86) were also asked to complete a web-based questionnaire on HRD/leadership competencies required for graduate agricultural leadership students. Those industry representatives (n=10) who provided data for study

were mostly males (n=7), held either bachelor's (n=4) or master's degrees (n=3), and obtained degrees in various areas, such as engineering (n=2), human resources (n=1), agriculture (n=1), business (n=1), and communication/journalism (n=1). Of the ten industry representatives, six respondents reported that their companies had hired agricultural education and communication graduates. The industry representatives worked for companies classified as industrial/farm equipment (n=2), food/grocery (n=1), career development/planning (n=1), human resources consulting (n=1), and manufacturing (n=3). Some industry representatives worked in companies that had previously hired graduates of agricultural education and communication programs (n=6).

To determine the history of agricultural leadership programs, agricultural leadership faculty (n=7) and departmental chairs/unit leaders (n=8) were surveyed. The majority of agricultural leadership programs (n=5) began between 1970 and 1989, yet the first graduate leadership specializations were added later in the 1980s (n=2), 1990s (n=1), and 2000s (n=4). Originally, most programs offered either a bachelor's degree (n=3) or seminars (n=3).

Objective One

Objective one sought to ascertain the importance of HRD/leadership competencies for graduate students pursuing HR/training and development positions as perceived by university faculty who teach graduate-level agricultural leadership courses.

University faculty (n=22) rated 16 of the 18 competencies as very important or extremely important. The remaining two competencies, business knowledge and contracting, were rated as moderately important. None of the 18 HRD competencies were rated as not important or of little importance by university faculty.

University faculty (n=22) were asked to rate twenty-five items representing the five exemplary leadership practices identified by Kouzes & Posner (1997). Perceptions about the importance of each exemplary leadership practice were measured with a set of five Likert-type items. The five highest rated HRD competencies reported by university faculty were communication (M=4.77), interpersonal relationship building and collaboration (M=4.67), leadership (M=4.41), industry awareness (M=4.33), and program evaluation (M=4.23). The summated mean scores for the leadership practices ranged from 20.50 to 21.52, indicating that all five exemplary practices were rated by university faculty as very important.

To further explore the HRD/leadership competencies required for training and development, qualitative interviews were conducted with selected university faculty (n=5). When asked about the competencies relevant to HRD/leadership competencies relevant to graduate students, one respondent commented:

> I think it is imperative that graduate students have the following competencies: communication, oral and written, research, ability to conduct persuasive presentations, and the ability to utilize negotiation skills…They also need to have an understanding of the land-grant philosophy, research and statistics classes, ability to write critical reports for funding, an understanding of international development as well as diversity-an understanding of how people from different backgrounds can work together.

Another university faculty respondent provided a definition of leadership that included the terms, influence, planned change, potential, and goals. This respondent stated:

> …my definition of leadership centers around influence. It's a person's ability-definitely not necessarily a title a person carries, but leadership is a person's ability to influence others to bring about hopefully planned change to reach whatever goals, proficiencies, or customer service or whatever to be able to influence others to reach their potential and the goals of the organization.

Objective Two

Objective two sought to ascertain the HRD/leadership competencies necessary for graduate students pursuing training and development employment, as perceived by selected industry representatives. The five highest rated HRD competencies as reported by industry representatives were leadership (M=4.60), communication (M=4.40), interpersonal relationship building and coalition (M=4.40), change management (M=4.30), and buy-in/advocacy (M=4.10). Industry representatives felt that 11 of the 18 HRD competencies as identified by McLagan (1983) were very or extremely important. The industry representatives rated the remaining seven HRD competencies as moderately important.

To further explore the HRD/leadership competencies required for training and development, qualitative interviews were conducted with selected industry representatives (n=10). When asked about the competencies required for training and development employment, one respondent replied:

> One has to be….flexible, maybe that's not a good word. One has to adjust to change and have insight or vision. It is also important to be able to direct even when things are not going right according to your opinion or by procedure. It goes back to motivation because you have got to get them there.
>
> We use eight leadership competencies … communication, diversity, visioning, mentoring, professionalism and ethics, problem-solving, teamwork, and working with change.

Another industry representative highlighted the importance of interaction with industry as a means of knowing what is required for training and development employment. When asked about recommendations to prepare students for gainful employment in the training and development profession, one respondent suggested:

> I guess one would be while they are in school, get out and talk to companies, even though they may not be in a job search mode. Talk to HR and different types of

> staff members to find out (most of these companies are happy to talk to them)…find out exactly early on if the student does this to determine if there are needs and areas the company representatives can help guide them as to the courses. Instead of going through and taking a bunch of courses and then going out looking for a job, start early finding out exactly what are the needs and of course trying to align those with career interests.

Industry representatives (n=10) were also asked to rate twenty-five items representing the five exemplary leadership practices identified by Kouzes and Posner (1997). Perceptions about the importance of each exemplary practice were measured with a set of five Likert-type items. The summated mean scores for the leadership practices ranged from 19.30 to 21.70, indicating that all five exemplary practices were rated as very important by industry representatives.

Objective Three

Objective three sought to compare and contrast the perceptions of importance by university faculty and industry perspectives toward HRD/leadership competencies necessary for agricultural education graduate students to obtain training and development employment. University faculty and industry representatives felt that most of the HRD competencies as identified by McLagan (1983) were very or extremely important (see Table 4-18). The university faculty surveyed rated thirteen HRD competencies higher than the industry representatives rated those HRD competencies, and the faculty summated mean was slightly higher-70.80 versus 67.17. However, overall both groups rated the set of 18 competencies as very important.

Both university faculty and industry representatives rated communication, interpersonal relationship building and collaboration, and leadership competencies as the three highest rated competencies; however, the fourth and fifth highest rated competencies differed. University faculty rated industry awareness and program

evaluation as the fourth and fifth highest rated competencies, whereas industry representatives rated change management and buy-in/advocacy as the fourth and fifth highest rated competencies.

University faculty and industry representatives also gave similar ratings of importance to the five exemplary leadership practices as identified by Kouzes and Posner (1997). Overall, university faculty rated the exemplary practices slightly higher, with the exception of challenging the process, which was rated slightly lower. University faculty rated the exemplary leadership practices as follows: modeling the way (M=21.52), encouraging the heart (M=21.43), challenging the process (M=20.81), inspiring a shared vision (M=20.59), and enabling others to act (M=20.50). Industry representatives rated the exemplary leadership practices as follows: encouraging the heart (M=21.70), enabling others to act (M=19.80), modeling the way (M=19.60), inspiring a shared vision (M=19.40), and challenging the process (M=19.30).

Objective Four

Objective four sought to identify key components of a graduate level agricultural leadership curriculum as recommended by industry representatives and university faculty. To accomplish this objective, fifteen respondents were interviewed to gain further insight about the competencies required for training and development employment and to obtain curriculum recommendations.

Recommendations from industry representatives (n=5) included utilizing careers services for job preparation, conducting informational interviews with company representatives, obtaining internship/co-op experience or “some general business orientation,” searching career websites to determine hiring trends and issues, and taking the appropriate courses.

University faculty (n=5) reported various components of graduate level agricultural leadership curricula. The responses were grouped into the following categories: management, youth organizations, organizational leadership, and personal leadership development.

Objective Five

Objective five sought to propose a model for graduate-level agricultural leadership curricula based on the literature review findings of the study. Respondents suggested that graduate agricultural leadership curricula should include the following basic components: program characteristics, faculty characteristics, partnerships/strategic relationships, curriculum, student characteristics, business-orientation of students, and industry characteristics. The model shown in Figure 5 depicts the interrelated components of graduate-level agricultural curricula. Program characteristics of graduate-level agricultural leadership programs and faculty characteristics are interdependent. For example, the target audience of an agricultural leadership program may directly influence a university faculty member's familiarity with industry. Similarly, faculty characteristics and curriculum components are interdependent, as faculty build their professional knowledge and expertise based on the courses taught.

The curriculum impacts student characteristics and vice versa. Students continue to build their skill set based on the curriculum, and the curriculum is typically revised to meet the student needs as well. Student characteristics determine the business orientation experiences of students who go above and beyond the required course requirements and gain first-hand knowledge about the business world through internships, work experiences, leadership education and training, and informational interviewing. Such experiences influence industry characteristics, such as familiarity with graduate-level

agricultural leadership programs. This conceptual model is a guide for developing graduate level agricultural leadership curricula and accounts for the attainment of experience, education, and professional development at various stages in career development.

The partnerships/strategic relationships are determined by faculty and industry characteristics and are indirectly related. Industry characteristics influence the curriculum offered as faculty obtain business experiences and update curriculum offerings based upon on industry needs and perspectives.

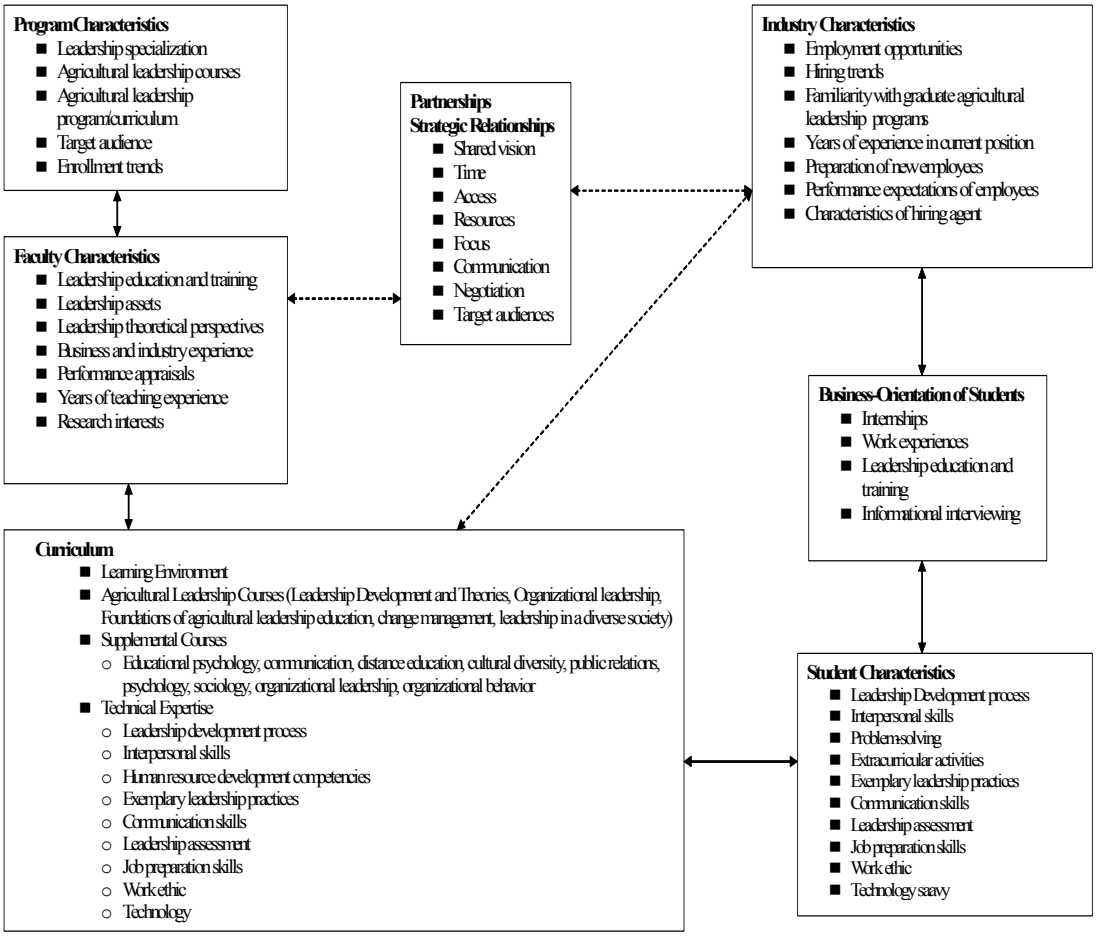

Figure 5. Key components of graduate level agricultural leadership curricula.

Objective Six

Objective six sought to determine the history of agricultural leadership programs. University department chairs/unit leaders were asked to provide background information on the year when graduate agricultural leadership courses were offered. Respondents were also asked to report the year when graduate leadership specializations were first offered.

The majority of agricultural leadership programs (n=5) began between 1970 and 1989, yet the first graduate leadership specializations were added later in the 1980s (n=2), 1990s (n=1), and 2000s (n=4). Originally, most programs offered either a Bachelor's degree (n=3) or seminars (n=3).

At the time of data collection responding department chairs/unit leaders reported that their departments currently offer Bachelor of Science (n=6), Master of Science (n=3), and Doctor of Philosophy (n=3) degrees with a focus on agricultural leadership. Additionally, departments offered certificate programs (n=3) and/or seminars (n=2) with leadership emphases. The target audience of current leadership programs at the time of the study included extension agents, farmers, teachers, community leaders, industry professionals, and governmental officials. Based on the responses, most responding programs (n=5) offered other specializations, such as agricultural teacher education. Only three of the 15 programs had exclusive leadership specializations. None of the agricultural leadership programs offered a graduate minor.

Discussion and Implications

Twenty-one agricultural education programs reported offering graduate level agricultural leadership course work, and just seven of these twenty-one programs offered graduate-level leadership specializations. Surprisingly, only three of the seven programs

offered leadership as a stand-alone specialization, whereas other programs offered leadership specializations combined with teacher education. Only three independent leadership specializations suggest that we may not have the capacity as a profession to aggressively pursue graduate agricultural leadership, especially at the Ph.D. level. A similar study conducted by Fritz and Brown (1998) found that 19 of the 55 departments of agricultural education (undergraduate and graduate programs) did not offer leadership and human resource management courses due to resource scarcity, institutional policy barriers and resistance, and lack of student demand.

University faculty should continue revamping graduate curricula to ensure that students are strong competitors for relevant employment opportunities. None of the five respondents of Fortune 500 companies reported that they had hired employees who had completed a graduate agricultural leadership degree. The data on this variable obtained in this study do not fully describe the scope of employment opportunities in training and development. Traditional agricultural education programs primarily focus on the preparation of teachers. Given this focus, secondary agriculture teachers appear to be identifiable clientele/stakeholders of agricultural education programs. Thus, program emphases that are indirectly related to teacher education that involve clientele/stakeholders other than teacher educators may be challenging to implement, due to incompatible departmental or institutional goals.

Faculty members teaching graduate leadership courses have acquired leadership education and training from various sources. Many of these faculty members appear to have developed their expertise in leadership during their tenure as faculty members. The leadership literature is rapidly expanding, making it quite easy to expand one's

knowledge and perspectives in leadership through self-study. Seminars and workshops are also plentiful, and in most cases, affordable. However, these faculty members should maintain an ongoing dialogue to ensure that the popular literature does not find its way into graduate curricula at the expense of leadership theory and practice grounded in empirical research.

Surprisingly, over one-half of the faculty respondents had some experience in business and industry. However, the data obtained in this study do not fully describe the nature and timeliness of these experiences due to the mixed industry population that included human resource professionals of agribusinesses (n=3) and career resource professionals (n=2). Ideally, faculty teaching graduate agricultural leadership courses should have had industry experience in a leadership/HRD/management position. This experience would provide a rich context for their teaching and support an accurate portrayal of the nature of leadership/HRD positions in industry.

Agricultural leadership faculty taught graduate courses in leadership development and theories, organizational leadership, foundations of agricultural leadership education, change management, and leadership in a diverse society; however, agricultural leadership faculty members had formal leadership courses in leadership development and theories, adult and extension education, program development, research, leadership in a diverse society, and specialized leadership training. Agricultural leadership educators are faced with teaching courses in change management and diversity, even though they took few courses in these subject areas. Thus, agricultural leadership educators may need to deepen and expand their expertise in these areas. They are faced with the challenge of embarking upon their own professional development to meet the needs and expectations

of their universities, departments, and stakeholders. However, achievement of such needs and expectations will vary from university to university, but the emerging curriculum demands suggest that improvement is essential for adequately preparing society-ready graduates.

Objective One

Objective one sought to ascertain the perceptions of university faculty toward HRD/leadership competencies for graduate students pursuing industry training and development positions. University faculty rated the 18 HRD competencies as very or extremely important. This finding is not surprising given the university faculty's leadership education training and background and years of experience teaching graduate agricultural leadership courses (M=7.1). The 18 HRD competencies as identified by McLagan (1983) can easily be incorporated into graduate-level agricultural leadership curricula.

Of the 18 HRD competencies, eight competencies (communication, leadership, interpersonal relationship building/collaboration, teamwork, adult learning, instructional design, program evaluation, and project management) easily fit within the context of graduate-level agricultural leadership. Communication and leadership appear to be well-represented in the current coursework offered by departments of agricultural education. Interpersonal relationship building/collaboration and teamwork competencies can be infused into the existing curriculum by requiring students to interact with industry and community leaders and to conduct group leadership projects. The implementation of competencies, such as change management, industry awareness, business knowledge, consulting, and awareness of e-learning, will require input from industry, Extension, and community leaders. Departments of agricultural education with few leadership faculty

may struggle to implement all of these competencies and incorporate an industry perspective. Since many of the competencies require the use of cognitive thinking abilities, the development of curricula that place emphasis on "how to think" versus "what to think" is essential. This is supported by research highlighting the importance of applications knowledge (Lindner & Dooley, 2002) essential for students in agricultural education.

University faculty members have ample teaching experience to provide students with leadership theory and practice grounded in empirical research. However, university faculty can only expose students to the relevant knowledge and empirical research regarding leadership development; some of the responsibility for developing the requisite skills to be successful rest with the student.

University faculty respondents rated twenty-five items representing the five exemplary practices identified by Kouzes and Posner (1997). The summated mean scores ranged from 20.50 to 21.52 for each practice, indicating that university faculty agreed that the exemplary leadership practices are very important for graduate students pursuing training and development employment.

Three of the five exemplary leadership practices (inspiring a shared vision, enabling others to act, and modeling the way) easily fit within the context of graduate-level agricultural leadership. Incorporating the exemplary leadership practices, challenging the process and encouraging the heart, may pose some challenges due to the internal nature of a person's leadership philosophy. For example, teaching a graduate student to "challenge the process" and "encourage the heart" may not be feasible given the nature of the exemplary leadership practices. Implementing these exemplary

practices effectively may require input from extension and community leaders. Thus, creating a learning environment that provides students with more opportunities to utilize the exemplary leadership practices is important.

Objective Two

Objective two sought to ascertain the HRD/leadership competencies necessary for graduate students pursuing training and development employment, as perceived by selected industry representatives. Industry respondents rated only the competency "leadership" as extremely important. Ten competencies (communication, interpersonal relationship building and collaboration, change management, buy-in/advocacy, business knowledge, performance gap analysis, industry awareness, adult learning, systems thinking, and project management) were rated very important, and seven competencies (consulting, instructional design, program evaluation, contracting, awareness of e-learning industry, implementation/support, and design/development) were rated as moderately important. This finding is consistent with research studies of Drucker (1999) and Marshall et al. (1999) that support the importance of soft skills in the workplace. Human resource managers of large American corporations indicate that soft skills are the most important characteristics an employee possesses, in addition to good communication skills and appearance. Soft skills identified by human resource managers of large American corporations were defined as having a "how can I help" attitude, good manners, willingness to take ownership, commitment, initiative, adaptability, teamwork, relationship building through trust and respect for the firm and individuals, and device to advance (Marshall, Patton & Stocker, 1999). Industry respondents in this study placed priority on leadership competencies when considering graduate students as potential candidates for training and development positions.

Industry representatives rated twenty-five items representing the five exemplary practices identified by Kouzes and Posner (1997). The summated mean scores ranged from 19.30 to 21.70. This finding indicates that industry representatives agreed that four exemplary leadership practices (enabling others to act, modeling the way, inspiring a shared vision, and challenging the process) were very important and one exemplary leadership practice (encouraging the heart) was extremely important.

Objective Three

Objective three sought to compare and contrast the perceptions about university faculty and industry self-identified perspectives on HRD/leadership competencies for graduate students pursuing training and development employment. Overall, the university faculty rated the 18 HRD competencies slightly higher than industry representatives (70.80 versus 67.17), although both groups rated a large majority of the competencies as very important.

University faculty and industry representatives also held similar perceptions about the importance of exemplary leadership practices. The university faculty rated the exemplary leadership practices from 20.50 to 21.52; whereas, the industry representatives rated the exemplary leadership practices from 19.30 to 21.70. Both groups rated all five exemplary practices as very important. This finding may be explained by the experience level of both university faculty and industry representatives. University faculty had an average of 7.1 years of experience teaching graduate-level agricultural leadership courses, while industry representatives had less than five years of experience working in the current position.

Future practice should address building partnerships to strengthen familiarity with agricultural leadership programs as well as industry's expectations. Academia-industry

partnerships have not been well-documented in the agricultural education profession. In terms of graduate agricultural leadership curriculum development, few research efforts can be cited. Findings from this study show that some academia partnerships involved career services/alumni professionals instead of university faculty. University partnerships with industry may also be forged around areas of interest beyond curriculum development.

The challenge of identifying industry representatives for this study is an indication that human resource personnel of Fortune 500 companies may not be the best group with which to gauge partnerships. Who are the clientele and/or stakeholders with which agricultural leadership educators should pursue partnerships? This answer to this question is challenging given the newness of agricultural leadership programs and limited resources available to sustain graduate-level, stand-alone leadership specializations. Perhaps it is more appropriate and worthwhile to involve extension and community leaders in the curriculum development of graduate-level agricultural leadership programs. Perhaps extension and community leaders are more accessible than industry leaders and more apt to become involved with agricultural leadership programs due to the emphasis on academic and community leadership development.

Industry representatives reported hiring agricultural education and communication graduate students from agricultural leadership programs. While graduate students in agricultural leadership are being hired for some training and development positions, it is unclear whether or not hiring trends in training and development are steady.

Objective Four

Objective four sought to identify key components of a graduate-level agricultural leadership curriculum as recommended by university faculty and industry representatives.

Recommendations from industry representatives included job preparation using career services, informational interviews, internships/work experiences or "some general business orientation, market trend research, and appropriate coursework. These responses were focused more on strategies for securing employment in industry rather than curriculum components of the graduate agricultural leadership program. This might suggest that the industry respondents in the study were unfamiliar with then nature and content of graduate programs in agricultural leadership. One note of caution when considering the data obtained from industry representatives is the mixed industry population which included human resource professionals of agribusinesses (n=3) and career resource professionals (n=2). Recommendations from university faculty included the incorporation of leadership, communication, research, presentation, negotiation, and ability to work with diverse groups.

The recommendations from the university faculty are representative of the leadership courses taken in their Ph.D. programs. Also, the years of teaching experience may have influenced the recommendations as well. On the other hand, the industry representatives' recommendations have to be reviewed carefully and generalized to the population studied.

Agricultural leadership is a new and emerging specialization in agricultural education. With only a few programs self-identified as an agricultural leadership program, more work needs to be done to reach consensus about what components to include in a graduate-level agricultural leadership program. The few agricultural leadership faculty and industry representatives in the study held different views about the components of graduate-level agricultural leadership curricula.

Objective Five

Objective five sought to propose a model for graduate-level agricultural leadership curricula based on research and findings of the study. Course content primarily focuses on leadership development and theories. Other content areas include foundations of agricultural leadership education, organizational leadership, and change management. Few specific courses are offered in global/diversity in leadership. It is possible that programs offered supplemental courses or infused the subject matter into the coursework.

More master's students (n=220) than Ph.D. students (n=77) enrolled during the 2001-2004 academic years pursued agricultural leadership specializations. There are some positions for which graduate students in agricultural education and communication are qualified. Graduate students in agricultural leadership education and related programs have previously obtained gainful employment in HR/training and development positions. Feedback from industry respondents in this study suggest that master's students maybe more preferred for training and development positions than doctoral students. Thus, future practice should incorporate business-orientation experience as a part of master-level agricultural leadership programs.

The graduate-level agricultural leadership curricula proposed in this study includes faculty characteristics, student characteristics, industry partnerships/strategic relationships, business orientation of students, curriculum components, and program characteristics. One limitation of the model is the incorporation of business orientation for graduate students, particularly master's students. Without input from industry clientele/stakeholders, it will be difficult to provide students with knowledge about the business world, including job descriptions and expectations. It is up to each individual

university and department of agricultural education to identify the appropriate clientele/stakeholders pertinent to building the curricula.

The business orientation of students pursuing non-academia employment is essential. Business orientation can be incorporated by requiring master's level students to complete internship and/or work experiences relevant to their learning goals. Applying adult learning principles would involve students actively participating in their expected learning goals and outcomes. Business orientation would not be limited to internship and work experiences, but it could also include conducting informational interviews, volunteer projects, and/or community service campaigns. Utilizing a semi-structured learning experience would provide students with an opportunity to enhance their business knowledge as well as their career planning/development goals.

Six of the ten industry representatives indicated that their company had previously hired agricultural education and communication graduates. Thus, there may be additional opportunities to enhance the publicity promoting agricultural leadership programs, especially to industry audiences. Further, determining reasons that companies have not previously hired agricultural education and communication graduates can be explored for further research.

University faculty members members acquired their Ph.D. degrees which focused primarily in youth leadership development and leadership development and theories. Few (n=2) respondents took adult education courses. University faculty need to build their expertise in business orientation to better prepare students for non-academia employment. To effectively prepare society-ready graduates, agricultural leadership faculty may need additional leadership training to expand their leadership knowledge and

expertise. Thus, building partnerships with other academic units or industries may prove useful in expanding new and evolving agricultural leadership programs. Based on the literature review, organizational leadership is a similar academic area upon which to build curricula and incorporate industry perspectives. Curriculum development of agricultural leadership programs should incorporate opportunities for students to develop their knowledge and understanding of the business world's requirements and expectations. Obtaining such experience will require training beyond agricultural leadership course offerings. Industry values experiences that orient students with the professional business world; thus, it is imperative the curriculum provide such opportunities for students to be adequately prepared for training and development employment.

Low response rates

Competency studies may generate low industry response rates as was the case with this study. Similar competency studies (Fulkert, 1997; Mahoric, 2001; Rothwell, Sanders, & Soper, 1999) have yielded response rates similar to the one in this study. According to Rothwell, Sanders, and Soper (1999), the low-response rate of industry respondents is typical, since companies usually do not want to divulge competency information. Some industry representatives indicated that they were unable to participate in the research study due to company policy. Other reasons for low response rate could be attributed to non-existent partnerships, time, and the increase of spam e-mails.

Objective Six

Objective six sought to determine the profile of graduate agricultural leadership programs. Graduate agricultural leadership programs have gradually emerged from agricultural education programs over the past 24 years. However, few additional faculty

FTEs have been allocated to support this initiative. Thus, in many cases, graduate agricultural leadership programs have been initiated by shifting personnel and fiscal resources away from agricultural education and related other programs. Unless these shifts have been accompanied by careful planning and administration of these programs, the result may be a splintered effort that leaves the original and new graduate leadership programs short of desired quality and scope standards. The reality of these resource limitations, coupled with the findings of this study, suggests that where such resource constraints exist, graduate agricultural leadership programs may be most effectively provided at the master's degree level. In the small number of programs that have significant resources allocated for agricultural leadership academic programs, PhD programs in agricultural leadership may be possible.

Agricultural leadership programs, especially at the graduate level, are new and emerging programs. Surprisingly, only three of seven programs offered leadership as a stand alone specialization. In most instances where a graduate-level leadership specialization was offered, it was offered as a combined specialization, especially teacher education.

Conclusions

Based on the results of the study, the following conclusions were drawn:

1. Very few agricultural education and communication departments offer graduate level degrees and/or specializations in agricultural leadership and relatively few university faculty teach graduate-level agricultural leadership courses. Graduate agricultural leadership programs have grown out of agricultural education perspectives, and faculty teaching in these programs have not made an adequate commitment to integrate industry perspectives into their leadership curricula.

2. Agricultural leadership programs originally offered bachelor's degrees and seminars; eventually only a small number of these programs offered a graduate specialization in agricultural leadership. Target audiences are diverse and include

industry, community leaders, teachers, extension agents, and more recently, governmental/agency official audiences.

3. University faculty who teach graduate agricultural leadership courses advance their leadership expertise through personal study, conferences, workshops, and corporate seminars.

4. Agricultural leadership academic programs are very young, with much of that program history focused on the undergraduate academic programs and courses. Agricultural leadership programs were originally offered as Bachelor of Science degrees and seminars in leadership for various target audiences. Graduate level study in agricultural leadership has only become available in the past 15 years and still remains limited to a very small number of institutions.

5. The majority of faculty teaching graduate level agricultural leadership courses are males and have previous business and industry experience in training and development, particularly in management and sales.

6. Most of industry respondents in this study held a master's degrees or less and had been employed less than five years in their current position.

7. Graduates of agricultural education programs with a leadership emphasis are accepting positions in business and industry in human resources development. Master's degrees are preferred, with positions in career services, education, research, and employee/client relations available to graduates in this field. Job titles include manager, director, and assistant/associate titles.

8. University faculty and industry representatives believe that all 18 HRD competencies (McLagan, 1983) are very/extremely important as preparation for HR/training and development positions.

9. University faculty and industry representatives agree that the 18 HRD competencies are either very important or extremely important.

10. University faculty and industry representatives agree that the 5 exemplary leadership practices are very important; however, industry representatives feel that encouraging the heart was extremely important.

11. Agricultural leadership faculty teach courses in leadership development and theories, organizational leadership, foundations, and research.

Recommendations for Practice

Based on the findings of this study, the following recommendations were made:

1. Graduate agricultural leadership curricula should incorporate the 18 HRD competencies (McLagan, 1983) and exemplary practices as identified by Kouzes and Posner (1997).

2. Graduate-level agricultural leadership curricula should incorporate program characteristics, faculty characteristics, partnerships/strategic relationships, curriculum, student characteristics, business orientation of students, and industry characteristics.

3. Agricultural leadership faculty should continue to expand their knowledge base in organizational and personal leadership development in academia and industry contexts to in order to prepare society-ready graduates in the future.

4. The development of graduate agricultural leadership curricula should involve input from university and/or college career service professionals who can provide additional insight on industry hiring trends and competency requirements.

5. Graduate students pursuing industry training and development careers should participate in business and industry experiences during their academic program to broaden their leadership knowledge. Faculty teaching in graduate agricultural leadership programs should strengthen partnerships with industry in order to improve curricula and business orientation of students.

6. Departments of agricultural education should continue establishing and maintaining partnerships with other departments, including career resources.

7. This study focused on the leadership specialization within the agricultural education degree program. Perhaps future efforts should also include the agricultural communications perspective, given the emphasis on marketing, public relations, and industry partnerships.

Recommendations for Future Research

- Researchers should continue to build the knowledge base on strategies on improving response rates in general. Dillman (2000) has documented several strategies used by researchers; however, these strategies need to be refined and reported.

- A longitudinal study should be conducted to determine the graduate students' perspective on the competencies required for training and development careers.

- Follow-up studies should be conducted periodically to determine the status of agricultural leadership programs in the profession of agricultural education. Few national studies (Brown & Fritz, 1994 & Fritz & Brown, 1998; Moody, 2001) on curriculum development efforts in agricultural leadership can be cited.

- This study should be replicated in three years to determine if training and development employment opportunities and desired competencies are similar.

- Research on competency development in agricultural education should address the challenges of using competency models. Rothwell and Lindholm (1999) stated that the challenges include ambiguity of terms and definitions, past-oriented competency models, and time-rigor trade off. One way to avoid the past-oriented competency

models is to consider the external forces that drive organizations which include the competitive, customer, supplier and distributor, economic, social, market, and legal sectors (Rothwell, Sanders, & Soper, 1999).

- Further research is necessary to determine if competencies for beginning employees are similar or in contrast to the competencies for experienced employees in HR/training and development positions.

- Future research in this area should incorporate agricultural communication departments as stakeholders. The advantages include more industry contact, marketing background, and increased likelihood of graduates entering industry jobs.

APPENDIX A
EXPERT PANEL

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APPENDIX B
UNIVERSITY FACULTY QUESTIONNAIRE

Part I: Human Resource Development Competencies

Below is a list of competencies required for human resource development leadership professionals (McLagan, 1983). Please indicate the competencies you deem to be most important for beginning employees in organizations like yours who hold graduate degrees. Rank each of the 18 competencies by importance using the scale below.

Scale: 1=Not important
2=Of little importance
3=Moderately important
4=Very important
5=Extremely important

1. Adult learning: Understanding how adults learn and how they use knowledge, skills and attitudes	1	2	3	4	5
2. Instructional design: Using the instructional model (analysis, design, development, delivery and evaluation) to create adult education classes that fulfill organizational goals	1	2	3	4	5
3. Performance gap analysis: Performing front-end analysis by comparing actual and ideal performance levels in the workplace	1	2	3	4	5
4. Change management: Helping people adapt to the changes brought on by new technologies and helping them to see the value and benefits of new technologies	1	2	3	4	5
5. Leadership: Leading, influencing, and coaching others to help them achieve desired results	1	2	3	4	5
6. Industry awareness: Understanding the current and future climate of the company's	1	2	3	4	5

industry and formulating strategies that respond to that climate					
7. Buy-In/Advocacy: Building ownership and support for workplace initiatives	1	2	3	4	5
8. Interpersonal relationship building and collaboration: Interacting effectively with others in order to produce meaningful outcomes	1	2	3	4	5
9. Consulting: Helping clients and stakeholders to question their assumptions, determine their needs, and plan implementation strategies for achieving their goals	1	2	3	4	5
10. Business knowledge: Demonstrating awareness of business functions and how business decisions affect financial and non financial work results	1	2	3	4	5
11. Systems thinking: Recognizing the interrelationship among the driving forces that connect seemingly isolated incidents within the organization	1	2	3	4	5
12. Contracting: negotiating, organizing, preparing, monitoring, and evaluating work performed by vendors and consultants	1	2	3	4	5
13. Project management: Assessing, planning, negotiating, organizing, monitoring, and evaluating the delivery process	1	2	3	4	5
14. Awareness of e-learning industry: Having a general understanding of trends within e-learning and knowing the existing and emerging technologies	1	2	3	4	5
15. Communication: Applying effective verbal, nonverbal, and written communication methods to achieve desired results	1	2	3	4	5
16. Program evaluation: Measuring the success of learning interventions	1	2	3	4	5

17. Design and development: Outlining and creating instructional materials suitable for electronic dissemination	1	2	3	4	5
18. Implementation and support: Coordinating the installation and maintenance of learning	1	2	3	4	5

Part II: Exemplary Leadership Practices

Below is a list of exemplary leadership practices (Kouzes & Posner, 1997). Please indicate the competencies you deem to be most important for beginning employees who hold graduate degrees. Rank each of the 5 leadership practices by importance using the scale below.

Scale: 1=Not important
2=Of little importance
3=Moderately important
4=Very important
5=Extremely important

1. Challenging the process:
   a. Searching out challenging opportunities to change, grow, innovate, and improve 1 2 3 4 5
   b. Experimenting, taking risks, and learning from mistakes 1 2 3 4 5
   c. Exploring new and different ways of solving problems or improving processes 1 2 3 4 5
   d. Going beyond the boundaries of the organization to improve processes 1 2 3 4 5
   e. Utilizing opportunities to change the status quo 1 2 3 4 5
2. Inspiring a shared vision:
   a. Envisioning an uplifting and ennobling future 1 2 3 4 5
   b. Enlisting others in a common vision by appealing to their values, interests, hopes, and dreams 1 2 3 4 5
   c. Communicating and sharing expectations using vivid, clear, and concrete images 1 2 3 4 5
   d. Exhibiting enthusiasm about future 1 2 3 4 5

possibilities

e. Envisioning the future of what the organization can become 1 2 3 4 5

3. Enabling others to act:
   a. Fostering collaboration by promoting 1 2 3 4 5
   b. Cooperative goals and building trust 1 2 3 4 5

   c. Strengthening people by giving power away, providing choice, developing competence, assigning critical tasks, and offering visible support 1 2 3 4 5

   d. Providing individuals with as much control over resources as needed to do the job 1 2 3 4 5

   e. Helping people learn and develop in their work 1 2 3 4 5

   f. Listening to diverse points of view 1 2 3 4 5

4. Modeling the way:
   a. Setting the example by behaving in ways consistent with shared values 1 2 3 4 5

   b. Achieving small wins that promote consistent progress and build commitment 1 2 3 4 5

   c. Making the connection between individual performance expectations and organizational mission, vision, and values 1 2 3 4 5

   d. Planning thoroughly by dividing projects into achievable steps, thus creating opportunities for small wins 1 2 3 4 5

   e. Keeping people and projects on task by behaving consistently according to personal values 1 2 3 4 5

5. Encouraging the heart:
   a. Recognizing individual contributions to the success of every project 1 2 3 4 5

   b. Celebrating team accomplishments regularly 1 2 3 4 5

c. Being as dedicated as you expect others to be 1 2 3 4 5

d. Providing team members with support and appreciation for their contributions 1 2 3 4 5

e. Recognizing people who exemplify commitment to shared values 1 2 3 4 5

Part III: Program Information

1. Please list the titles of graduate course(s) in leadership that you teach.

2. Does your department offer graduate degree(s) with a leadership specialization?
   - ❑ Yes
   - ❑ No

3. Please indicate the number of years you have taught graduate leadership courses at the university level.

4. Have you had any experience working in the business industry? If so, please specify the job title.
   - ❑ Yes
   - ❑ No
     - ❒ Job Title _____ (Please specify.)

5. From what sources have you developed your current level of expertise in leadership? (Check all that apply.)
   - ❑ Extension in-service training
   - ❑ Sabbatical leave
   - ❑ Corporate professional development seminars
   - ❑ Personal reading
   - ❑ Conferences/workshops
   - ❑ Other

6. Please indicate the number of years you were employed in this position.
   _____

7. Please indicate the area of your degree.
   - ❑ Engineering
   - ❑ Human Resources
   - ❑ Agriculture
   - ❑ Business
   - ❑ Liberal Arts
   - ❑ Technology

- ❑ Communication
- ❑ Journalism
- ❑ Other _____
  (Please specify.)

8. Please indicate the highest level of degree obtained.
   - ❒ Bachelors
   - ❒ Masters
   - ❒ Doctorate

9. Gender (Check one.)
   - ❒ Female
   - ❒ Male

APPENDIX C
INDUSTRY QUESTIONNAIRE

Part I: Human Resource Development Competencies

Below is a list of competencies required for human resource development leadership professionals (McLagan, 1983). Please indicate the competencies you deem to be most important for beginning employees in organizations like yours who hold graduate degrees. Rank each of the 18 competencies by importance using the scale below.

Scale: 1=Not important
2=Of little importance
3=Moderately important
4=Very important
5=Extremely important

1. Adult learning: Understanding how adults learn and how they use knowledge, skills and attitudes	1	2	3	4	5
2. Instructional design: Using the instructional model (analysis, design, development, delivery and evaluation) to create adult education classes that fulfill organizational goals	1	2	3	4	5
3. Performance gap analysis: Performing front-end analysis by comparing actual and ideal performance levels in the workplace	1	2	3	4	5
4. Change management: Helping people adapt to the changes brought on by new technologies and helping them to see the value and benefits of new technologies	1	2	3	4	5
5. Leadership: Leading, influencing, and coaching others to help them achieve desired results	1	2	3	4	5
6. Industry awareness: Understanding the current and future climate of the company's industry and formulating strategies that respond to that climate	1	2	3	4	5

7. Buy-In/Advocacy: Building ownership and support for workplace initiatives	1	2	3	4	5
8. Interpersonal relationship building and collaboration: Interacting effectively with others in order to produce meaningful outcomes	1	2	3	4	5
9. Consulting: Helping clients and stakeholders to question their assumptions, determine their needs, and plan implementation strategies for achieving their goals	1	2	3	4	5
10. Business knowledge: Demonstrating awareness of business functions and how business decisions affect financial and non financial work results	1	2	3	4	5
11. Systems thinking: Recognizing the interrelationship among the driving forces that connect seemingly isolated incidents within the organization	1	2	3	4	5
12. Contracting: negotiating, organizing, preparing, monitoring, and evaluating work performed by vendors and consultants	1	2	3	4	5
13. Project management: Assessing, planning, negotiating, organizing, monitoring, and evaluating the delivery process	1	2	3	4	5
14. Awareness of e-learning industry: Having a general understanding of trends within e-learning and knowing the existing and emerging technologies	1	2	3	4	5
15. Communication: Applying effective verbal, nonverbal, and written communication methods to achieve desired results	1	2	3	4	5
16. Program evaluation: Measuring the success of learning interventions	1	2	3	4	5
17. Design and development: Outlining and creating instructional materials suitable for electronic dissemination	1	2	3	4	5

18. Implementation and support: Coordinating the installation and maintenance of learning technologies	1	2	3	4	5

Part II: Exemplary Leadership Practices

Below is a list of exemplary leadership practices (Kouzes & Posner, 1997). Please indicate the competencies you deem to be most important for beginning employees who hold graduate degrees. Rank each of the 5 leadership practices by importance using the scale below.

Scale: 1=Not important
2=Of little importance
3=Moderately important
4=Very important
5=Extremely important

1. Challenging the process:

a. Searching out challenging opportunities to change, grow, innovate, and improve	1	2	3	4	5
b. Experimenting, taking risks, and learning from mistakes	1	2	3	4	5
c. Exploring new and different ways of solving problems or improving processes	1	2	3	4	5
d. Going beyond the boundaries of the organization to improve processes	1	2	3	4	5
e. Utilizing opportunities to change the status quo	1	2	3	4	5

2. Inspiring a shared vision:

f. Envisioning an uplifting and ennobling future	1	2	3	4	5
g. Enlisting others in a common vision by appealing to their values, interests, hopes, and dreams	1	2	3	4	5
h. Communicating and sharing expectations using vivid, clear, and concrete images	1	2	3	4	5
i. Exhibiting enthusiasm about future possibilities	1	2	3	4	5
j. Envisioning the future of what the organization can become	1	2	3	4	5

3. Enabling others to act:
   - k. Fostering collaboration by promoting 1 2 3 4 5
   - l. cooperative goals and building trust 1 2 3 4 5
   - m. Strengthening people by giving power away, providing choice, developing competence, assigning critical tasks, and offering visible support 1 2 3 4 5
   - n. Providing individuals with as much control over resources as needed to do the job 1 2 3 4 5
   - o. Helping people learn and develop in their work 1 2 3 4 5
   - p. Listening to diverse points of view 1 2 3 4 5
4. Modeling the way:
   - q. Setting the example by behaving in ways consistent with shared values 1 2 3 4 5
   - r. Achieving small wins that promote consistent progress and build commitment 1 2 3 4 5
   - s. Making the connection between individual performance expectations and organizational mission, vision, and values 1 2 3 4 5
   - t. Planning thoroughly by dividing projects into achievable steps, thus creating opportunities for small wins 1 2 3 4 5
   - u. Keeping people and projects on task by behaving consistently according to personal values 1 2 3 4 5
5. Encouraging the heart:
   - v. Recognizing individual contributions to the success of every project 1 2 3 4 5
   - w. Celebrating team accomplishments regularly 1 2 3 4 5
   - x. Being as dedicated as you expect others to be 1 2 3 4 5
   - y. Providing team members with support and appreciation for their contributions 1 2 3 4 5
   - z. Recognizing people who exemplify commitment to shared values 1 2 3 4 5

Part III: Company Information

1. Has your company previously recruited students with who hold graduate degrees in agricultural leadership?
   - ❒ Yes
   - ❒ No

2. Has your company previously hired employees with graduate degrees in agricultural education with a leadership emphasis?
   - ❒ Yes
   - ❒ No

3. Are there current positions (vacant or filed) in your company for which graduate students in agricultural education with the above preparation would be strong competitors or preferred candidates?
   - ❒ Yes
   - ❒ No
   - ❒ _____
     (Please specify the job title(s).)
   - ❒ _____
     (Please specify the job title(s).)

4. For each job, please specify the preferred degree and qualifications required.

Job Title	Degree Preferred	Qualifications

5. Please indicate the preferred degree required for training and development or human resource positions.
   - ❒ High school diploma
   - ❒ Associate degree
   - ❒ Bachelor's degree
   - ❒ Master's degree
   - ❒ Specialist
   - ❒ Ph.D.
   - ❒ Post-doctoral

6. Please indicate the type of company with whom you work:
   - ❒ Food Consumer Products
   - ❒ Food Production
   - ❒ Food Services
   - ❒ Tobacco
   - ❒ Industrial and Farm Equipment

- ❒ Wholesales
- ❒ Food and Grocery
- ❒ Other _____
  (Please specify.)

7. Gender (Check one.)
   - ❒ Female
   - ❒ Male

8. Please indicate your highest degree completed. (Check one.)
   - ❑ High school diploma
   - ❑ Associate degree
   - ❑ Bachelor's degree
   - ❑ Master's degree
   - ❑ Specialist
   - ❑ Ph.D.
   - ❑ Postdoctoral

9. Please indicate the area of your degree.
   - ❒ Engineering
   - ❒ Human Resources
   - ❒ Agriculture
   - ❒ Business
   - ❒ Liberal Arts
   - ❒ Technology
   - ❒ Communication
   - ❒ Journalism
   - ❒ Other _____
     (Please specify.)

10. Please indicate your job title. (Check one.)
    - ❑ CEO
    - ❑ President
    - ❑ Senior Vice President, Human Resources
    - ❑ Vice President
    - ❑ Manager
    - ❑ Director
    - ❑ Other _____
      (Please specify.)

11. Please indicate the number of years you have been employed with your company.
    _____

APPENDIX D
UNIVERSITY FACULTY QUESTION GUIDE

The Department of Agricultural Education and Communication prepares students to serve as educational and communication specialists with a leadership focus in the Agriculture and Natural Resources industries. At the undergraduate level students complete courses in program planning and evaluation, teaching methods, personal leadership development, selling, human resource management, and marketing and campaign strategies. Graduate courses include in-depth study in these major areas and also typically include educational technology, distance education and foundational work in educational psychology.

1. Does your department have a leadership specialization? Agricultural leadership degree?

2. Do these graduates work in academia or industry careers typically?

3. What are examples of the industry careers that students pursue? Are there other opportunities are available for students with industry leadership interests?

4. Which courses most adequately prepare students for non-academia careers?

5. What does leadership mean to you?

6. What leadership skills should students pursuing industry careers possess?

7. What recommendations would you make to educators who are preparing students for training and development and human resources careers?

8. Additional comments/questions?

APPENDIX E
INDUSTRY QUESTIONNAIRE

The Department of Agricultural Education and Communication prepares students to serve as educational and communication specialists with a leadership focus in the Agriculture and Natural Resources industries. At the undergraduate level students complete courses in program planning and evaluation, teaching methods, personal leadership development, selling, human resource management, and marketing and campaign strategies. Graduate courses include in-depth study in these major areas and also typically include educational technology, distance education and foundational work in educational psychology.

1. Provide an overview of career options in your company relevant to a student majoring in agricultural education with a leadership specialization.

2. Are there current positions (filled or vacant) in your company for which students with the above preparation would be strong competitors or even preferred?

3. If so, what are the job titles, qualifications, and responsibilities?

4. What does leadership mean to you?

5. What leadership skills do these positions require?

6. What types of coursework and or competencies demonstrate leadership skill potential?

7. What is the demand for graduates with these skills in your company or on an annual basis? What degree(s) are preferred? Required? (BS, MS, or PhD)

8. What is the demand for these types of graduates for your industry on a statewide or regional basis?

9. What opportunities for advancement exist in your company for these types of employees?

10. What are the key components of a graduate agricultural leadership curriculum?

11. Additional comments/questions?

APPENDIX F
PRE-EMAIL NOTIFICATION

May 7, 2003

Dear Dr. Adams:

I am conducting a research study about the value of a graduate degree in Agricultural and Leadership Education in agriculturally related Fortune 500 companies. This study will help to determine the preferred competencies for industry careers as perceived by university faculty and industry professionals. Within the next couple of days, an online version of the survey will be sent to you at this same e-mail address. Your participation in this research study will be greatly appreciated.

If you have any questions, feel free to contact me by telephone at (352) 392-0502 Ext. 226 or by e-mail at ltjones@mail.ifas.ufl.edu.

Thanks in advance for your cooperation.

Sincerely,

Laikhe Jones, Graduate Research Assistant
Department of Agricultural Education and Communication
P.O. Box 110540; 305 Rolfs Hall
University of Florida
Gainesville, FL 32607-0540
Tel: (352)392-0502 Ext. 226
Fax: (352) 392-9585
E-mail: ltjones@mail.ifas.ufl.edu

APPENDIX G
E-MAIL NOTIFICATION

May 9, 2003

Dear Dr. Fanno:

I am conducting a research study about the value of a graduate degree in Agricultural and Leadership Education for employment in agriculturally related Fortune 500 companies. This study will help to determine competencies required for industry careers as perceived by university faculty and industry professionals. Your input will assist us in improving our graduate curricula. To participate in this study, complete the online study available at http://aecweb.ifas.ufl.edu/ltjones/academiasurvey.htm. Your survey code number is please enter it in the box labeled 'insert code here'. The survey will only take 15 minutes to complete! Should you desire a paper version of this survey, please provide me with your mailing address. I am also enclosing a copy of the institutional review board protocol which requires your signature. This can be completed and returned electronically or by mail.

Your response by May 16, 2003 will be greatly appreciated. If you have any questions about this research study, please contact me by telephone at (352) 392-0502 Ext. 226 or by e-mail at ltjones@mail.ifas.ufl.edu. Thank you for your assistance!

Sincerely,

Laikhe Jones, Graduate Research Assistant
Department of Agricultural Education and Communication
P.O. Box 110540; 305 Rolfs Hall
University of Florida
Gainesville, FL 32607-0540
Tel: (352)392-0502 Ext. 226
Fax: (352) 392-9585
E-mail: ltjones@mail.ifas.ufl.edu

APPENDIX H
REMINDER E-MAIL NOTIFICATION

June 6, 2003

Dear Dr. Jackson,

You recently received an online survey requesting your opinions about the competencies required for graduate students pursuing industry careers.

If you have already completed the online survey, please accept our sincere thanks. If not, please do so today by accessing the survey at: http://aecweb.ifas.ufl.edu/ltjones/academiasurvey.htm. Enter your survey code, which is 815. We are especially grateful for your help because it is only by asking people like you to share your experiences that we can understand how to improve graduate agricultural leadership curricula.

If you did not receive a survey, or if the previous e-mail was deleted, please contact us by telephone at (352) 392-0502 Ext. 226 or by e-mail at ltjones@mail.ifas.ufl.edu.

Sincerely,

Laikhe Jones, Graduate Research Assistant
Department of Agricultural Education and Communication
P.O. Box 110540; 305 Rolfs Hall
University of Florida
Gainesville, FL 32607-0540

APPENDIX I
COVER LETTER TO INDUSTRY RESPONDENTS

July 11, 2003

Mr. James Farrell, Chief Executive Officer
Illinois Tool Works
3600 West Lake Ave.
Glenview, IL 60625-5811

Dear Mr. Farrell:

In an effort to prepare society-ready graduates from the College of Agricultural and Life Sciences at the University of Florida, I have endorsed a study to examine the competencies needed by graduates who pursue entry-level training and human resources positions. Your participation in this study will be beneficial to us in preparing suitable graduates fro employment in companies like yours.

You may participate in this study by:

- ❒ Completing and returning the enclosed survey and institutional review board form;
- ❒ Participating in a telephone interview (Please return the enclosed postcard); or
- ❒ Completing a questionnaire online at http://aecweb.ifas.ufl.edu/industrysurvey.htm. Enter the survey code 500.

If for some reason you are unable to participate in this study, please contact Laikhe Jones, and she will remove your name and contact information from the participant list. Upon completion of this study, summary findings will be forwarded to you if you request. Should you have further questions concerning this research, contact Laikhe Jones at (352) 392-0502 Ext. 226 or ltjones@mail.ifas.ufl.edu.

Sincerely,

E. Jane Luzar, Associate Dean
College of Agricultural and Life Sciences

APPENDIX J
COVER LETTER FOR SECOND MAILING

January 27, 2004

Dear Dr. Flores:

This is to request your participation in a study being completed by Laikhe Jones, UF PhD candidate. The focus of Laikhe's study has been to determine professional opportunities in non-university settings for students completing graduate degrees in agricultural leadership. Laikhe originally sought input from human resources directors in agriculturally related Fortune 500 companies. However, as is often the case with this population, she received a disappointing response from these subjects. In fact, many replied that their company policies prohibited them from participating in the study.

However, this situation has presented the opportunity for Laikhe to more closely examine the development of graduate programs in agricultural leadership across the U.S. Your assistance is crucial to successful completion of this important study. We have very little research to guide our efforts to prepare graduate students for training and development and human resources education positions in non-university settings, yet this currently appears to be an active placement arena for our graduates with even greater potential for future.

You may participate in this study by completing the attached brief questionnaire. Upon completing the questionnaire, be sure to save the file with your answers and e-mail the attachment to Laikhe Jones at ltjones@mail.ifas.ufl.edu.

If for some reason you are unable to participate in this study, please contact Laikhe Jones, and she will remove your name and contact information from the participant list. Should you have further questions concerning this research, contact Laikhe Jones at (352) 337-1711 or ltjones@mail.ifas.ufl.edu.

Sincerely,

Ed Osborne
Professor and Chair

Laikhe Jones
Ph.D. Candidate

APPENDIX K
UNIVERSITY CHAIRS QUESTIONNAIRE

Agricultural Leadership Program History

The following questions are designed to gain feedback about the history of your agricultural leadership program. Please respond to each question.

Note: For each item, double-click the highlighted text field and type your answer in the field labeled 'default text'. Then click 'ok'. For items that you are asked to check a box, double-click the box you wish to select. Select 'checked' located under the heading 'default value'. Then click 'ok'.

1. Year when first course in leadership was taught?

2. Year when leadership was first offered as a specialization or major?

3. Number of faculty teaching courses in leadership when leadership was first offered as a specialization or major?

4. Original degrees/programs offered with a specialization or major in leadership?
   (Check all that apply.)
   ☐ BS
   ☐ MS
   ☐ Ph.D.
   ☐ Certificate program
   ☐ Seminars

5. Current degrees/programs offered with a specialization or major in leadership?
   (Check all that apply.)
   ☐ BS
   ☐ MS
   ☐ Ph.D.
   ☐ Certificate program
   ☐ Seminars

6. Original target audience?
   ☐ Extension agents
   ☐ Farmers
   ☐ Teachers
   ☐ Community leaders
   ☐ Industry professionals

☐ Government/agency officials
☐ Other (Please specify.)
☐ Other (Please specify.)

7. Current target audience?
   ☐ Extension agents
   ☐ Farmers
   ☐ Teachers
   ☐ Other (Please specify.)
   ☐ Other (Please specify.)

8. Does your program offer leadership as a graduate specialization?
   ☐ Yes
   ☐ No

9. Is the leadership specialization a stand alone area of study?
   ☐ Yes
   ☐ No
      a. If no, please indicate the specialization(s) that is (are) combined with leadership?

10. Does your program offer a graduate minor in agricultural leadership?
    ☐ Yes
    ☐ No

11. List the graduate leadership courses offered by your department.
    1.
    2.
    3.
    4.
    5.
    6.
    7.
    8.
    9.
    10.

Employment Trends of Graduate Agricultural Leadership Students

The following questions are designed to gain feedback about the employment trends of your recent leadership graduates. Please respond to each question.

Note: For each item, double-click the highlighted text field and type your answer in the field labeled 'default text'. Then click 'ok'. For items that you are asked to check a box, double-click the box you wish to select. Select 'checked' located under the heading 'default value'. Then click 'ok'.

1. Please list the total number of graduate students in your department for each of the following areas in Fall 2003:
   a. Leadership
   b. Communication
   c. Extension
   d. Teacher education
   e. Other (Please specify).
   f. Other (Please specify).
   g. Total (Please specify).

Note: The following questions pertain only to graduate students in your agricultural leadership program.

2. Please provide placement data for your graduate students in your leadership programs for the last three academic years (2000-2003).
   a.

Graduate Leadership Program	Number of Students (2001-02)	Number of Students (2002-03)	Number of Students (2003-04)
M.S.			
Ph.D.			
Certificate program (if applicable)			
Total Students in Leadership			

   b. Please list the companies and or agencies in which graduate students have taken employment in the last 3 years. (Ex. John Deere, Cargill, Department of Education, etc.)

   c. Please list the job titles of non-university positions in which graduate students have obtained employment in the last 3 years?

3. For which jobs do you feel the master's degree students in your leadership program are well prepared? (Check all that apply.)
   Education/Training Specialist ☐ Yes ☐ No
   HR Manager ☐ Yes ☐ No
   Leadership Educator ☐ Yes ☐ No
   Director of Education/Training Programs ☐ Yes ☐ No
   Program Evaluator ☐ Yes ☐ No
   Other (please specify)
   Other (please specify)

4. For which jobs do you feel the doctoral degree students in your leadership program are well prepared?
   Education/Training Specialist ☐ Yes ☐ No
   HR Manager ☐ Yes ☐ No
   Leadership Educator ☐ Yes ☐ No

Director of Education/Training Programs	☐ Yes	☐ No
Program Evaluator	☐ Yes	☐ No
Other (please specify)		
Other (please specify)		

APPENDIX L
UNIVERSITY FACULTY QUESTIONNAIRE

Graduate Agricultural Leadership Curriculum

The following questions are designed to gain feedback on your graduate agricultural leadership program. Please respond to each question.

Note: For each item, double-click the highlighted text field and type your answer in the field labeled 'default text'. Then click 'ok'. For items that you are asked to check a box, double-click the box you wish to select. Select 'checked' located under the heading 'default value'. Then click 'ok'.

1. Do you project any changes in course offerings in the near future? ☐ Yes ☐ No

    b. If yes, please describe the projected changes.

2. What courses other than those currently offered in your department do you feel are essential for graduate students specializing in leadership?

3. Do you foresee any changes in the required competencies in the next 3-5 years?
    ☐ Yes
    ☐ No

    c. If yes, please describe the projected changes.

4. Do you foresee any changes in the required competencies in the next 5-7 years?
    ☐ Yes
    ☐ No

    d. If yes, please describe the projected changes.

5. What are the required textbooks for your leadership course(s)?
    1.
    2.
    3.
    4.
    5.

6. Do you utilize leadership inventories or assessment tools in your course?
    ☐ Yes ☐ No

e. If yes, which leadership inventories or assessment tools do you use in your course(s)?

Leadership Education and Training

The following questions are designed to gain feedback on your leadership background. Please respond to each question.

Note: For each item, double-click the highlighted text field and type your answer in the field labeled 'default text'. Then click 'ok'. For items that you are asked to check a box, double-click the box you wish to select. Select 'checked' located under the heading 'default value'. Then click 'ok'.

1. Which of the following industry positions have you held? (Check all that apply).
   ☐ Education/Training Specialist
   ☐ HR Manager
   ☐ Leadership Educator
   ☐ Director of Education/Training Programs
   ☐ Program Evaluator
   ☐ Other (Please specify.)
   ☐ Other (Please specify.)

2. What are your primary areas of research interests?
   ☐ Youth leadership
   ☐ Curriculum development
   ☐ Extension
   ☐ Competency assessment and development
   ☐ Training and development
   ☐ Other (please specify)
   ☐ Other (please specify)

3. List your memberships in professional leadership organizations.

4. What was the major of your highest degree?

5. Did your doctoral degree program have a leadership education emphasis?
   ☐ Yes
   ☐ No

6. What formal leadership courses have you completed?

APPENDIX M
UNIVERSITY AFFILIATION OF FACULTY PARTICIPANTS

1. California Polytechnic State University
2. Clemson University
3. Iowa State University
4. North Carolina A&T State University
5. Ohio State University
6. Oklahoma State University
7. Oregon State University
8. Pennsylvania State University
9. South Carolina State University
10. South Dakota State University
11. Texas A&M University
12. Texas Tech University
13. University of Delaware
14. University of Florida
15. University of Nebraska-Lincoln
16. Utah State University

APPENDIX N
INDUSTRY PARTICIPANTS

1. Bowater
2. Briggs & Stratton
3. Caterpillar
4. Clemson University Career Services
5. International Game Technology
6. Job Hog.net
7. ProFac Cooperative
8. U.S. Department of Agriculture/Natural Resources Conservation Service
9. University of Florida Career Resource Center
10. Perdue Farms

APPENDIX O
INSTITUTIONAL REVIEW BOARD FORM

INFORMED CONSENT

Protocol Title: Academia and Industry Perspectives on Leadership and Human Resource Development Competencies Required for Graduate Students Pursuing Industry Careers

Please read this consent document carefully before you decide to participate in this study.

My name is Laikhe Jones, and I am a graduate student in the Department of Agricultural Education and Communication. Thank you for taking the time to participate in this study. Your participation is completely voluntary. There is no penalty for not participating. The purpose of this study is to investigate academia and industry perceptions of graduate agricultural leadership curricula. If you choose to participate, you will answer items on a confidential survey that will take about 30 minutes to complete. You can stop any time without penalty and you do not have to answer any question you do not wish to answer.

All answers are confidential to the extent provided by the law. There are no known risks associated with this study and there is no compensation or other direct benefit to you for participation.

If you'd like to learn about this study, please contact me at 213 Rolfs Hall, Gainesville campus or by telephone at 352-392-0502 ext. 226. You may also contact Dr. Ed Osborne, research supervisor, at 305 Rolfs Hall, PO Box 110540, Gainesville, FL, 32611-0540 or by telephone at 352-392-0502. If you have questions about your rights as a research participant, please contact the UFIRB Office, Box 112250, University of Florida, Gainesville, FL, 32611-2250, 352-392-0433.

Agreement:

I have read the procedure described above, I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant _____ Date: _____

Principal Investigator: _____ Date: _____

APPROVED BY
University of Florida
Institutional Review Board (IRB 02)
Protocol# 2003-U-291
For Use Through 3/15/04

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BIOGRAPHICAL SKETCH

Laikhe Jones was born on April 9, 1974, in Durham, North Carolina. She participated in a summer research apprenticeship program, at North Carolina A&T State University, that sparked her interest in a career in agriculture.

She received a Bachelor of Science degree in agricultural education from North Carolina A&T State University in May of 1992. During each summer, she participated in internships with USDA/Natural Resources Conservation Service, Cornell Environmental Science Undergraduate Research Program (CESURE), Dupont Agricultural Products, and Franklin-Vance-Warren Opportunity, Inc.

Shortly after graduation, Ms. Jones pursued a Master of Science degree, in agricultural and extension education at Michigan State University, which was completed in August 1998. While at Michigan State University, she participated in a summer study abroad program in Swaziland, Lesotho, and South Africa. She then worked as an instructor at North Carolina A&T State University. In August 2000, Ms. Jones began work on a Doctor of Philosophy degree in agricultural education and communication at the University of Florida.