

**Effect of an Internship on Pre-service Extension Educators' and Mentors
Views of the Cooperative Extension Service**

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Abstract

Internships have become an important part of the college experience for students as a way to learn and develop talents in a certain area. This study sought to determine if participation in an internship with the Cooperative Extension Service changed the interns and mentors overall perception of the Cooperative Extension Service. The views were measured in terms of a traditional or contemporary view of Extension using a semantic differential scale. The interns were measured at three points in the internship experience: pre, post, and post-post. Measurements for the mentors were taken pre and post internship. The interns' views moved from a contemporary view to a more traditional view while the mentors went from strongly traditional view to a more neutral view. This change may be attributed to the internship experience and the interaction between the interns and mentors.

Introduction/Theoretical Framework

Internships have become an important part of the college experience for students, allowing them to try different careers before actually entering the workforce (Patterson, 1997). A 2005 study by the National Association of Colleges and Employers reported, on average, more than three out of five college hires had an internship experience (Jones, 2006). Internships have benefits for both students and organizations. Students bridge the gap between classroom learning and the real world (Gault, Redington, & Schlager, 2000) while companies view interns as potential full-time employees (Stone & McLaren, 1999). Research shows that undergraduates benefit by gaining self confidence and developing expertise (Henry, Rehwaltdt, & Vineyard, 2001). Knouse, Tanner, and Harris (1999) found internships improved the opportunity to have a job at graduation and increased academic performance. This increase in academic performance may be attributed to time management, communication skills, self-discipline, initiative, and a better self-concept developed during the internship.

Organizations, specifically mentors, benefit from hosting interns. Inkster and Ross (1995) found mentors or supervisors may be transformed in subtle ways when hosting an intern. These transformations may include increase knowledge of developments in the field, renewed enthusiasm for career, and increased creativity (Inkster & Ross). Stone and McLaren (1999) found by hosting an intern, mentors find their ideas and attitudes refreshed and are exposed to new innovative ideas. Beard (2007) reported a lower turnover rate for new hires that had internship experience and increased confidence in a professional work setting. Internship experiences have been found to increase the awareness of interns about other career options previously not considered (Kerka, 1989; Neapolitan, 1992; Scott, 1992) and viewed as important ways of preparing students for future careers.

In studying alumni and their early career success, Gault et al. (2000) found alumni with internship experiences had significantly earlier career advantages, better job preparation, found employment quicker, and were found to have higher extrinsic success. Taylor (1988) found employees with an internship experience received higher starting salaries, were more satisfied with their new job, and were viewed to be more qualified for jobs than those students without an internship experience. Organizations who host interns may view them as potential employees, inexpensive help, and a source of new, fresh ideas (Cannon & Arnold, 1998; Ross & Elechi, 2002; Stone & McLaren, 1999).

The importance of this study is supported by the National Research Agenda of Agricultural Education and Communication for 2007-2010. The study falls under research priority number 4 for the Extension and Outreach objective which concerns the appropriate non-formal educational delivery systems for the preparation of Extension educators (Osborne, 2007). An internship experience with Cooperative Extension is a cumulative, full-time experience for students preparing for careers as Extension educators at some universities (Scheer, Ferrari, Earnest, & Connors, 2006). Other states with Extension internship experiences are simply allowing undergraduates to test out a career option. Extension educators describe this as a “win-win” situation, where undergraduates are hired at minimal expense for the summer months and experience the career of an Extension agent in exchange for extending the reach of Extension educators (Rogers, Mason, & Cornelius, 2001).

The theoretical framework of this study is based on David Kolb's model of experiential learning. Kolb (1984) offers a working definition of experiential learning as "Learning is the process whereby knowledge is created through the transformation of experience" (p. 38). Another definition is when the learner is in direct contact with the realities being studied (Zanville & Markwood, 1982). Much of the internship literature cites experiential learning as the framework or basis of the internship experience (Beard, 2007; Inkster & Ross, 1995, 1998; Parilla & Hesser, 1998; Stedman, Rutherford, & Roberts, 2006; Stone & McLaren, 1999; Zanville & Markwood, 1982).

The experiential learning theory is built upon six ideas shared by numerous scholars in the human learning and development field including Dewey, Lewin, and Piaget (Kolb, 1984; Kolb & Kolb, 2005). These six ideas are: (1) Learning is best conceived as a process, not in terms of outcomes, where ideas are formed and reformed. (2) Learning should be relearning where students' ideas are brought out, examined, and mixed with new refined ideas. (3) Conflicts help to drive the learning process. (4) Learning involves the whole person, i.e. thinking, feeling, perceiving, and behaving. (5) Learning is a process of combining new experiences with old experiences and vice versa. (6) Creating new knowledge is a process of learning (Kolb; Kolb & Kolb).

Smith (2001) discusses Kolb's experiential learning model as having four points which are concrete experience (CE), observation and reflection (RO), forming abstract concepts (AC), and testing in new situations (AE). A person can begin at any point of the model during the learning process. Figure 1 graphically displays Kolb's experiential learning process model. Kolb (1984) describes the four points as:

They [learners] must be able to involve themselves fully, openly, and without bias in new experiences (CE). They must be able to reflect on and observe their experiences from many perspectives (RO). They must be able to create concepts that integrate their observations into logically sound theories (AC) and they must be able to use these theories to make decisions and solve problems (AE) (p. 30).

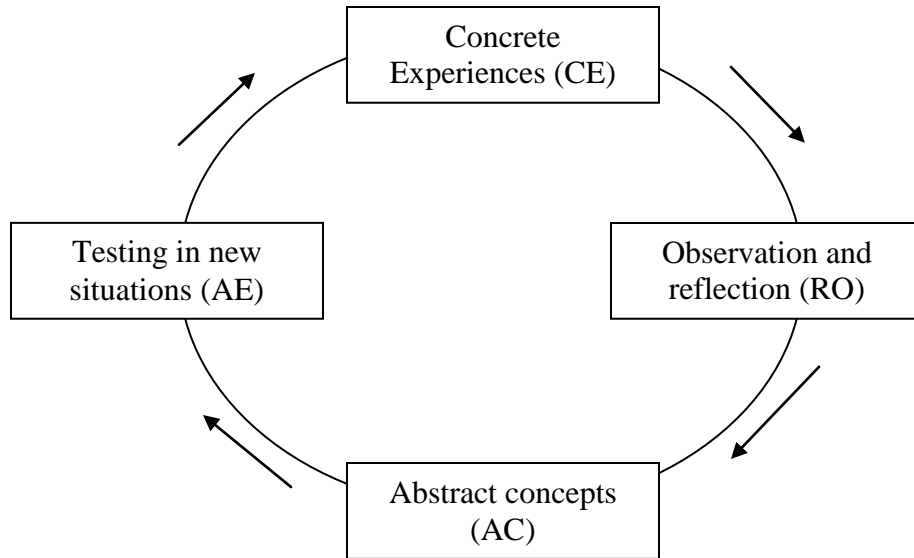


Figure 1. Kolb's model of experiential learning adapted from Smith (2001)

Roberts (2006) summarizes various experiential learning models as all being cyclical in nature. Roberts describes the experiential learning cycle as a process that requires the learner to be focused, followed by interaction and reflection, the developing of generalizations, and finally the testing of those generalizations.

Purpose/Objectives

The purpose of this study was to describe changes in interns and mentors attitudes towards the Cooperative Extension Service during participation in an internship program.

The following objectives directed this study:

1. Describe the demographic characteristics of the interns and mentors.
2. Describe interns' attitudes toward the Cooperative Extension Service at various points during the internship experience.
3. Describe mentors' attitudes toward the Cooperative Extension Service at various points in the internship experience.
4. Compare interns' attitudes toward the Cooperative Extension Service to the attitudes of their mentors.

Methods/Procedures

The population consisted of 12 Cooperative Extension Service interns for the summer of 2007. The target mentor population consisted of 18 Cooperative Extension Service educators (mentors) with varying staffing assignments. Any county educator who interacted with the interns was asked to complete the post test assessment which ultimately yielded responses from

25 Extension educators. To participate in the program, both interns and mentors completed an application and were chosen through a selection process overseen by the State Extension office. Interns were selected through an interview process and placed in a county office for a paid, ten to twelve week internship. Due to the census population of the interns and mentors used in this study, inferential statistics were not used.

The researcher used a semantic differential scale instrument developed by Gruntmeir (1999) to collect quantitative data related to attitudes. Osgood, Suci, and Tannenbaum (1965) state a semantic differential scale is a reliable and valid way to measure attitude. The instrument consisted of 14 pairs of polar opposite words. Gruntmeir used a panel of experts and a pilot study to determine the validity and reliability of the word pairs. The researcher divided the word pairs on the instrument into two categories which represented two different views of Extension--traditional and contemporary. The instrument was modified slightly by reverse ordering six of the 14 instrument items to minimize bias. The reversed pairs were minimizing risk/taking risk, low tech/high tech, cautious/challenging, preserves the past/initiates change, controlled/autonomous, and rigid/flexible. Varimax rotation was used to determine the loadings of the word pairs in Gruntmeir's study. All pairs with loadings below 0.42 were eliminated from the original instrument leaving 14 on the final instrument.

Each question on the instrument had a possible score of one to seven. A score of four would indicate the respondent was neutral on the word pair; a score less than four would indicate the respondent favored the first term, while a score greater than four indicate the respondent favored the second term. The instrument was administered to the interns three times in the experience: 1) before beginning the internship (pre-test), 2) at the completion of the internship (post-test), and five months after internship completion (post-post-test). Interns were instructed to answer the questions on how they perceived the Cooperative Extension Service to be, not how it should be. Mentors also completed the Attitude toward Cooperative Extension Service instrument and were administered the questionnaire before the intern started the experience and at the completion of the intern's experience. As with the interns, Extension educators were asked to reflect on how they saw the Extension service, not an ideal Extension service. Mentors did not complete a post-post test assessment.

Results/Findings

Objective 1: Describe the demographic characteristics of the interns and mentors

Intern majors included agricultural communications, agricultural education, agricultural leadership, animal science, horticulture, human development and family science, nutritional sciences, dietetics and exercise, sociology, and plant science, representing three academic colleges and seven different academic departments. Nine of the twelve interns were female and three of the twelve interns had completed a bachelor's degree or were graduate students. Seven of the twelve interns reported no experience with Cooperative Extension prior to the internship.

The majority of the mentors had master's degrees and ranged in age from 26 years old to 60 years old with the average age being 45 years old. The majority had 4-H as part of their staffing assignment, followed by agriculture, family and consumer science, and rural and

community development. The mean length of time served as an Extension Educator was 14 years with a range of 3 to 33 years. More than eighty percent reported having mentored before, yet less than thirty percent reported having received formal training as a mentor.

Objective 2: Describe interns' attitudes toward the Cooperative Extension Service at various points during the internship experience

For the pre test, the responses favored seeing Extension in a traditional light. These included (with means in parentheses) rural (3.00) over urban, education (3.33) over facilitation, minimizing risk (3.67) over taking risk, grassroots initiatives (3.75) over top-down initiatives, and brainstorming (3.92) over structured analysis. In the post test, traditional services that were favored include minimizing risk (3.00), rural (3.08), education (3.33), simple (3.75), grassroots initiatives (3.83), generalization (3.92), and brainstorming (3.92).

The post-post test traditional services that were favored include rural over urban (2.50), education over facilitation (3.00), neutrality over advocacy (3.33), generalization over specialization (3.42), brainstorming over structured analysis (3.50), minimizing risk over taking risk (3.83), simple over complex (3.83), and grassroots initiatives over top-down initiatives (3.92).

Differences in means are shown in Table 1 for pre test versus post test. The word pairs education/facilitation, brainstorming/structured analysis, neutrality/advocacy, and rigid/flexible did not have a change in mean from pre to post test. The word pairs grassroots initiatives/top-down initiatives, rural/urban, and controlled/autonomous increased in mean from pre to post test. The remaining seven word pairs had a decrease in mean ranging from 0.33 to 0.83.

The differences in means from the pre test to the post-post test had a few increases and numerous decreases. The greatest increase in mean was 0.67 for the word pair controlled/autonomous. The differences in means for post test versus post-post test had six pairs with a decrease in mean that ranged from 0.25 to 0.84. Neutrality/advocacy had the greatest decline while isolation/collaboration had the smallest decrease. The increase in mean ranged from 0.08 to 0.83. The greatest gain was for minimizing risk/taking risk while simple/complex had the smallest increase.

Table 1

Differences in Means for Attitudes toward the Cooperative Extension Service for Interns

| | | μ | μ | μ | Difference | Difference | Difference |
|------------------------|----------------------|-------|-------|-----------|------------|---------------------|--------------------|
| <i>Traditional</i> | <i>Contemporary</i> | Pre | Post | Post-Post | Pre-Post | Post – Post Post | Pre – Post Post |
| Rural | Urban | 3.00 | 3.08 | 2.50 | (0.08) | 0.58 | 0.50 |
| Education | Facilitation | 3.33 | 3.33 | 3.00 | 0.00 | 0.33 | 0.33 |
| Minimizing Risk | Taking Risk | 3.67 | 3.00 | 3.83 | 0.67 | (0.83) | (0.16) |
| Grassroots Initiatives | Top-Down Initiatives | 3.75 | 3.83 | 3.92 | (0.08) | (0.09) | (0.17) |
| Brainstorming | Structured Analysis | 3.92 | 3.92 | 3.50 | 0.00 | 0.42 | 0.42 |
| Controlled | Autonomous | 4.00 | 4.33 | 4.67 | (0.33) | (0.34) | (0.67) |
| Neutrality | Advocacy | 4.17 | 4.17 | 3.33 | 0.00 | 0.84 | 0.84 |
| Generalization | Specialization | 4.25 | 3.92 | 3.42 | 0.33 | 0.50 | 0.83 |
| Simple | Complex | 4.58 | 3.75 | 3.83 | 0.83 | (0.08) | 0.75 |
| Low Tech | High Tech | 4.67 | 4.08 | 4.08 | 0.58 | 0.00 | 0.59 |
| Cautious | Challenging | 4.75 | 4.08 | 4.17 | 0.67 | (0.09) | 0.58 |
| Preserves the past | Initiates Change | 4.92 | 4.58 | 4.58 | 0.33 | 0.00 | 0.34 |
| Isolation | Collaboration | 5.50 | 4.92 | 4.92 | 0.58 | 0.00 | 0.58 |
| Rigid | Flexible | 5.58 | 5.58 | 5.33 | 0.00 | 0.25 | 0.25 |

Note. A lower mean favors traditional Extension Services while a higher mean favors contemporary Extension Services. A negative difference indicates a move to a more contemporary view, while a positive difference indicates a move to a more traditional view.

Objective 3: Describe mentors' attitudes toward the Cooperative Extension Service at various points in the internship experience

For the pre test, the mentors' responses favored the traditional services (with means in parentheses) of minimizing risk over taking risk (2.39), education over facilitation (2.78), grassroots initiatives over top-down initiatives (2.94), rural over urban (3.00), neutrality over advocacy (3.17), cautious over challenging (3.72), and generalization over specialization (3.94). Traditional services favored in the post test included (with means in parentheses) education (2.78), minimizing risk (3.00), rural (3.17), neutrality (3.22), grassroots initiatives (3.56), and controlled (3.72).

Table 2 shows the differences between pre and post test for the mentors on the attitude instrument. Grassroots initiatives/top-down initiatives had the largest increase (0.62) with pre-post test means of 2.94 and 3.56, respectively. The remaining five word pairs had a decrease in mean ranging from 0.22 to 0.34.

Table 2

Differences in Means for Attitudes toward the Cooperative Extension Service for Mentors (Pre-Post Test)

| <i>Traditional</i> | <i>Contemporary</i> | μ Pre | μ Post | Difference Pre-Post |
|------------------------|----------------------|--------------|---------------|------------------------|
| Minimizing risk | Taking risk | 2.39 | 3.00 | (0.61) |
| Education | Facilitation | 2.78 | 2.78 | 0.00 |
| Grassroots Initiatives | Top-Down Initiatives | 2.94 | 3.56 | (0.62) |
| Rural | Urban | 3.00 | 3.17 | (0.17) |
| Neutrality | Advocacy | 3.17 | 3.22 | (0.05) |
| Cautious | Challenging | 3.72 | 4.00 | (0.28) |
| Generalization | Specialization | 3.94 | 4.22 | (0.28) |
| Controlled | Autonomous | 4.06 | 3.72 | 0.34 |
| Rigid | Flexible | 4.22 | 4.00 | 0.22 |
| Low Tech | High Tech | 4.39 | 4.17 | 0.22 |
| Preserves the past | Initiates change | 4.44 | 4.22 | 0.22 |
| Brainstorming | Structured analysis | 4.56 | 4.28 | 0.28 |
| Simple | Complex | 4.72 | 4.89 | (0.17) |
| Isolation | Collaboration | 5.11 | 5.11 | 0.00 |

Note. A low score favors traditional Extension Services; high score favors contemporary Extension Services. A negative difference indicates a move to a more contemporary view, while a positive difference indicates a move to a more traditional view.

Objective 4: Compare interns' attitudes toward the Cooperative Extension Service the attitudes of their mentors

There were five word pairs that fell into the traditional category throughout the internship and five word pairs were in the contemporary category throughout for the interns. Three words pairs went from contemporary to traditional while one word pair was neutral and went to contemporary. Large changes from contemporary to traditional occurred from pre to post test for the word pair simple/complex. A similar changed occurred for two word pairs from pre to post-post test. These were generalization/specialization which changed by 0.83 and neutrality/advocacy with a change of 0.84. From post to post-post test, the word pair neutrality/advocacy had a change of 0.84.

The mentor pre test had seven words that favored traditional services. On the post test, six word pairs were favored traditional. In terms of contemporary services, the pre test had seven word pairs. The post test had six word pairs favoring contemporary services. The post test had two word pairs that were deemed neutral with a mean of 4.00. They were rigid/flexible and cautious/challenging. Two word pairs switched sides. Controlled/autonomous went from contemporary to traditional while generalization/specialization went from traditional to contemporary. Two word pairs went neutral from pre to post test, one was contemporary, and one was traditional. A comparison of the interns' post-post test and mentors' post test means on the instrument is given in Table 3.

Table 3

Intern and Mentor Attitude Instrument Means Comparison

| <i>Traditional</i> | <i>Contemporary</i> | <i>Intern Post-Post Test M</i> | <i>Mentor Post Test M</i> |
|------------------------|----------------------|------------------------------------|-------------------------------|
| Rural | Urban | 2.50 | 3.17 |
| Education | Facilitation | 3.00 | 2.78 |
| Neutrality | Advocacy | 3.33 | 3.22 |
| Generalization | Specialization | 3.42 | 4.22 |
| Brainstorming | Structured analysis | 3.50 | 4.28 |
| Minimizing risk | Taking Risk | 3.83 | 3.00 |
| Simple | Complex | 3.83 | 4.89 |
| Grassroots Initiatives | Top-Down Initiatives | 3.92 | 3.56 |
| Low Tech | High Tech | 4.08 | 4.17 |
| Cautious | Challenging | 4.17 | 4.00 |
| Preserves the past | Initiates change | 4.58 | 4.22 |
| Controlled | Autonomous | 4.67 | 3.72 |
| Isolation | Collaboration | 4.92 | 5.11 |
| Rigid | Flexible | 5.33 | 4.00 |

Note. A low score favors traditional Extension Services; high score favors contemporary Extension Services.

Conclusions

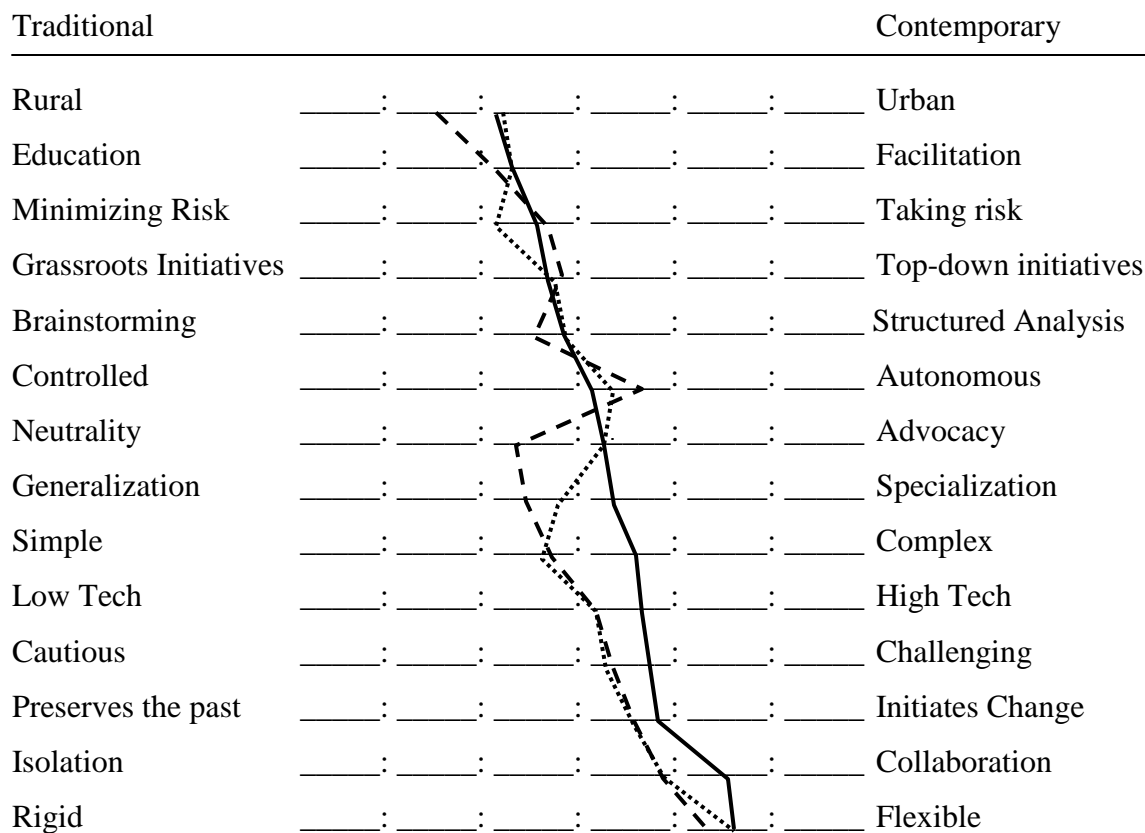
Conclusions related to Objective 1

The interns represented a broad, diverse spectrum of students. They represented eight different academic departments on campus. They were upperclassmen and graduate students, many nearing the completion of their education. The population was mainly female and the College of Agricultural Sciences and Natural Resources was the most represented college. This broad and diverse group is an encouraging sign for the future of Cooperative Extension Service. If this group is representative of the applicant pool, there is great potential for Cooperative Extension to continually move forward.

Mentors participating in the internship program were experienced educators with Cooperative Extension Service and experienced mentors. They represented a diverse array of staffing assignments and were highly educated with the majority possessing a degree above a bachelor's degree. While the mentors had experience in mentoring interns, they lacked formal mentor training.

Conclusions related to Objective 2

At the beginning of the internship, the interns viewed the Cooperative Extension Service being more contemporary than traditional. At the conclusion of the internship, the interns' perception was equally divided among the traditional and contemporary services. However, the post-post test revealed that the interns continued to shift to a more traditional services view than contemporary. For many of the interns, this was their first experience with the Cooperative Extension Service. The internship experience had an effect on the interns' perception of the Cooperative Extension Service which is shown by the changes in mean. The mentors viewed Cooperative Extension as more traditional which may have affected the interns' perceptions, causing the shift to a more traditional services view. The internship experience caused the interns views to shift from an idealistic view to a realistic, firsthand view. Figure 2 graphically shows the changes the interns experienced at the three assessments during the internship for each word pair.

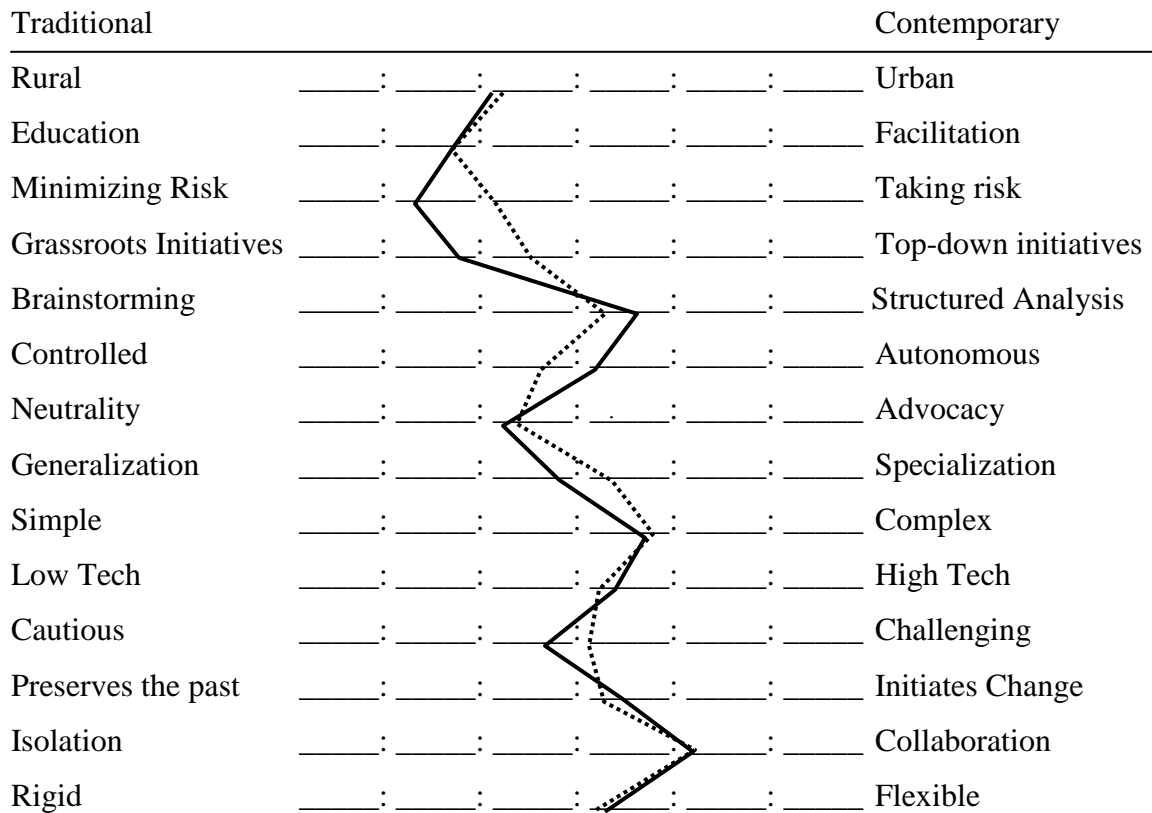


The — line is pre test, ... line is post test, and - - - line is post-post test

Figure 2. Intern attitudes toward Cooperative Extension Service at three assessment points.

Conclusions related to Objective 3

The mentors were equally divided in viewing the Cooperative Extension Service as being traditional and contemporary services for both the pre and post test. There was a shift from not as strongly traditional services from pre to post test. The shift towards being more neutral may be attributed to the experience as mentor and working with an intern. The interns viewed the Cooperative Extension as more contemporary, causing the mentors' to move to a more neutral outlook. The mentors may reassess their view and look at Cooperative Extension Service from a newer, fresher perspective and revive their desire to be a great educator. Figure 3 graphically shows the changes the mentors experienced at the two assessments during the internship.



The — line is pre test and the . . . line is post test

Figure 3. Mentor attitudes toward Cooperative Extension Service for two assessment points.

Conclusions related to Objective 4

There were similarities for both the interns and mentors attitudes with Gruntmeir's (1999) findings with experienced Extension Educators using the same instrument. Interns and mentors categorized eight word pairs similarly. This can be attributed to the interns being influenced or adapting the mentors' attitude and vice versa. There were however a few major differences for the word pairs of rigid/flexible, simple/complex, and controlled/autonomous. This can be

attributed to the interns' lack of experience working in Cooperative Extension in comparison to the mentors experience with the Cooperative Extension Service.

Implications/Discussion

The change in attitude toward traditional services (interns) and contemporary services (mentors) should not be viewed in terms of good or bad. Instead the change the internship experience may cause should be embraced. The learning, experiences, and growth occurred during the internship supports the six ideas Kolb refers to as the experiential learning theory is built upon. The internship experience affected both interns and mentors. To fully understand how Kolb's model is used in this experience, the interns need to be followed past the initial internship experience in order to see how the interns continually evolve and develop ideas about the Cooperative Extension Service. The experience will affect their attitudes toward Cooperative Extension Service as whether they view it as more traditional or contemporary.

If internships are able to influence possible educator's views, the experience will let potential employees know what Cooperative Extension is like versus their idealistic view without experience. Also the internship experience can influence current educator's views as shown by the change of the mentors in this study. The ability to determine an educator's views and see if their views change after interacting with interns is important. If change occurs at the educator level, it may have an effect on all Cooperative Extension Service.

The outcomes and success of a program cannot be determined without solid evaluation methods and instruments. Discussion with other states with Cooperative Extension Service internship programs did not yield a set evaluation method. By testing instruments, a standard evaluation method for Cooperative Extension Service internships might be developed, providing the potential for uniformity. A uniform evaluation system could allow the comparison of data from state to state, program to program. This concept is supported by the National Research Agenda for Agricultural Education and Communications (Osborne, 2007).

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