Assessing the Importance and Inclusion of Emotional Intelligence in Agricultural Education

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Abstract

The purpose of this study was to explore the importance and inclusion of emotional intelligence by agricultural education instructors. Although much research has been conducted about the importance of emotional intelligence in the realm of education, research in the area of emotional intelligence in the agricultural education program is limited. The concept of incorporating emotional intelligence into the agri-science curriculum is not a new idea. The very philosophy of agricultural education lends itself to the development of emotional intelligence.

The teachers recognized eight out of the twenty constructs identified through the review of literature as high level success abilities. This means that agricultural education instructors believe these components are important and they are actually including them in their curriculum.

Eleven of the twenty emotional intelligence constructs were identified as low level needs. This indicates that teachers do not believe these constructs are important, and therefore do not need to be included in their programs.

Only one construct, conflict resolution, was identified as being a critical need. This indicates that teachers believe conflict resolution is important, but they are not including it into their program curriculum.
Introduction/Theoretical Framework

The explosive growth in the body of knowledge about how the brain works has captured the interest and imagination of educators and the general public (Sylwester, 1994). Researchers are learning about how the brain processes, stores and retrieves information at an unprecedented rate. During the 1990's, brain research exploded into dozens of subdisciplines, such as multiple intelligence. The book *Emotional Intelligence* by Daniel Goleman (1995) brought to the public’s attention the importance of our emotional lives (Jensen, 1998).

There is a rising tide of understanding among educators that students’ social and emotional learning can and should be promoted in school (Langdon, 1996). The challenge of raising knowledgeable, responsible and caring individuals is recognized by nearly everyone. Today, educators have renewed their perspectives on what common sense has always suggested: when schools attend systematically to students' social and emotional skills, the academic achievements of students increase, the incidence of problem behaviors decrease, and the quality of the relationships surrounding each student improves. Thus, social and emotional education is sometimes called the missing piece in education (Jensen, 1998).

Recent findings in emotional intelligence support the concept of confluent education, which holds that effective learning develops in the interaction of cognitive and emotional domains. Therefore, effective educational practice requires attention to the development of many forms of intellect through formal teaching practice as well as through modeling, or informal teaching practice. Current research and practice both firmly demonstrate that the growth of ethical or principle driven behavior—a critical component of emotional intelligence—develops through numerous informal interactions both in and out of class.

Phipps and Osborne (1988) believed many students try to be like their agricultural education instructors, therefore what the teachers do must be of the highest standard. According to a benchmark model proposed by Torres and Cano (1995), teacher-related factors are one of the five factors that are thought to influence, directly or indirectly, cognitive ability in students. These teacher-related factors include personal characteristics such as gender, age, and educational and occupational aspirations (Torres & Cano, 1995). These teacher-related factors are part of the presage variables found in the Model for the Study of Classroom Teaching, Figure 1 (Dunkin & Biddle, 1974).

![Figure 1: Model for the Study of Classroom Teaching](image)

Emotional intelligence has its roots in the concept of social intelligence, first identified by E.L. Thorndike in 1920. Thorndike (1920) defined social intelligence as “the ability to understand and manage men and women, boys and girls—to act wisely in human relations” (p.
Thorndike’s (1920) definition included interpersonal and intrapersonal intelligences in the definition of social intelligence. Interpersonal (knowing how to get along with others) and intrapersonal (knowing yourself) intelligences made up Howard Gardner’s “personal intelligences” (Young, 1996). There was not just one kind of intelligence crucial for life success, but rather a wide spectrum of intelligences. The operative word in his view is multiple. Ten years after publishing his theory, Young (1996) added interpersonal and intrapersonal factors to his theory.

Emotional intelligence is a psychological construct not easily defined. However, in his 1995 book, *Emotional Intelligence*, Goleman simply defined emotional intelligence as “a different way of being smart” (p. 279). Understanding the concept of emotional intelligence, according to Salovey and Sluyter (1997) requires the understanding of the two component terms, emotion and intelligence. Intelligence is typically measured by psychologists as how well the cognitive sphere functions. Emotions belong to the affective sphere of mental functioning. A good definition of emotional intelligence should, in some way, connect emotions with intelligence if the meaning of the two terms is to be preserved. Emotional intelligence should in some way refer to heightened emotional and mental abilities. According to Salovey and Sluyter (1997), the best definition of emotional intelligence is the following:

...the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (p. 5).

This definition combines the ideas that emotion makes thinking more intelligent and that one thinks intelligently about emotions (Salovey & Sluyter, 1997).

According to Funderstanding (1998), a web-based research center, emotional intelligence encompasses five characteristics and abilities. In other words, in order to be emotionally intelligent, one must have these characteristics and abilities as part of their personal attributes. The characteristics and abilities are outlined in Table 1.

<table>
<thead>
<tr>
<th>Characteristics and Abilities Encompassed by Emotional Intelligence</th>
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<tbody>
<tr>
<td><strong>A. Self-Awareness</strong></td>
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<tr>
<td><strong>B. Mood Management</strong></td>
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<tr>
<td><strong>C. Self-Motivation</strong></td>
</tr>
<tr>
<td><strong>D. Empathy</strong></td>
</tr>
<tr>
<td><strong>E. Managing Relationships</strong></td>
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(Funderstanding, 1998)
When a curriculum adheres to traditional subject areas and is devoid of emotional content, the subject matter is unlikely to “live” for the students because of the curriculum’s cold and reductionistic nature. Since the world is growing more complex such an approach makes it extremely difficult for children to integrate the parts and pieces of what they learn, much less apply them within a real-world context (Schilling, 1996).

Goleman (1995) listed the following traits as critical elements for a student’s success in school: (a) confidence, (b) curiosity, (c) intentionality, (d) self-control, (e) relatedness, (f) capacity to communicate, and (g) ability to cooperate. Figure 2 illustrates these key traits to understanding how to learn. These traits are all aspects of emotional intelligence. According to Goleman (1995) a student who learns to learn is much more apt to succeed. Emotional intelligence has proven to be a better predictor of future success than the more traditional methods such as GPA, IQ and standardized test scores (Funderstanding, 1998).

Character education has received a great deal of attention in the past few years. Character education and social and emotional education share many overlapping goals. Many character education programs promote a set of values and directive approaches that presumably lead to responsible behavior (Brick & Roffman, 1993; Lickona, 1993; Lockwood, 1993). Social and emotional education efforts typically have a broader focus. They place more emphasis on active learning techniques, the generalization of skills across settings, and the development of social decision-making and problem-solving skills that can be applied in many situations. Social and emotional education, according to Elias, Butler, Blum & Schuyler (1997), helps students develop attitudes, behaviors, and cognitions that will make them “healthy and competent” overall—socially, emotionally, academically and physically.

Experience and research show that promoting social and emotional development in students is the missing piece in efforts to reach the array of goals associated with improving schooling in the United States. There is a rising tide of understanding among educators that student's social and emotional learning can and should be promoted in schools (Elias et al., 1997).

In Preparing Students for the 21st Century, Uchida, Cetron, and McKenzie (1996) list essential skills and behaviors students will need in order to be successful in the new millennium. According to Uchida et al. (1996) one of the essential skills is “conflict resolution and negotiation skills” (p. 16). When people know how to work out their differences, they often

<table>
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<tr>
<th>Key Traits for Understanding How to Learn</th>
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<tbody>
<tr>
<td>Intentionality</td>
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<tr>
<td>Self-Control</td>
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</table>

Figure 2: Key Traits in the Understanding of How to Learn (Source: based on information from Funderstanding, 1998).
experience breakthroughs in mindsets and can resolve problems more easily. Emotional intelligence allows students to manage relationships with other people.

Emotional intelligence is one of the latest “buzz words” in education. Much research has been conducted about the importance of emotional intelligence in the realm of education. Researchers such as Goleman, Salovey and Sluyter, and Gardner have all worked to impress upon educators the importance of emotional intelligence. Goleman (1995) has noted that emotional intelligence predicts as much as 80% of a person's success in life, whereas the traditional measure, IQ, only predicts about 20%. Traditionally, the emphasis when evaluating potential performance has been intellectual; now compelling research indicates that emotional intelligence is twice as important as IQ plus technical skills for outstanding performance. According to studies by EQ University (1999), emotional intelligence is on the decline across all economic groups and cultures. Today's social climate in the United States is supportive of teaching emotional intelligence to students. There are a number of programs and projects, often referred to as character education initiatives, aimed at the development of emotionally competent young people.

Although research in the area of emotional intelligence in the agricultural education classroom is limited, the concept of incorporating emotional intelligence into the agriscience curriculum is not a new idea. The very philosophy of agricultural education lends itself to the development of emotional intelligence. The philosophy states that “practical application and successful knowledge, skills and attitudes into real-world settings is the goal of instruction” (Phipps & Osborne, 1988, p. 19). Goleman (1995) noted that success in the adult world depends on both academic ability and social and emotional skills. Elias et al., (1997) also stated it is important to outline clearly the social and emotional education students need to acquire in the course of their school years—skills and capacities that schools must impart in partnership with parents and the surrounding community. Agricultural education addresses many of the skills that are the initial building blocks of emotional intelligence.

Agricultural education is often considered a program that encompasses more than just agriculture. Agricultural education instructors have the ability to reach their students on a variety of levels because of instructional components such as classroom instruction, laboratory instruction, supervised agricultural experience programs and the FFA organization. Agricultural education has been considered a program which emphasizes the development of character and citizenship in the development of young people. These are all key components in emotional intelligence. Agricultural education's four instructional components—classroom instruction, laboratory instruction, supervised agricultural experience, and the FFA—have been considered vehicles to enhance character development in students (National FFA Organization, 1999).

**Purpose and Objectives**

The purpose of this study was to explore the importance and inclusion of emotional intelligence by agricultural education instructors. As a means of accomplishing the purpose of the study, the following objectives were developed:
1. To determine the characteristics of agricultural education instructors in Texas, New Mexico and Oklahoma in regard to the following: (a) personal characteristics; (b) school characteristics; and (c) program characteristics.

2. To determine the critical curricular needs of emotional intelligence in agricultural education classrooms as perceived by agricultural education instructors.

Methodology

Population/Study Design

The target population of this study was all secondary agricultural educators teaching in public secondary schools in Texas, New Mexico and Oklahoma during the 2000-2001 school year. In 2000, there were approximately 2,064 agricultural education instructors in these three states. The accessible population for the study were teachers identified in the Agricultural Educators Directory (Henry, 2000). According to Krejcie and Morgan’s (1970) table for determining sample size, a simple random sample of 325 was selected. This sample size provided a margin of error of plus and/or minus 5%. One hundred seventy-six teachers responded to the survey for a return rate of 57.23%. Ten of the returned instruments were unusable. Research has shown that nonrespondents are often similar to late respondents (Goldhor, 1974). In order to control for non-response error, respondents were categorized into early and late groups. Early respondents were compared to late respondents in order to check for significant differences. Independent t-tests were run comparing specific variables of the early and late respondents. The variables used were number of years teaching agricultural education, number of students in agricultural education programs, the importance mean and the inclusion mean. No significant differences were found; therefore late respondents were believed to be typical of non-respondents. This allowed the researchers to assume that respondents were an unbiased sample and allowed for generalization to the population.

Instrumentation

The instrumentation for the study consisted of a four-part mailed questionnaire. It was researcher-designed and composed in a booklet format according to Dillman’s (2000) Tailored Design Method (TDM). Part One, was used to accumulate demographic information from the subjects. Part Two consisted of questions used to determine the importance and inclusion of emotional intelligence by agricultural education instructors. Twenty emotional intelligence constructs were selected based on an extensive review of literature. These constructs were identified as the following: (a) ability to cooperate; (b) capacity to communicate; (c) citizenship; (d) confidence; (e) conflict resolution; (f) coping skills; (g) curiosity; (h) empathy; (i) health promotion; (j) life skills; (k) managing relationships; (l) mood management; (m) negotiation skills; (n) problem prevention skills; (o) self-awareness; (p) self-control; (q) self-motivation; (r) service skills; (s) social competencies; and (t) workplace skills.

After development, the instrument was presented to a panel of agricultural educators for review. The review was used to verify the validity of the instrument’s content. A pilot test was also conducted using a random sample of AgriScience instructors in northwest Texas. Data collected was analyzed using. Coefficients ranged from .85 to .87 for each of the constructs.
Data Analysis

Descriptive statistics were used to summarize the demographic data. For the second objective, critical needs were determined based on the use of a needs assessment matrix developed by Witkin (1984) for assessing needs in social and educational programs.

The grand mean of importance as well as the grand mean of inclusion was calculated separately for each construct. These means were then used to construct an XY graph by plotting the overall importance of each construct on the Y axis and the degree of inclusion for each construct on the X axis. By plotting the grand means (GM) for each construct (importance and inclusion), four quadrants emerged as shown in Figure 3.

If the item score mean for overall importance was greater than the construct grand mean, and the mean for inclusion was less than the construct grand mean, the item was placed in the fourth quadrant and defined as a critical need.

Findings

Objective One

The mean years of teaching experience for the respondents was 16.4 years, and they had taught agricultural education for an average of 15.1 years. A majority of the teachers were either in single teacher departments or in programs with one teaching partner. The vast majority (93.2%) of respondents were male. The average age of the teachers was 41 with the youngest
being 24 and the oldest being 65. The majority (92.5\%) of the respondents were white/non-Hispanic.

Most of the teachers taught in small communities with populations less than 5,000. The average school size was 888 students with 142 students enrolled in agricultural courses. The mean percentage of students participating in the FFA organization was 72. Forty-seven percent of the students in the teachers’ programs participated in SAE programs.

Findings Related to Objective Two

Objective two was to determine the critical needs of emotional intelligence in agricultural education classrooms as perceived by agricultural education instructors.

High Level Success Abilities

Table 2 indicates the items and the means of the items that were identified as high-level success abilities. The teachers identified eight items as high-level success abilities. These constructs were: (1) ability to cooperate, (2) capacity to communicate, (3) citizenship, (4) confidence, (5) life skills, (6) self control, (7) self-motivation, and (8) workplace skills.

Table 2: Constructs in Quadrant 1 (High Level Success Abilities)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Importance</th>
<th></th>
<th>Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Ability to Cooperate</td>
<td>3.84</td>
<td>0.38</td>
<td>160</td>
</tr>
<tr>
<td>Ability to Communicate</td>
<td>3.86</td>
<td>0.35</td>
<td>160</td>
</tr>
<tr>
<td>Citizenship</td>
<td>3.69</td>
<td>0.55</td>
<td>160</td>
</tr>
<tr>
<td>Confidence</td>
<td>3.71</td>
<td>0.48</td>
<td>160</td>
</tr>
<tr>
<td>Life Skills</td>
<td>3.76</td>
<td>0.46</td>
<td>160</td>
</tr>
<tr>
<td>Self Control</td>
<td>3.65</td>
<td>0.57</td>
<td>159</td>
</tr>
<tr>
<td>Self Motivation</td>
<td>3.78</td>
<td>0.45</td>
<td>159</td>
</tr>
<tr>
<td>Workplace Skills</td>
<td>3.79</td>
<td>0.41</td>
<td>159</td>
</tr>
</tbody>
</table>

Critical Needs

Table 3 indicates that only one critical emotional intelligence need surfaced. This need was conflict resolution.

Table 3: Construct in Quadrant 4 (Critical Needs)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Importance</th>
<th></th>
<th>Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td>3.52</td>
<td>0.6</td>
<td>159</td>
</tr>
</tbody>
</table>
Low Level Needs

Table 4 lists eleven items the teachers identified, as low level needs. These constructs consisted of (1) coping skills, (2) curiosity, (3) empathy, (4) health promotion, (5) managing relationships, (6) mood management, (7) negotiation skills, (8) problem prevention skills, (9) self awareness, (10) service skills, and (11) social competencies.

Table 4: Constructs in Quadrant 3 (Low Level Needs)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Importance Mean</th>
<th>Importance SD</th>
<th>Importance N</th>
<th>Inclusion Mean</th>
<th>Inclusion SD</th>
<th>Inclusion N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping Skills</td>
<td>3.43</td>
<td>0.57</td>
<td>159</td>
<td>3.01</td>
<td>0.75</td>
<td>160</td>
</tr>
<tr>
<td>Curiosity</td>
<td>3.24</td>
<td>0.68</td>
<td>159</td>
<td>2.87</td>
<td>0.80</td>
<td>158</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.04</td>
<td>0.78</td>
<td>158</td>
<td>2.68</td>
<td>0.85</td>
<td>158</td>
</tr>
<tr>
<td>Health Promotion</td>
<td>3.19</td>
<td>0.73</td>
<td>158</td>
<td>2.75</td>
<td>0.85</td>
<td>159</td>
</tr>
<tr>
<td>Managing Relationships</td>
<td>3.27</td>
<td>0.79</td>
<td>160</td>
<td>2.93</td>
<td>0.84</td>
<td>159</td>
</tr>
<tr>
<td>Mood Management</td>
<td>3.16</td>
<td>0.81</td>
<td>160</td>
<td>2.68</td>
<td>0.92</td>
<td>158</td>
</tr>
<tr>
<td>Negotiation Skills</td>
<td>3.31</td>
<td>0.69</td>
<td>159</td>
<td>2.88</td>
<td>0.83</td>
<td>158</td>
</tr>
<tr>
<td>Problem Prevention Skills</td>
<td>3.42</td>
<td>0.67</td>
<td>159</td>
<td>3.04</td>
<td>0.80</td>
<td>157</td>
</tr>
<tr>
<td>Self Awareness</td>
<td>3.42</td>
<td>0.68</td>
<td>159</td>
<td>2.99</td>
<td>0.81</td>
<td>158</td>
</tr>
<tr>
<td>Service Skills</td>
<td>3.41</td>
<td>0.61</td>
<td>158</td>
<td>3.11</td>
<td>0.76</td>
<td>157</td>
</tr>
<tr>
<td>Social Competencies</td>
<td>3.42</td>
<td>0.63</td>
<td>159</td>
<td>3.14</td>
<td>0.75</td>
<td>158</td>
</tr>
</tbody>
</table>

Conclusions and Recommendations

Curricular planners need to answer such questions as “What will the world be like in the Twenty-first Century?” and “What characteristics will our graduates need to be successful at the turn of the century?” (Sledge, Darrow, Ellington, Erpelding, Hartung, & Riesch, 1987, p. 119).

If agricultural education programs are going to survive, they must be able to adjust to new situations and environments that help to improve the on-the-job effectiveness of future graduates (Coorts, 1987; Slocombe & Baugher, 1988; Scanlon, Bruening, & Cordero 1996). In a 1996 study Scanlon, Bruening and Cordero stated that in addition to student input, curricula change is often influenced by input from current and future employers. Input from employers, peers, faculty and students produces a pattern that can be used as a model to modify and upgrade the curricula.
This study was a first step in evaluating and identifying the curricular needs of emotional intelligence. Similar studies need to be completed looking at other stakeholders such as, students, and future employers.

Most of the teachers in Texas, New Mexico and Oklahoma who are currently teaching (2000-2001) are middle-aged, white males who have taught agricultural education for several years. Most of them teach in rural communities as the only teacher, or with one partner.

The average high school size where these instructors teach is small (average enrollment is 888). Enrollments in agricultural also represent a significant proportion of the total school population (16% of the students in these schools enroll in agricultural courses). High school agricultural education programs have a relatively high percentage of membership in the FFA, with membership being over 70%. Nearly half (47%) of agricultural students participate in SAE programs.

The teachers identified eight out of the twenty constructs as high level successful abilities. This means that agricultural education instructors believe these components are important and they are actually including them into their curriculum.

Eleven of the twenty emotional intelligence constructs were identified as low level needs. This indicates that teachers do not feel that these constructs are important, and therefore do not need to be included into their programs.

One critical need surfaced in the findings of this study. This indicates that teachers believe conflict resolution is important, but they are not including it into their program curriculum. In-service training needs to be provided instruction including conflict resolution in their curriculum.

More research needs to be conducted in the area of emotional intelligence in agricultural education programs. The findings of this study address ‘breadth’ of emotional intelligence, subsequently the ‘depth’ issue remains uncertain. It is essential that subsequent research be conducted that involves stakeholders in the development of a consensus of the age-appropriate fundamental and powerful concepts associated with the specific constructs of emotional intelligence.

References


