COOPERATING TEACHERS' PERCEPTIONS OF IMPORTANT ELEMENTS OF THE STUDENT TEACHING EXPERIENCE: A FOCUS GROUP APPROACH WITH QUANTITATIVE FOLLOW-UP

M. Craig Edwards, Assistant Professor
University of Georgia
Gary E. Briers, Professor
Texas A&M University

Abstract

Two purposes of this study were to describe selected characteristics of cooperating teachers/ schools and to identify teachers' perceptions about important elements of student teaching. Some researchers contend that to better understand complex phenomena, a "soft systems" approach (e.g., focus groups) may be more appropriate than quantitative methodologies. So, another purpose was to compare teachers' perceptions when determined by focus groups and by a mail questionnaire. Five teacher focus groups provided the perceptions (35 teachers; 23 schools); each group represented a "core" area of student teaching. Thirty-four elements were identified as being "important." Then, via a mail questionnaire, teachers rated the elements using a Likert-type rating scale ("5" = "High Importance,"..."1" = "No Importance"); return rate was 89% for teachers. Cronbach's reliability estimates for importance ratings of the "core areas" ranged from .49 to .86; overall reliability was .91. Items were perceived to have "much" or "high importance" (overall $\underline{M}$ = 4.54). "A well rounded program emphasizing instruction, SAEs, and youth leadership activities" received the highest rating ($\underline{M}$ = 5.00). Teachers' ratings by mail questionnaire confirmed their earlier perceptions, thus supporting the assertion that a "soft systems" approach can be useful when examining a complex phenomenon.

Introduction/Theoretical Base

Is there a more important component of the preservice professional development of aspiring agriculture teachers than the student teaching experience? Schumann (1969) argued, "The experiences obtained during student teaching are probably the most crucial activities involved in the development of prospective vocational agriculture teachers" (p. 156). Schumacher and Johnson (1990) stated that "the influence of the cooperating teacher on the preparation of new teachers is profound" (p. 2). Moreover, Norris, Larke, and Briers (1990) asserted, "The student teaching center and the supervising (cooperating) teacher are the most important ingredients in the student teaching experience" (p. 58). Other researchers (Deeds, 1993; Deeds, Arrington, & Flowers, 1988; Garton & Cano, 1994; Martin & Yoder, 1985) have supported this premise.

DeMoulin (1993) posited, "Ideally, students should exhibit positive changes in attitude toward teaching and come away from the student-teaching experience with a positive attitude toward their chosen profession" (p. 160). Deeds and Barrick (1986) examined attitudes of preservice teachers toward themselves as future teachers and toward teaching agriculture, following early field-based experiences. They concluded that the perceptions of preservice teachers regarding the quality of program in which their early field-based experience transpired were related to the extent that their attitude was positive. Further, Byler and Byler (1984) analyzed student teacher morale before and after the student teaching experience and concluded, "There was a significant relationship after the student teaching experience between student teachers' morale and the morale of their cooperating teachers" (p. 27).

Martin and Yoder (1985) conceptualized a successful student teaching experience as one in which a "team approach" (p. 19) defined the relationship between the

cooperating teacher and the student teacher. This approach envisioned a supervisory "climate" devoted to using a clinical teaching analysis model. These researchers contended that "the success of the supervision and the success of the individual student teacher depends, to a very great extent, upon the general supervisory climate in the department and on the educational leadership abilities of the cooperating teacher" (p. 21). Moreover, Korthagen and Kessels (1999) argued that a cooperating student teacher center "must be able to offer a sound balance between safety and challenge and a balance between the goal of serving the student teachers' learning and the interests of the school" (p. 14). Further, DeMoulin (1993) contended, "The supervisory instructor is present to foster unique teaching concepts and to give support and encouragement to preservice teachers" (p. 160). In support, Garton and Cano (1994) maintained, "Priority should be given to selecting cooperating teachers who model the desired teaching behaviors expected of student teachers" (p. 213). As Martin and Yoder stated, "Supervision of student teachers represents an important responsibility" (p. 21), one that has and continues to demand a diligent research interest on the part of the profession.

Investigators (Deeds, 1993; Deeds, Arrington, & Flowers, 1988; Larke, Norris, & Briers, 1992) have identified and quantified important dimensions of the student teaching experience through the use of survey research methods (i.e., mail questionnaires). For example, Deeds collected data from 82 institutions, nationally, that were charged with agricultural teacher education. Also, Larke, Norris, and Briers conducted a national study that queried three groups—teacher educators, supervising teachers, and student teachers. Consistent with traditional quantitative research methodology, these studies sought to "generalize" the essential components of an often complex phenomenon—the student teaching experience. Yet, is a post-positivistic approach a valid method for describing the important elements of this experience?

The argument about the merit of qualitative versus quantitative research methodologies in humankind's quest to better understand human behavior is not a new one; its origin dates at least as far back as the Enlightenment (Berlin, 1998; Eisner, 2001), an era which emphasized "rationalism" and "quantification" (empiricism) in the pursuit of truth (Eisner, 2001). Berlin identified the 18th century German philosopher Johann Gottfried Herder as the chief contrarian to this perspective, and credited Herder with postulating "the vital importance of considering qualitative as well as quantitative factors" (p. 360) when examining the behavior of humankind. Berlin summarized Herder's position:

> "…the attempt to reduce such phenomena to combinations of uniform elements, and to describe or analyse them in terms of universal rules, tended to obliterate precisely those crucial differences which constituted the specific quality of the object under study, whether in nature or in history." (p. 359)

To this end, the learning theorist Elliot Eisner (2001) echoed Herder's admonition when he stated, "Philosophical constructivists have pointed out that what something means comes both from the features of the phenomenon to be addressed and from the way those features are interpreted or experienced by individuals" (p. 368). Moreover, Willis (1991) contended that "perceiving precedes making meaning or acting" (p. 175), and "altered circumstances [contexts] must be constantly reperceived and reconsidered anew" (p. 174). Further, Willis posited, "Human experiencing thus involves an ongoing, cyclical relationship among the processes of perceiving, thinking, and acting in which the deepening and refining of one process helps further deepen and refine the others" (p. 174). Kolb's "learning cycle"—a series of cyclical events "wherein 'experience is translated into concepts which in turn are used as guides in the choice of new experiences'" (Miller, 1999, n. p. #)—supports Willis' suppositions. So, separating the "perceivers" from what they "perceive" may be not only counter-productive to reaching a robust

understanding of a phenomenon, but virtually impossible.

Regarding agricultural and extension education**,** Miller (1998) stated, "Our tradition and our learning related to research methods are couched in the empirical method. However, much of our interest for knowledge production or problem solving lies in practical understanding with our basis in communicative interaction or emancipation" (n. p. #). Moreover, Miller argued that the very "nature" of social science research, that is, its tendency for being highly contextual and problem-centered, seriously hampers even the most rigorous attempts to generalize the results. As an appropriate alternative, Miller suggested a "soft systems methodology [SSM]" as "a philosophical basis for conducting inquiry"—one that "deals with problem setting, and involves stakeholders in the research process in the local context" (n. p. #). An application of this premise could be a focus group research design. Focus groups, by definition, hinge on the principle of "communicative interaction" and the direct participation of stakeholders (Krueger, 1994; Morgan, 1997; Stewart & Shamdasani, 1990).

A review of literature revealed no research using cooperating (supervising) agriculture teachers as a "focus group" to collect information about their perceptions of important elements of the student teaching experience. However, researchers (Cole & Waters, 1997; Gamon & Chestnut, 1994; Haak & Talbert, 1998) have used focus groups when investigating other questions in agricultural education. Moreover, Stewart and Shamdasani (1990) concluded that "among the most widely used research tools in the social sciences are group depth interviews, or focus groups" (p. 9). In support, Popham (1993) stated, "…behavioral scientists have been increasingly drawn to the virtues of *focus group interviews* as a method of securing useful qualitative data" (p. 194). Morgan (1997) defined a focus group "as a research technique that collects data through group interaction on a topic determined by the researcher" (p. 6). Stewart and Shamdasani opined that a "contemporary focus group interview generally involves 8 to 12 individuals who discuss a particular topic under the direction of a moderator who promotes interaction and assures that the discussion remains on the topic of interest," and that it "will last from one and a half to two and a half hours" (p. 10).

This form of qualitative research methodology is recognized for its ability to yield "emic" data, that is, "data that arise in a natural or indigenous form" (Stewart & Shamdasani, 1990, p. 13). Focus group participants "respond in their own words, using their own categorizations and perceived associations" (p. 13). For these and other reasons focus groups can be useful research tools for generating hypotheses, for better understanding the participants' "vocabulary" regarding the question(s) under study, for refining questionnaire terminology and scaling, and for increasing the researcher's understanding of previously collected quantitative data (Krueger, 1994; Morgan, 1997; Popham, 1993).

A fundamental characteristic of focus groups is that they create a forum for "group" interaction and collective expression; yet, this is viewed as having both positive and negative consequences. For example, Stewart and Shamdasani (1990) stated, "This synergistic effect of the group setting may result in the production of data or ideas that might not be uncovered in individual interviews" (p. 16). However, "the responses from members of the group are not independent of one another, which restricts the generalizability of results;" and that, "the results obtained in a focus group may be biased by a very dominant or opinionated member" (p. 17). Popham (1993) echoed these reservations yet maintained "qualitative methods such as focus group interviews will usually yield certain insights and understandings that are simply not obtainable through quantitative methods alone" (p. 204), and that focus groups are a useful source of data that "can be used in concert with quantitatively oriented procedures" (p. 203).

Moreover, Krueger (1994) stated, "Increasingly, researchers are recognizing the benefits of combining qualitative and quantitative procedures, resulting in greater methodological mixes that strengthen the research design" (p. 29). Related to this

premise, Gall, Borg, and Gall (1996) asserted that the process of "triangulation helps to eliminate biases that might result from relying exclusively on any one data-collection method, source, analyst, or theory" (p. 574). Further, they suggested that it is possible to achieve triangulation by following "the process of using multiple data-collection methods, data sources, analysts, or theories to check the validity of case study findings" (p. 574). To this end, Krueger asserted, "focus groups can precede quantitative procedures;" and that the "insights [gained] can then be used to develop more efficient follow-up quantitative procedures such as telephone or mail-out surveys" (p. 29). Further, Stewart and Shamdasani (1990) maintained, "Focus groups also have a place as a confirmatory method that may be used for testing hypotheses" (p. 15). Yet, will cooperating teachers' perceptions of important elements of student teaching be similar (i.e., confirmatory) or different, depending on whether their perceptions are determined by a focus group or alternately by a mail questionnaire?

Purposes and Research Questions

Two purposes of this study were to describe selected characteristics of cooperating teachers and their schools, and to identify what cooperating teachers perceive to be the important elements of the student teaching experience. An additional purpose was to conduct a form of triangulation (Gall et al., 1996) and compare cooperating teachers' perceptions of important elements of the student teaching experience, when determined by both qualitative and quantitative research methods. These specific research questions guided the study: 1) What are selected personal, professional, and school setting characteristics of cooperating teachers? 2) What do cooperating teachers perceive to be important elements of the student teaching experience as determined by focus groups? 3) What do cooperating teachers perceive to be important elements of the student teaching experience as determined by a mail questionnaire? 4) Are cooperating teachers' perceptions of the important elements of the student teaching experience as identified by focus groups similar to those elements perceived to be important as determined by a mail questionnaire?

Methods and Procedures

This was a descriptive study that used both qualitative (focus groups) and quantitative (mail questionnaire) research procedures to describe selected characteristics of cooperating teachers and their schools, and to identify cooperating teachers' perceptions of the important elements of the student teaching experience. The Department of Agricultural Education at Texas A&M University hosted an agriculture cooperating teacher workshop on July 6-7, 1998. A portion of the workshop included a focus group exercise to determine participants' perceptions of the "important elements" of the student teaching experience. The study's focus groups were comprised of the teachers in attendance. The groups' members included teachers (n = 35) and schools (n = 23) that had either served as cooperating student teaching centers during the previous three years or were future placement sites.

Prior to the workshop, the teachers were divided randomly into five different focus groups of seven members each. Members of the same department were assigned purposefully to different groups (Popham, 1993). Each of the five focus groups represented a "core" component (area) of the student teaching experience as identified by a review of literature (Briers & Edwards, 1998; Claycomb & Petty, 1983; Edwards & Briers, 1998; Garton & Chung, 1995; Larke, Norris, & Briers, 1992; Martin & Yoder, 1985; Miller & Scheid, 1984) and by teacher education faculty in the Department of Agricultural Education at Texas A&M University. The five core areas were: classroom and laboratory instruction, supervised agricultural experience programs (SAEPs), student leadership development (FFA), school and community relationships, and cooperating teacher-student teacher relationships.

Teachers were notified by mail of their group's core area and were asked to devote their "best thinking" to that component of the student teaching experience. During the workshop, approximately one and a half

hours was used for the purpose of focus group breakout sessions. The participants were provided flip chart sheets and pens, and were instructed to record the important elements that emerged during the session. During the "group" time, a teacher educator monitored the discussions, served as a "moderator," and provided structure when necessary (Morgan, 1997; Stewart & Shamdasani, 1990). In turn, each focus group reported the "important elements" of the student teaching experience that they had identified.

The teachers identified 34 elements of the student teaching experience as being "important." These elements (items) were included in a mail questionnaire administered during the second phase of the study (Morgan, 1997; Stewart & Shamdasani, 1990). One part of the survey instrument consisted of 11 multiple-choice questions describing selected personal, professional, and school setting characteristics of the cooperating teachers. The other part of the questionnaire was divided into five "core" areas of the student teaching experience and included the 34 "important elements" identified earlier by the cooperating teacher focus groups: classroom and laboratory instruction (5 items, α=.49), supervised agricultural experience programs (SAEPs) (4 items, α=.56), student leadership development (FFA) (7 items, α=.77), school and community relationships (9 items, α=.86), and cooperating teacher-student teacher relationships (9 items, α=.82). The survey participants were asked to rate the "level of importance" of the elements using a Likert-type rating scale ("5" = "High Importance," "4" = "Much Importance," "3" = "Some Importance," "2" = "Low Importance," and "1" = "No Importance"). Cronbach's coefficient alpha reliability estimate for the overall importance scale of 34 items was .91.

Following the workshop, participants were mailed a research packet that included a cover letter explaining the second phase of the study, a questionnaire, a pre-coded scan sheet, and a return envelope coded to determine non-respondents. Following a two-week waiting period, non-respondents were contacted and encouraged to return their questionnaires. Teachers who requested another research packet were mailed one. After another two-week waiting period, a third mailing of research packets containing a slightly altered cover letter was mailed to remaining non-respondents (Dillman, 1978). The final rate of return—deemed to be acceptable (Tuckman, 1999)—was 89% (31 of 35) for the cooperating teachers representing 91% (21 of 23) of the cooperating student teaching centers. The data were analyzed using the *Statistical Package for the Social Sciences v. 7.5*. Research questions one and three were analyzed descriptively with frequencies, percentages, means, and standard deviations.

Results/Findings

As shown in Table 1, the cooperating teachers who participated in this study were mostly males; only two of the 31 respondents were female. Almost one-half (15) of the teachers held only a Bachelor's degree, while slightly more than one-half (16) had earned a Master's degree. All of the teachers were members of their state's professional organization, and slightly more than one-half (16) reported national affiliations. Nineteen of the instructors had 11 or more years of experience as an agriscience teacher, and 22 of the 31 had six or more years of service at their current school. Eighteen of the teachers had previously supervised four or more student teachers, and one-third had cooperated in the supervision of seven or more preservice teachers.

Regarding selected school-setting characteristics, 12 of the 21 centers had a school-schedule with a 6-, 7-, or 8-period day and an 18-week semester, while the remaining centers reported various alternative scheduling patterns. A similar dichotomy existed regarding school size; 12 of the centers reported campus enrollments of 780 or more students and the remainder were smaller. Departmental enrollments were evenly split; that is, one-half reported student enrollments of 151 or greater while the remainder served fewer pupils. All but three of the 21 centers were multiple teacher departments, with 10 centers having two faculty members.

Table 1
Selected Characteristics of Cooperating Teachers (N=31)

Characteristics	Frequency	Percentage
Gender		
Male	29	93.5
Female	2	6.5
Highest Degree		
Bachelor's	15	48.4
Master's	16	51.6
Service as an Agriscience Teacher		
3 to 5 years	6	19.4
6 to 10 years	6	19.4
11 to 20 years	7	22.6
21 or more years	12	38.7
Number of Schools Taught Agriscience		
1	14	45.1
2	11	35.5
3 or more	6	19.3
Service at Current School		
Beginning first year	1	3.2
1 to 5 years	8	25.8
6 to 10 years	5	16.1
11 to 20 years	10	32.3
21 or more years	7	22.6
Student Teachers Supervised		
None	4	12.9
1 to 3	9	29.0
4 to 6	8	25.8
7 or more	10	32.3
Professional Affiliations		
VATAT[a] only	15	48.4
VATAT[a] and NAAE[b]	11	35.4
VATAT[a], NAAE[b], ACTE[c], and others	5	16.2

Note. [a]Vocational Agriculture Teachers' Association of Texas. [b]National Association of Agricultural Educators. [c]Association for Career and Technical Education.

The 34 "important elements" of the student teaching experience that were identified by cooperating teachers focus groups are shown in Table 2. Cooperating teachers rated elements (items) of the student teaching experience on level of importance ("5" = "High Importance" …"1" = "No Importance") via a mail questionnaire; all of the 34 items were perceived to have either "much" or "high importance" ($\underline{M} \geq 4.00$) (Table 2). The overall mean was 4.54 or midway between "much" and "high importance." The highest rated element was "a well rounded program emphasizing instruction, SAEs, and youth leadership activities" ($\underline{M} = 5.00$; $\underline{SD} = .00$). "Daily (systematic) classroom and/or laboratory instruction" was the second highest rated element ($\underline{M} = 4.94$; $\underline{SD} = .25$), while the element "a cooperating teacher who has a positive attitude" was rated third ($\underline{M} = 4.90$; $\underline{SD} = .30$). Four elements, belonging to the core area "Cooperating Teacher-Student Teacher Relationships," tied for fourth ($\underline{M} = 4.77$) (Table 2). "Recognized integrity of the cooperating teacher and program" ($\underline{M} = 4.74$; $\underline{SD} = .45$) was rated the eighth most important element, and two elements, "resources available to train a competitive team" ($\underline{M} = 4.71$; $\underline{SD} = .53$) and "a cooperating teacher who communicates clear expectations to the student teacher…" ($\underline{M} = 4.71$; $\underline{SD} = .46$), tied for ninth. The core area "Cooperating Teacher-Student Teacher Relationships" accounted for five of the ten highest rated elements. Of the remaining elements, 19 had mean importance ratings between 4.25 and 4.70, while five items had mean rating scores approaching "much importance" ($\underline{M} < 4.25$). Four of the five lowest rated elements belonged to the core area "School and Community Relationships."

The elements were grouped conceptually into five "core" areas, and a "composite" mean was computed for each area. Two core areas were tied for highest composite mean (4.69); they were "Classroom and Laboratory Instruction" (5 elements) and "Cooperating Teacher-Student Teacher Relationships" (9 elements). The core area "Student Leadership Development (FFA)" (7 elements) had the next highest composite mean (4.54). The core areas "Supervised Agricultural Experience Programs" (4 elements) and "School and Community Relationships" (9 elements) had the second lowest and lowest composite means (4.40 and 4.36, respectively).

Table 2
Cooperating Teachers' Perceptions of the Important Elements of the Student Teaching Experience (N=31)

Elements[a]	M[b]	SD	Ranking	
Classroom and Laboratory Instruction				
Daily (systematic) classroom and/or laboratory instruction	4.94	.25	2	
A discipline management plan used in a structured environment	4.65	.55	12	
Current technology used in instruction	4.32	.70	27	
Creative teaching methods as a basis for day-to-day instruction, e.g., use of multimedia	4.52	.63	18	
A well-rounded program emphasizing instruction, SAEs, and youth leadership activities	5.00	.00	1	
Composite Mean[c]				4.69
Supervised Agricultural Experience Programs				
All students meeting State SAEP requirements, with accurate record books	4.48	.72	20	
Diversity within the students' SAEPs	4.10	.79	33	
Project supervision and an explanation of this commitment to the student teacher	4.61	.50	14	

Table Continues

Table 2 (Continued)

Elements[a]	M[b]	SD	Ranking	
Student participation in advanced awards and degrees on district, area, state and national levels	4.39	.62	26	
Composite Mean[c]				4.40
Student Leadership Development (FFA activities)				
Strong classroom instruction in leadership development	4.55	.57	17	
These activities as essentials for a balanced program	4.68	.48	11	
A history of successful participation	4.32	.70	27	
Cooperating teachers who are familiar with current rules for participation in events (e.g., CDEs and LDEs)	4.52	.57	18	
Cooperating teachers who delegate the training of at least one team to the student teacher	4.58	.56	15	
Resources available to train a competitive team	4.71	.53	9	
Opportunities for the student teacher to judge or monitor a district or area Leadership Development Event (LDE)	4.42	.72	23	
Composite Mean[c]				4.54
School and Community Relationships				
Recognized integrity of the cooperating teacher and program	4.74	.45	8	
Dep'tal support organization(s) (e.g., advisory committees, booster clubs, and Alumni)	4.29	.69	29	
A cooperating teacher who supports other school activities (e.g., sports banquets)	4.10	.75	33	
A cooperating teacher who supports activities in the community (e.g., service organizations)	4.13	.81	32	
A spirit of professional cooperation among fellow teachers	4.58	.50	15	
Use of local media	4.23	.62	30	
School administrators who are involved in program activities	4.42	.62	23	
Community service projects	4.23	.67	30	
Availability of facilities (e.g., computer lab, shops, horticultural lab, school farm)	4.48	.72	20	
Composite Mean[c]				4.36
Cooperating Teacher-Student Teacher Relationships				
A cooperating teacher who is willing to be a mentor	4.77	.43	4	
A student teacher who is willing to be mentored by the cooperating teacher	4.77	.43	4	
A cooperating teacher who has a positive attitude	4.90	.30	3	
A cooperating teacher who is a "good" role model	4.77	.50	4	
A cooperating teacher who communicates clear expectations to the student teacher (e.g., role in the classroom and calendar of events)	4.71	.46	9	
A cooperating teacher who provides frequent evaluations and feedback to the student teacher	4.65	.55	12	
Discipline policies that are in place and enforced	4.77	.43	4	
"Reinforcement" techniques in teaching (e.g., pace, reteaching, retesting, and accommodation of various learning styles)	4.45	.62	22	
Assistance in job placement	4.42	.62	23	
Composite Mean[c]				4.69
Overall Mean				4.54

Note. [a]Important elements were determined by focus groups and reflect the groups' "language."
[b]5 = High Importance…1 = No Importance.
[c]Composite mean of elements for that core area.

Conclusions, Implications, and Recommendations

Based on findings of this study, cooperating teachers used by the Department of Agricultural Education at Texas A&M University were predominantly male, were members of their state's professional organization (VATAT), and were generally experienced teachers who were likely to have had several years of service at their school. Most of the teachers had previous experience supervising student teachers and were most likely employed in a multiple teacher department staffed by two instructors.

Focus groups perceived that the "traditional" triad associated with secondary-level agricultural education (i.e., classroom/laboratory instruction, the FFA, and SAEs) was an important component of the student teaching experience. This perception was confirmed by teachers' ratings of importance when queried via a mail questionnaire; "instruction" was the most important of these three areas. However, found to be equally "important" were those elements belonging to the core area "Cooperating Teacher-Student Teacher Relationships" (Table 2). Other researchers (Martin & Yoder, 1985) have made a similar contention.

Shelley-Tolbert, Conroy, and Dailey (2000) opined "that agricultural education is the premier vehicle for contextualized teaching and learning within any community setting" (p. 60), and that the "unique nature of community-based agricultural education should…drive the curriculum…" (p. 59). This implies that the "quality" of an agriculture teacher's relationship to his/her local "community" is a prerequisite for program success, especially that which pertains to the instructional component. Yet interestingly, the core area "School and Community Relationships," although considered "important," had the lowest composite mean for the five areas addressed by this study. Moreover, investigators (Edwards & Briers, 1998; Garton & Chung, 1995; Mundt & Connors, 1999) have found that early-career agriculture teachers identify a need for inservice education in this area. Does expression of this "need" by beginning teachers arise because of a lower "value" that cooperating teachers may have for this part of the student teaching experience? Perhaps student teachers were not being exposed adequately to "related" learning opportunities; then, on becoming a practicing teacher, they realized that they were lacking in these professional competencies. This potential "association" between inservice education needs of novice teachers and perceptions of cooperating teachers about important elements of student teaching warrants further study.

Regarding research methodology, what is implied by the fact that all of the important elements, as determined by focus groups, were rated either "much" or "high" in importance when teachers were surveyed via a mail questionnaire? Did one approach simply "confirm" the findings of the other (Stewart & Shamdasani, 1990)? This implies that either data collection method was equally "valid," at least for the purpose of gathering this type of information from this particular sample. Moreover, what if the questionnaire items had been generated by a "non-indigenous" source (e.g., the researchers)? Then, how similar, different, or valid would the items/elements have been and, ultimately, the study's findings? Further, would the results have been similar if a different group of cooperating teachers had provided the quantitative data? Or is it conceivable that the similarity of the findings can be attributed to the fact that the questionnaire items were "crafted" by a stakeholder group (i.e., cooperating teachers) that was arguably one of the most qualified sources for this purpose (Krueger, 1994; Morgan, 1997; Popham, 1993; Stewart & Shamdasani)?

If one accepts this premise, then these findings support Krueger's assertion that "benefits" can be reaped by properly applying "methodological mixes" to a research design. Further, the findings of this study and their implications appear to support the contentions of other researchers (Eisner, 2001; Miller, 1998; Willis, 1991). That is, using a "soft systems" methodological approach (Miller, 1998) when attempting to "understand" complex behaviors that are problem-centered and highly contextual (i.e., the student teaching experience) is an appropriate procedure.

Recommendations for practice and future research follow: 1) Prior to student teaching, preservice teachers should be made aware of the important elements of the student teaching experience identified by cooperating teachers. These elements should be used as a "framework" for examining and anticipating cooperating teachers' "expectations" for the student teacher and the student teaching experience. Further, these elements can serve as "talking points" (i.e., points of reference) for student teachers when defining and "negotiating" duties, roles, and responsibilities with their cooperating teachers at the onset of student teaching. 2) Student teachers and subsequent groups of cooperating teachers should be surveyed using a similar quantitative instrument. If significant areas of "disagreement" arise, these areas could serve as "directed-questions" for student teacher focus groups, and explored as to why they are perceived to be less or more important. Concomitantly, cooperating teacher groups should examine why teachers perceive these elements to be important. Then, with a "greater" understanding of both groups' perceptions, teacher educators can design and implement preservice learning activities to address any incongruence that might be a limiting factor preventing development of an effective cooperating teacher-student teacher relationship (Martin & Yoder, 1985). 3) Researchers are encouraged to consider using a focus group approach when deemed an appropriate methodology for their investigation, for example, to collect data, to design and refine instruments, to generate hypotheses, and to confirm earlier findings (Krueger, 1994; Morgan, 1997; Popham, 1993). 4) Moreover, to further strengthen our collective understanding of the potential "value" and the possible "limitations" of research that involves both qualitative and quantitative methodologies (i.e., "mixed methods"), researchers are urged to conduct investigations that incorporate both approaches (Eisner, 2001; Krueger), compare their findings, and report their conclusions.

References

Berlin, I. (1998). *The proper study of mankind: An anthology of essays.* New York: Farrar, Straus and Giroux.

Briers, G. E., & Edwards, M. C. (1998). Assessing inservice needs of entry-phase agriculture teachers in Texas. *Proceedings of the Seventeenth Annual Western Agricultural Education Research Meeting, XVII,* 127-138.

Byler, B. L., & Byler, L. F. (1984). Analysis of student teacher morale before and after student teaching. *The Journal of the American Association of Teacher Educators in Agriculture, 25*(3), 22-28.

Claycomb, D. M., & Petty, G. C. (1983). A three year longitudinal study of the perceived needs for assistance as ranked by vocational agriculture instructors. *The Journal of the American Association of Teacher Educators in Agriculture, 24*(4), 28-33.

Cole, S. E., & Waters, R. G. (1997). Factors influencing the retention of senior 4-H members in rural Tennessee: A Focus group study. *Proceedings of the 1997 National Agricultural Education Research Meeting, 24,* 510-517.

Deeds, J. P. (1993). A national study of student teaching requirements in agricultural education. *Proceedings of the National Agricultural Education Research Meeting, 20,* 219-225.

Deeds, J. P., Arrington, L. R., & Flowers, J. L. (1988). Cooperating teacher attitudes regarding cooperating teachers and student teaching experience expectations in vocational agriculture in three states. *Proceedings of the Thirty-Seventh Annual Southern Region Research Conference in Agricultural Education,* Group 2, Paper 2.

Deeds, J. P., & Barrick, R. K. (1986). Relationships between attitudes of pre-service agricultural education majors and variables related to early field-based experience. *The Journal of the American*

Association of Teacher Educators in Agriculture, 27(3), 2-7.

DeMoulin, D. F. (1993). Efficacy and educational effectiveness. In J. R. Hoyle & D. M. Estes (Eds.), *NCPEA: In a new voice* (pp. 155-167). Lancaster, PA: Technomic Publishing Company, Inc.

Dillman, D. A. (1978). *Mail and telephone surveys: The total design method.* New York: John Wiley & Sons.

Edwards, M. C., & Briers, G. E. (1998). Assessing the inservice needs of entry-phase agriculture teachers in Texas: A discrepancy model versus direct assessment. *Proceedings of the 25th National Agricultural Education Research Meeting, 25,* 322-332.

Eisner, E. W. (2001, January). What does it mean to say a school is doing well? *Phi Delta KAPPAN 82*(5), 367-372.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman Publishers USA.

Gamon, J., & Chestnut, D. (1994). The use of focus groups to conduct an outcomes assessment of undergraduates in the college of agriculture. *Proceedings of the 21st Annual National Agricultural Education Research Meeting, 21,* 43-48.

Garton, B. L., & Cano, J. (1994). The influence of the cooperating teacher on the student teacher's use of the problem-solving approach to teaching. *Proceedings of the 21st Annual National Agricultural Education Research Meeting, 21,* 209-214.

Garton, B. L., & Chung, N. (1995). An analysis of the inservice needs of beginning teachers of agriculture. *Proceedings of the 22nd Annual National Agricultural Education Research Meeting, 22,* 77-83.

Haak, J. D., & Talbert, A. B. (1998). Development of recruitment guidelines for agricultural teacher education in Indiana. *Proceedings of the 25th Annual National Agricultural Education Research Meeting, 25,* 297-308.

Korthagen, F. A. J., & Kessels, J. P. A. (1999). Linking theory and practice: Changing the pedagogy of teacher education. *Educational Researcher, 28*(4), 4-17.

Krueger, R. A. (1994). *Focus groups: A practical guide for applied research* (second edition). Thousand Oaks, CA: SAGE Publications, Inc.

Larke, A., Jr., Norris, R. J., & Briers, G. E. (1992). A three-year national study of teacher educator, supervising teacher, and student teacher perceptions concerning the selection of student teaching centers and supervising (cooperating) teachers in agriculture. *Proceedings of the National Agricultural Education Research Meeting, 19,* 204-210.

Martin, R. A., & Yoder, E. P. (1985). Clinical teaching analysis: A procedure for supervising teachers. *The Journal of the American Association of Teacher Educators in Agriculture, 26*(4), 16-21, 33.

Miller, L. E. (1998). Research to practice in a positivistic community. *1998 Conference Papers, 14th Annual Conference, 15, 16, 17, 18 April, 1998, Tucson, Arizona, Association for International Agricultural and Extension Education,* Session H, Paper 4.

Miller, L.E. (1999). Revisiting experiential learning: Basis for study tours/study abroad programs. *1999 Conference Proceedings 15th Annual Conference 21, 22, 23, 24 March, 1999 Port of Spain, Trinidad 25, 26 March, 1999 Tobago, Association for International Agricultural and Extension Education,* Session G, Paper 1.

Miller, W. W., & Scheid, C. L. (1984). Problems of beginning teachers of vocational agriculture in Iowa. *The Journal of the American Association of Teacher Educators in Agriculture, 25*(4), 2-7.

Morgan, D. L. (1997). *Focus groups as qualitative research* (second edition). Newbury Park, CA: SAGE Publications, Inc.

Mundt, J. P., & Connors, J. J. (1999). Problems and challenges associated with the first years of teaching agriculture: A framework for preservice and inservice education. *Journal of Agricultural Education, 40*(1), 38-48.

Norris, R. J., Jr. Larke, A., & Briers, G. E. (1990). Selection of student teaching centers and cooperating teachers in agriculture and expectations of teacher educators regarding these components of a teacher education program: A national study. *Journal of Agricultural Education, 31*(1), 58-63.

Popham, W. J. (1993). *Educational evaluation* (third edition). Needham Heights, MA: Allyn and Bacon.

Schumacher, L. G., & Johnson, D. M. (1990). Time series analysis of agricultural education student teachers' perceptions of agricultural mechanics lab management competencies. *Journal of Agricultural Education, 31*(4), 2-8.

Schumann, H. B. (1969, January). The cooperating teacher's role in student teaching. *The Agricultural Education Magazine, 41*(7), 156.

Shelley-Tolbert, C. A., Conroy, C. A., & Dailey A.L. (2000). The move to agriscience and its impact on teacher education in agriculture. *Journal of Agricultural Education, 41*(4), 51-61.

Stewart, D. W., & Shamdasani, P. N. (1990). *Focus groups: Theory and practice.* Newbury Park, CA: SAGE Publications, Inc.

Tuckman, B. W. (1999*). Conducting educational research* (fifth edition). Fort Worth: Harcourt Brace College Publishers.

Willis, G. (1991). Phenomenological inquiry: Life-world perceptions. In E. C. Short (Ed.), *Forms of curriculum inquiry* (pp.173-186). Albany, NY: State University of New York Press.