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Methodological content and teaching delivery used by vocational teacher education faculty in University Council and other selected higher education institutions

Blair, Robert Barry, Ph.D.
The Louisiana State University and Agricultural and Mechanical Col., 1993
A Dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
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in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in
The School of Vocational Education

by
Robert Barry Blair
B.S., Oral Roberts University, 1986
M.B.E., Middle Tennessee State University, 1987
December 1993
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ABSTRACT

The purpose of this study was to identify the methodological content and teaching delivery used by vocational teacher education faculty in University Council for Vocational Education (UCVE) institutions and other selected higher education institutions (NON-UCVE). The population for this study was defined as: full-time vocational teacher education faculty in programs at Research I, Research II, and Doctorate Granting Colleges and Universities I where comprehensive vocational education programs were offered. Administrative leaders for each institution identified the vocational teacher education faculty which established the frame for the study. A stratified-random cluster sample of vocational teacher educators from UCVE institutions and NON-UCVE institutions were the study subjects. A three-part researcher developed instrument was used for data collection. The demographic information identified institutional characteristics and vocational teacher educator characteristics. The remaining part of the instrument focused on methodological content and delivery. Two full mailings and two follow-up attempts yielded a total response rate of 73.3%. Statistics used to report the data analysis included: frequencies, percentages, central tendency, and Kendall's Tau.

Teaching strategies found to be most frequently modeled by vocational teacher educators included: discussion,
demonstration, questioning techniques, problem solving, peer
teaching, brainstorming, small group instruction, lecture,
simulation, multimedia instruction, creative teaching, and
case studies. Teaching strategies found to be most frequently taught by vocational teacher educators included:
discussion, demonstration, questioning techniques, problem
solving, small group instruction, brainstorming, simulation,
peer teaching, lecture, case studies, multimedia instruction,
and individualized instruction.

Kendall's Tau was used to identify relationships between
the most frequently modeled and taught teaching strategies
and selected demographic characteristics. Significant
relationships were found between the following modeled
strategies and demographic characteristics: methods course
enrollment and discussion; number of required methods course
hours and problem solving; highest degree awarded within
program and simulation; and, highest degree held by methods
teacher and lecture. Significant relationships were found
between the following taught strategies and demographic
characteristics: highest degree held by methods teacher and
lecture; professional membership status and case studies,
small group instruction, and lecture.
INTRODUCTION

A thorough review of research literature relevant to methods course content and teaching delivery techniques used in vocational education yielded an alarming void. Methodology and delivery studies can be found relating to other areas of education but are extremely limited with regard to vocational education. One way to address this problem was to identify the methods and delivery techniques used in vocational teacher education programs.

White (1989) believes that teachers of today are probably reflecting the theory and methods of their training programs. These programs contain methods and reinforcement strategies that have dominated pedagogical practice of the last 20 years. He further states that teaching in the 1990's must be influenced by the theory and research of this era, which should include learning principles and pedagogy based on social learning and information systems (White, 1989, p. 6).

Gage (1972) recognized that the learning theory subscribed to by a teacher will influence his theory of teaching. He summarized several of the prevalent theories utilized in the past and present.

Teaching becomes the process of providing for the learner what a given learning theory regards as essential. For the conditioning theorists, the teacher must provide cues for a given response and reinforcement of that response. For the modeling theorists, the teacher must provide a model to be observed and imitated. For the cognitive theorist, the teacher must
provide a cognitive structure or the stimuli that will produce one (Gage, 1972, p. 19).

White (1989) acknowledges changes in society and how these changes affect teaching and learning. He stated that:

Teachers should no longer be perceived as the cognitive stuffers of information and skills. Teachers should no longer be held accountable as the only teaching agent in student's learning and whose pedagogy is the delivery of reinforcement to "correct" behavior. Students must be self motivated and self regulating if quality instruction is to take place (White, 1989, p. 6).

The 1990's have been declared the decade of the brain, therefore, it is important to recognize brain-based learning in which the major objective is to move from memorizing information to meaningful learning (Caine & Caine, 1990, p. 69). In brain-based learning the individual as a whole must be taken into consideration. Caine and Caine (1990) state that brain-based teaching must fully incorporate stress management, nutrition, exercise, drug education, and other facets of health into the learning process. They also concluded that a) learning is influenced by the natural development of the body; b) learning engages the entire physiology; c) learning is enhanced by challenge and inhibited by threat; and d) each brain is unique (Caine & Caine, 1990, p. 66).

Caine and Caine (1990) advocate teaching that is multifaceted which allows all students to express visual, tactile, emotional, or auditory preferences. Choices should also be variable enough to attract individual interests. This may require the reshaping of learning organizations so
that they exhibit the complexity found in life (Caine & Caine, 1990, p. 69).

Marshall (1990) supports both White and Caine and Caine's ideas from the philosophical perspective of learning styles. He states the following:

Teaching to style represents a philosophical change from tradition to a mutual embrace of accountability: If students don't learn the way we teach them, then we will teach them the way they learn. In short, we must teach them how they learn so that they can teach themselves (Marshall, 1990, p. 62).

Hartley (1990) conducted a study of Colorado vocational educators that examined perceived professional development needs and preferred delivery systems. Her study included a statewide sample of 1,043 vocational educators with a response rate of 31 percent. She found the strongest perceived needs related to teaching strategies to include: computer-assisted instruction, motivating students, developing critical thinking skills, integrating business/industry standards into the curriculum, and diagnosing individual learning styles and characteristics.

In her study on cognitive theory related to teaching and learning in vocational education, Thomas (1992) suggests a need for major changes in educational methods, perspectives, and institutions. She further states that barriers to change include: (1) vocational education research does not focus on teaching/learning; (2) teachers are not prepared in cognitive methods; (3) school structures hinder cognitive development;
and (4) society does not demonstrate that thinking is valued. She concludes that, vocational education can fulfill its role in cognitive development by providing real-world experiences, changing mind sets about assessment and systematically researching cognition and vocational education.

Therefore, an examination of vocational teacher education programs, and more specifically, methods course content and delivery techniques, is essential. Determining methodological content and teaching delivery of vocational teacher education programs will consequently provide a research database. This will enable changes to be made where needed to reflect the changing needs of students, teachers, and society.

**Statement of the Problem**

The need for this research was founded on the void that appears in the research literature related to methodological content and teaching delivery used in vocational teacher education programs. White (1989) hypothesized that teachers of today are probably reflecting the theory and methods of their teacher training programs. He further emphasizes the need for teaching of the 1990's and beyond to be influenced by the research of this era (1990's) (White, 1989, p. 6). Therefore, there is a need to know the methodological content and teaching delivery that exists in vocational teacher education programs.
Purpose of the Study

The purpose of this study was to identify the methodological content and teaching delivery used by selected university vocational teacher education faculty in the United States baccalaureate degree programs. In order to accomplish the purpose of this exploratory study, specific objectives were formulated.

Objectives of the Study

The specific objectives of the study were to:

1. Describe the vocational teacher education programs at University Council for Vocational Education (UCVE) institutions and other selected NON-UCVE higher education institutions on selected demographic characteristics. The characteristics included: higher education institution classification, American Vocational Association (AVA) region, college, school and/or department where the program is located, enrollment size (small=50 or less and large=more than 50), number of graduates, curricula offered, number of teaching methods courses required (credit hours each), and the degrees offered through the school and/or department where the vocational teacher education program is located.

2. Describe the vocational teacher educators at UCVE institutions and other selected NON-UCVE higher education institutions on selected personal and professional characteristics. The characteristics included: age, gender, race, academic credentials, number of years experience as a
vocational teacher educator and number of years experience in secondary education, professional rank, membership in professional organizations, and attendance at national and state professional meetings.

3. Describe the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses at UCVE institutions and other selected NON-UCVE higher education institutions.

4. Identify the relationship of the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher.

5. Describe the teaching delivery techniques most frequently taught in methods courses by UCVE institutions' and other selected NON-UCVE higher education institutions' vocational teacher education faculty.

6. Identify the relationship of the teaching delivery techniques most frequently taught by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods course enrollment; methods credit hours required; highest
Significance of the Study

The study was considered to be significant for the following reasons:

1. A thorough Educational Resource Information Center (ERIC) search and review of Dissertation Abstracts International was conducted to locate information on vocational teacher education programs. A void existed in the research literature relevant to vocational teacher education programs, especially pertaining to the methodological content and teaching delivery used by vocational teacher education faculty throughout the United States.

2. The information obtained from this study will help to fill the research void regarding strategies taught and modeled by vocational teacher education faculty.

3. The results of the study will be useful in disseminating information about the methodological content and teaching delivery used by vocational teacher educators at selected higher education institutions for the enhancement of vocational teacher education programs.

Definition of Terms

University Council for Vocational Education Institutions (UCVE) refers to universities that provide research, service, and instruction in vocational education. To be included in the UCVE, universities must meet the following criteria:
Doctoral Program—The doctoral program must be supported by graduate faculty representing expertise in three or more vocational fields. As identified by the graduate school, the doctoral program must have an emphasis in vocational education and/or an emphasis in each of three specialized vocational fields. When three or more doctoral vocational fields are offered, these fields must operate through some type of coordinating body. The doctoral program(s) as described above must have produced one or more doctorates in the previous three years.

Size of Staff—The doctoral program shall be staffed with the equivalent of six or more full-time members with teaching rank, and of these at least four shall be members of the graduate faculty, representing at least three specialized fields in vocational education.

Related Disciplines—support shall be available in the related disciplines necessary to guarantee breadth of the doctoral program.

Staff/Faculty Research and Development—The faculty in vocational education has made and continues to make contributions to the field of vocational education through disciplined inquiry recognized as worthwhile by the Council.

Single Location—For the four criteria above, the University's resources shall be assembled on a single, well-established campus (UCVE Brochure, 1991).

The following institutions are members of the UCVE (at the time of this study): Auburn University, Colorado State University, Louisiana State University, North Carolina State University, Ohio State University, Oklahoma State University, Oregon State University, Pennsylvania State University, Southern Illinois University at Carbondale, Texas A&M University, University of Arkansas, University of Georgia, University of Idaho, University of Illinois at Urbana-Champaign, University of Kentucky, University of Minnesota, University of Missouri-Columbia, University of Nebraska-
Lincoln, University of Tennessee, University of Wyoming, and Virginia Polytechnic Institute and State University.

**Brainstorming**—activity or technique to encourage the creative generation of ideas—usually a group process, in which group members contribute suggestions in a spontaneous, noncritical manner (Houston, 1990, p. 28).

**Case studies**—detailed analysis, usually focusing on a particular problem of an individual, group, or organization (Houston, 1990, p. 32).

**Close procedure**—completion of exercises requiring the reader to insert missing words with the aid of surrounding context (Houston, 1990, p. 40).

**Comprehensive vocational education**—for the purpose of this study, comprehensive vocational education refers to a program in vocational education and/or emphasis in three or more vocational fields, which operate through some type of coordinating body. Areas of emphasis include, but are not limited to, the following: Adult Education, Agricultural Education, Business Education, Home Economics Education, Industrial Arts Education, Marketing Education, Technology Education, Vocational Education, Training and Development, Extension Education, and Trade and Industrial Education.

**Computer simulation**—computer based representation of real situations or systems (Houston, 1990, p. 50).

**Computer assisted instruction**—interactive instruction technique in which a computer is used to present instructional material, monitor learning, and select additional instructional material in accordance with individual learner needs (Houston, 1990, p. 49).

**Creative teaching**—development and use of novel, original, or inventive teaching methods (note: refers to teaching that results from the teacher's creativity, not to teaching that is intended to develop the learner's creativity (Houston, 1990, p. 58).

**Demonstration**—to illustrate or explain in an orderly and detailed way, especially with many examples, specimens, and particulars (Gove, 1981, p. 600).

**Diagnostic teaching**—process of diagnosing students abilities, needs, and objectives and prescribing requisite learning activities (Houston, 1990, p. 69).
Discussion—oral, and sometimes written, exchange of opinions—usually to analyze, clarify, or reach conclusions about issues, questions or problems (Houston, 1990, p. 71).

Dramatic play—refers to sociodramatic play (role play) (Houston, 1990, p. 73).

Drills—repetition of tasks or procedures (Houston, 1990, p. 73).

Experimental teaching—teaching that uses new or innovative ideas, methods, or devices (Houston, 1990, p. 93).

Guided design—reasoning-centered instructional method developed by Charles E. Wales and Robert A. Stager that uses small-group techniques and a prepared outline of decision making steps to guide students through the process of resolving open-ended problems (Houston, 1990, p. 113).

Hypermedia—computerized compilations of information units (text, graphics, animation, and/or sound) interconnected by logical nonlinear linkages that enable users to follow optional paths through the material—also, the systems, used to create and display this information (Houston, 1990, p. 121).

Individualized instruction—adapting instruction to individual needs within the group (note: do not confuse with "independent study" or "individual instruction.") (Houston, 1990, p. 124).

Instructional films—for the purpose of this study, instructional films refers to films and/or video tapes used to introduce or enhance subject matter for better student understanding.

Interactive video—online video computing systems capable of rapid, accept and reject communications with human beings (Houston, 1990, p. 131).

Interviews—to question or converse with especially in order to obtain information or ascertain personal qualities (Gove, 1981, p. 1184).

Learning strategies—rules, principles, and procedures used to facilitate learning, frequently applicable to a variety of specific learning tasks (Houston, 1990, p. 146).

Learner controlled instruction—instruction in which the individual learner has considerable influence over what is taught, how it is taught, and the pace of instruction—often
used in relation to student interaction with courseware (Houston, 1990, p. 145).

**Lecture method**—teaching method in which information is presented orally to a class with a minimal amount of class participation (Houston, 1990, p. 146).

**Mass instruction**—large scale activities aimed at disseminating information or to influence the opinion of the general public (Houston, 1990, p. 156).

**Memorization**—the act or an instance of memorizing (Gove, 1981, p. 1409).

**Methodological Content**—for the purpose of this study, methodological content refers to the methods course content used by vocational teacher educators in vocational teacher education programs.

**Methods teachers**—teacher educators who provide instruction in how to teach a particular subject or general classroom procedures that may be used in teaching any subject (Houston, 1990, p. 163).

**Methods courses**—courses in standard classroom procedures that may be used in teaching any subject (Houston, 1990, p. 162).

**Multimedia instruction**—the integration of more than one medium in a presentation or module of instruction (Houston, 1990, p. 169).

**Multisensory learning**—learning that involves the processing of stimuli through two or more senses (Houston, 1990, p. 169).

**Peer teaching**—peer tutoring, cooperative learning (Houston, 1990, p. 168).

**Precision teaching**—teaching method, based on behavior modification, that uses daily measurement and charting procedures as reinforcement for learning (Houston, 1990, p. 198).

**Problem solving**—learning that combines two or more principles to produce a solution and in the process acquires the capability to deal with future similar problems with greater facility (McNeil, 1985, p. 154).

**Programmed instruction**—instruction in which learners progress at their own rate using workbooks, textbooks, or electromechanical devices that provide information in
discrete steps, test learning at each step, and provide immediate feedback about achievement (Houston, 1990, p. 204).

**Questioning techniques**—methods used for constructing and presenting questions in order to promote effective discussions and learning or to elicit information (Houston, 1990, p. 210).

**Simulation**—duplication of the essential characteristics of a task or situation (Houston, 1990, p. 239).

**Small group instruction**—for the purpose of this study, small group instruction refers to instruction aimed at disseminating information to a small group of people.

**Teaching methods (delivery)**—ways of presenting instructional materials or conducting instructional activities (Houston, 1990, p. 264).

**Teaching machines**—devices that mechanically, electrically and/or electronically present instructional programs at a rate controlled by the learners' responses (Houston, 1990, p. 264).

**Thematic approach**—teaching approach that organizes subject matter around unifying themes (Houston, 1990, p. 270).
REVIEW OF RELATED LITERATURE

The purpose of this chapter was to provide information that served as the foundation of the study. The chapter is organized into the following sections: theoretical framework, teaching methods, modeling, and teacher/student roles.

Theoretical Framework

Theories of Learning

Thorndike (1917) believed that learners were empty organisms that responded to stimuli randomly and automatically. A specific response is connected to a specific stimulus when it is rewarded. Thorndike's system has sometimes been called bond psychology or connectionism, and was the original stimulus-response psychology of learning. His system of thought became greatly refined and elaborated, and provided the subfoundation of the behaviorist theories of learning (p. 17). Thorndike (1917) observed:

Common observation shows that children differ greatly in their mental make-up and psychology proves these differences to exist in the case of all mental qualities and to be of the utmost practical importance. In the physical characteristics of the sense and motor organs, in the strength of instincts and capacities, in the nature of their previous experiences and inborn and acquired interests--no two children are exactly alike and any one school class will show extensive differences. The same stimulus cannot be expected to produce exactly the same response in any two and will rarely produce anything like the same response from all (p. 68).

Pavlov developed the concepts and techniques of reinforcement, extinction, generalization, and
differentiation. His system has been termed classical conditioning to distinguish it from later developments in instrumental and operant conditioning (Knowles, 1984, p. 18).

Watson, generally credited with being the father of behaviorism, placed emphasis on kinesthetic stimuli as the integrators of animal learning and, applying this concept to human beings, conjectured that thought was merely implicit speech—that sensitive enough instruments would detect tongue movements or other movements accompanying thinking (Knowles, 1984, p. 19).

In his later works, Guthrie placed increasing emphasis on the part played by the learner in selecting the physical stimuli to which it would respond; hence, the importance of the attention or scanning behavior that goes on before association takes place (Knowles, 1984, p. 20).

Skinner (1968) believed that students do not learn passively but rather actively (p. 5). He further stated that if the student is to learn about the world in which he lives, then he must be able to experience it. Learning by doing, learning from experiences, and learning by trial-and-error are components of the classical theory of reinforcement (p. 8).

Pittenger and Gooding (1971) make the following statements concerning Authur Combs and Donald Snygg's system of thought:
1. Man behaves in terms of what is real to him and what is related to his self at the moment of action (p. 130).

2. Learning is a process of discovering one's personal relationship to and with people, things, and ideas. This process results in and from a differentiation of the phenomenal field of the individual (p. 136).

3. Further differentiation of the phenomenological field occurs as an individual recognizes some inadequacy of a present organization. When a change is needed to maintain or enhance the phenomenal self, it is made by the individual as the right and proper thing to do. The role of the teacher is to facilitate the process (p. 144).

4. Given a healthy organism, positive environmental influences, and a nonrestrictive set of precepts of self, there appears to be no foreseeable end to the perceptions possible for the individual (p. 150).

5. Transfer is a matter of taking current differentiations and using them as first approximations in the relationship of self to new situations (p. 157).

6. Learning is permanent to the extent that it generates problems that may be shared by others and to the degree that continued sharing itself in enhancing (p. 165).

Two other contemporary psychologists, Piaget and Bruner, have had great impact on thinking about learning although they are not literally learning theorists. Their focus is on cognition and the theory of instruction. Piaget has conceptualized the process of the development of cognition and thought in evolutionary stages. According to him, the behavior of the human organism starts with the organization of sensory-motor reactions and becomes more intelligent as coordination between the reactions to objects becomes
progressively more interrelated and complex. Thinking becomes possible after language develops—and with it a new mental organization (Knowles, 1984, p. 24).

1. The formation of the symbolic or semiotic function (ages two to seven or eight)—which enables the individual to represent objects or events that are not at the moment perceptible by evoking them through the agency of symbols or differentiated signs.

2. The formation of concrete mental operations (ages seven or eight to eleven or twelve)—linking and dissociation of classes, the sources of classification; the linking of relations; correspondences, etc.

3. The formation of conceptual thought (or formal operations) (ages eleven or twelve through adolescence)—"This period is characterized by the conquest of a new mode of reasoning, on that is no longer limited exclusively to dealing with objects or directly representable realities, but also employs 'hypotheses'..." (Piaget, 1970, p. 30).

The major criticism of Piaget, Bruner and other cognitive theorists by other adherents to the organismic model is that they are unbalanced in their overemphasis on cognitive skills at the expense of emotional development; that they are preoccupied with the aggressive, agentic, and autonomous motives to the exclusion of the homonymous, libidinal, and communal motives; and that they concern themselves with concept attainment to the exclusion of concept formation or invention (Knowles, 1984, p. 26).

Caine and Caine (1990) emphasize that learning engages the entire physiology, therefore, brain-based teaching must fully incorporate stress management, nutrition, exercise, drug education, and other facets of health into the learning
process. Learning is influenced by the natural development of the body (p. 66). Consideration must be given to the idea that learning is enhanced by challenge and inhibited by threat whereby the brain learns optimally when appropriately challenged, but "down-shifts" under perceived threat. This means that teachers and administrators should strive to create a state of relaxed alertness in students. All the methodologies the teacher uses to orchestrate the learning context influence the state of relaxed alertness (p. 69). Educators must take into account that each brain is unique. The purpose of brain-based learning is to move from memorizing information to meaningful learning (p. 69).

**Theories of Teaching**

Theories of learning are of use only to a laboratory scientist unless they are applied somehow to the facilitation of learning, a function assigned usually in our society to a person designated as teacher (Knowles, 1984, p. 64).

A distinction can be made between theories of learning and theories of teaching. While theories of learning deal with the ways in which an organism learns, theories of teaching deal with the ways in which a person influences an organism to learn (Gage, 1972, p. 56).

Hilgard and Bower (1966) identified twenty principles from three different families of theories--S-R theory, cognitive theory, and motivation and personality theory.

**A. Principles emphasized in S-R theory**

1. The learner should be active, rather than a passive listener or viewer.
2. Frequency of repetition is still important in acquiring skill, and for retention through over learning.

3. Reinforcement is important; that is in repetition desirable or correct responses should be rewarded.

4. Generalization and discrimination suggest the importance of practice in varied contexts, so that learning will become (or remain) appropriate to a wider (or more restricted) range of stimuli.

5. Novelty in behavior can be enhanced through imitation of models, through cueing, through shaping, and is not inconsistent with a liberalized S-R approach.

6. Drive is important in learning, but all personal-social motives do not conform to the drive-reduction principles based on food-deprivation experiments.

7. Conflicts and frustrations arise inevitably in the process of learning difficult discriminations and in social situations in which irrelevant motives may be aroused. Hence we must recognize and provided for their resolution or accommodation (Hilgard & Bower, 1966, pp. 562-563).

B. Principles emphasized in cognitive theory

1. The perceptual features of the problem given the learner are important conditions of learning—figure-ground relations, directional signs, sequence, organic interrelatedness. Hence a learning problem should be so structured and presented that the essential features are open to the inspection of the learner.

2. The organization of knowledge should be an essential concern of the teacher or educational planner so that the direction from simple to complex is not from arbitrary, meaningless parts to meaningful wholes, but instead from simplified wholes to more complex wholes.
3. Learning is culturally relative, and both the wider culture and the subculture to which the learner belongs may affect his learning.

4. Cognitive feedback confirms correct knowledge and corrects faulty learning. The learner tries something provisionally and then accepts or rejects what he does on the basis of its consequences. This is, of course, the cognitive equivalent of reinforcement in S-R theory, but cognitive theory tends to place more emphasis upon a kind of hypothesis-testing through feedback.

5. Goal-setting by the learner is important as motivation for learning and his successes and failures determine how he sets future goals.

6. Divergent thinking, which leads to inventive problem solving or the creation of novel and valued products, is to be nurtured along with convergent thinking, which leads to logically correct answers (Hilgard & Bower, 1966, pp. 563-565).

C. Principles from motivation and personality theory

1. The learner's abilities are important, and provisions have to be made for slower and more rapid learners, as well as for those with specialized abilities.

2. Postnatal development may be as important as hereditary and congenital determiners of ability and interest. Hence the learner must be understood in terms of the influences that have shaped his development.

3. Learning is culturally relative, and both the wider culture and the subculture to which the learner belongs may affect his learning.

4. Anxiety level of the individual learner may determine the beneficial or detrimental effects of certain kinds of encouragements to learn.

5. The same objective situation may tap appropriate motives for one learner and not for another, as for example, in the contrast between those motivated by affiliation and those motivated by achievement.
6. The organization of motives and values within the individual is relevant. Some long-range goals affect short-range activities. Thus college students of equal ability may do better in courses perceived as relevant to their majors than in those perceived as irrelevant.

7. The group atmosphere of learning (competition vs cooperation, authoritarianism vs democracy, individual isolation vs group identification) will affect satisfaction in learning as well as the products of learning (Hilgard & Bower, 1966, pp. 565-567).

Gagne (1957) agrees with the learning theorists that teaching means the arranging of conditions that are external to the learner, but he disagrees that learning is a phenomenon which can be explained by simple theories (p. 26). He believes that there are eight distinct types of learning, as follows: signal learning; stimulus-response learning; chaining; verbal association; multiple discrimination; concept learning; principle learning; and problem solving (p. 58).

Bruner's (1966) theory of instruction was constructed to meet these four criteria:

1. A theory of instruction should specify the experiences which most effectively implant in the individual a predisposition toward learning.

2. A theory of instruction must specify the ways in which a body of knowledge should be structured so that it can be most readily grasped by the learner.

3. A theory of instruction should specify the most effective sequences in which to present the materials to be learned.
4. A theory of instruction should specify the nature and pacing of rewards and punishments in the process of learning and teaching (Bruner, 1966, p. 40).

His system is predicated on the existence in all people of the will to learn (Knowles, 1984, p. 89).

**Teaching Methods**

White (1989) described the prevalent teaching methods of past decades in which the teacher presented the lesson plan and the prescribed curriculum through the textbooks, diagrams on the blackboard, the lesson plans and oral discussion. The students reacted to the lesson presented and responded orally and in writing to the questions and examinations. The teacher reinforced the correct responses and failed to respond to incorrect responses. Punishment or negative reinforcement was frowned upon. This method of teaching may or may not be effective depending upon the individual learner. Caine and Caine (1990) suggest that teaching should be multifaceted in order to allow all students to express visual, tactile, emotional, or auditory preferences (p. 69). Along this same line of thinking, Blumenfeld (1992) determined variety to be one of the important components which must be included in an effective learning situation. There are many ways to create variety, such as through games, fantasy, novelty, contests, computers, and cooperative learning. However, Blumenfeld (1992) recognized the fact that more knowledge is needed about what types of variety promote mastery orientation and what types simply garner
short-term attention. One must realize that variety may actually detract from a focus on the real content and problem and may not sustain motivation to learn over a long period (p. 272).

Klausnitzer (1992) reported a situation where paideia is being utilized. Paideia is a Greek word which means that general learning should be the possession of all human beings (p. 1B). Schools that operate under this philosophy believe that their students can use alternative methods of instruction, such as seminars and cooperative learning. One teacher at a Tennessee school indicated that the teachers adopting paideia try to avoid strictly textbook teaching while incorporating more cooperative learning situations where students can learn from each other in small groups. Through seminars, students are provided with an avenue whereby they may express informally their opinions about something they have read in order to understand it more fully. Students learn to think before they answer and listen to other answers as well. This helps them to realize that their ideas are not the only ones, and as a result, they become critical thinkers because they are required to analyze other students' opinions in addition to their own.

In a study conducted by the National Center for Research in Vocational Education, Hollenbeck (1988) found the factors to most influence teaching methods were institutional characteristics, class size and adequacy of
materials/equipment, perceptions of institutional mission, and education and training of instructors.

Research related to the variety of teaching methods included in this study is presented below:

**Brainstorming**

Houston (1990) defined brainstorming as an activity or technique to encourage the creative generation of ideas—usually a group process, in which group members contribute suggestions in a spontaneous, noncritical manner (p. 28). Brainstorming for ideas was one of the many techniques included in a book comprised of a series of 30, computer-based lesson plans developed by teachers from secondary and collegiate educators for teaching writing (Wresch, 1991).

**Case Studies**

As defined by Houston (1990), case studies involve a detailed analysis, usually focusing on a particular problem of an individual, group, or organization (p. 32). Significant gains in student achievement were found when case studies, small group work, and library research were incorporated into a human genetics course at the University of Illinois (Palmer, 1992). Seventeen dental hygiene students enrolled in a baccalaureate curriculum were found to prefer the case-based method over lecture, except when preparing for written exams (Kassebaum, 1991). Lundy (1991) conducted six case studies about the use of games and simulations. She found that cognitive learning was enhanced
by advance briefing about the game or simulation and that competitiveness tended to have a negative effect on learning in higher education. Burger (1992) found that teacher educators desiring to demonstrate the best practices using case method pedagogy should consider emphasizing induction into the case.

**Cloze Procedure**

Houston defined the cloze procedure as the completion of exercises requiring the reader to insert missing words with the aid of surrounding context (p. 40). The cloze procedure was one of the techniques used in a semester-long study conducted by Battle (1986) which examined the effectiveness of instructional activities that were designed to improve communication skills of first-semester freshmen enrolled in standard-level English.

**Computer Assisted Instruction**

According to Houston (1990), computer assisted instruction involves interactive instruction technique in which a computer is used to present instructional material, monitor learning, and select additional instructional material in accordance with individual learner needs (p. 49). Over a three year period, Dickey (1990) conducted a study which identified the types of computer-assisted instruction software chosen by secondary mathematic teachers. He found that all of the teachers included in the study rejected drill and practice software while the majority chose tutorial
programs. Kerns (1989) found that computer-assisted tutorials which were used to teach tennis strategies and rules were equally as effective as traditional instruction. In a study conducted by Hartley (1990) in which Colorado vocational educators were surveyed concerning their professional development needs and preferred delivery systems, computer-assisted instruction was found to be one of the teaching strategies most needed by Colorado vocational educators.

**Computer Simulation**

Houston (1990) defined computer simulation as the computer based representation of real situations or systems (p. 50). A experimental study conducted by Sterling and Gray (1991) at American University using simulation software in an introductory statistics course resulted in higher achievement scores for the class that used the simulation software when compared to the control group which utilized only the traditional methods. About half of the students included in the study judged the software to be beneficial. Computer programs have been developed to simulate the behavior of various members of the animal kingdom which would allow students to practice the shaping of behavior on a specimen without actually using a living creature. According to Acker (1990), students were able to shape the behavior of various organisms successfully using the computer simulation. College news writing students prefer computer simulations to
analyze their writing of news stories over the traditional paper version of the reporting simulation (Smith, 1990).

**Creative Teaching**

Houston (1990) defines creative teaching as the development and use of novel, original, or inventive teaching methods (note: refers to teaching that results from the teacher's creativity, not to teaching that is intended to develop the learner's creativity (p. 58).

**Demonstration**

To demonstrate is to illustrate or explain in an orderly and detailed way, especially with many examples, specimens, and particulars (Gove, 1981, p. 600). Fotos (1990) found that inservice training programs for dental assistants, hygienists, and other dental care personnel on infection control and clinical asepsis procedures were more effective when demonstrated rather than communicated by lecture or seminar. In the field of music, Gee (1990) found that set inductions which incorporated demonstrations using audio/visual aids resulted in the most effective lessons, when student teachers were teaching kindergarten, third, fourth, or sixth grade students.

**Diagnostic Teaching**

Houston (1990) defined diagnostic teaching as the process of diagnosing students abilities, needs, and objectives and prescribing requisite learning activities (p. 69). Jones and Krouse (1988) found that teachers using
diagnostic teaching strategies with students, who have mild learning disabilities, had significantly greater effects on reading achievement and off-task behavior control.

**Discussion**

Discussion involves oral, and sometimes written, exchange of opinions—usually to analyze, clarify, or reach conclusions about issues, questions or problems (Houston, 1990, p. 71). Discussion/feedback was found to be more effective than lecture or questioning techniques in a music education study conducted by Wolfe and Jellison (1990). In a study which compared three types of college teaching (discussion, lecture, and personalized systems), Miller (1991) found that discussion enhances learning and gives students a feeling of ownership in the learning process. Scharmann (1989) found significant differences in the level of understanding of the nature of science and attitudes toward evolution in an experimental study to determine the influence of a diversified instructional strategy in a scientific environment where the experimental group was allowed to discuss the theory conflicts and develop a consensus opinion.

**Dramatic Play**

Houston (1990) defined dramatic play as sociodramatic play or role play (p. 73). In a study conducted by Reiff and Powell (1992) where sixty-five preservice teachers were administered the Kolb Learning Style Inventory and a survey
to determine computer importance, knowledge, and attitude it was found that role play was the most preferred strategy.

**Drills**

According to Houston (1990), drills involve repetition of tasks or procedures (p. 73).

**Experimental Teaching**

Experimental teaching is teaching that uses new or innovative ideas, methods, or devices (Houston, 1990, p. 93).

**Guided Design**

Houston (1990) defined guided design as a reasoning-centered instructional method developed by Charles E. Wales and Robert A. Stager that uses small-group techniques and a prepared outline of decision making steps to guide students through the process of resolving open-ended problems (p. 113).

**Hypermedia**

Hypermedia refers to computerized compilations of information units (text, graphics, animation, and/or sound) interconnected by logical nonlinear linkages that enable users to follow optional paths through the material (Houston, 1990, p. 121).

**Individualized Instruction**

Houston (1990) defined individualized instruction as adapting instruction to individual needs within the group (note: do not confuse with "independent study" or "individual instruction.") (p. 124). Page and Page (1987)
found that arts and sciences faculty used individualized instruction more often than did business faculty. When compared to the Socratic dialogue method and the lecture method, personalized systems of instruction were viewed more positively by students (Smith, 1987). Factors to consider when using individualized instruction include the following: instruction should be based on the assessed abilities of the student; students should work at their own pace and receive periodic reports on mastery; students should be involved in planning and evaluating their own learning; students should be provided with alternative materials, activities, and goals; and students should be allowed to assist each other to achieve group or individual goals (Wasman, Wang, Anderson, and Walberg, 1985).

**Interactive Video**

According to Houston (1990), interactive video involves online video computing systems capable of rapid, accept-and reject communications with human beings (p. 131). Leonard (1992) compared student performance on learning biology concepts when students were instructed using two different approaches. The use of interactive videodisc and the traditional laboratory approach were found to be equivalent, however, the interactive videodisc method proved to be more time efficient than the conventional laboratory method. In a study to compare the efficiency and effectiveness of using an interactive videodisc system to teach college students
sign language vocabulary, Slike (1989) found that the group using the interactive videodisc system took one-third less time to learn the same number of signs as the control group which used the traditional approach.

**Interviews**

Interviews involve questioning or conversing with an individual or a group of individuals, especially in order to obtain information or ascertain personal qualities (Gove, 1981, p. 1184). Wiener and Shamaskin (1990) found that a nursing home, when compared to a hospital setting, was an appropriate setting for teaching medical interview and physical diagnosis to medical students.

**Instructional Films**

Teasley (1992) stated that the ease of using videocassettes and the wide availability of hundreds of excellent commercial movies mean that teachers are no longer limited to instructional films or audio-visual aids of a few decades ago (p. 24). Teachers in the Durham School District in Durham, North Carolina have developed ways of using classic films in a variety of ways. They use silent films, westerns of the 1930s and 1950s, detective films of the 1940s, foreign films in French, Japanese, Chinese, Italian and Spanish. When the teachers present these films in a thought-out manner, students respond with interest, enthusiasm and critical acumen (Teasley, 1992, p. 24).
Learner Controlled Instruction

Houston (1990) defined instruction in which the individual learner has considerable influence over what is taught, how it is taught, and the pace of instruction—often used in relation to student interaction with courseware (p. 145).

Lecture

Lecture is a teaching method in which information is presented orally to a class with a minimal amount of class participation (Houston, 1990, p. 146). Page and Page (1987) found that the lecture method was used more by individuals with five or less years of experience in teaching (p. 10). Lecture was found to be the most common strategy for teaching factual information about human sexuality in the United States medical schools (Wallick, 1992). Beegle and Coffee (1991) found that accounting educators predominately use lecture and problem solving in teaching accounting. This finding reaffirms the idea that teachers often teach the way they were taught. However, the results of this study did indicate the use of a wider variety of techniques than in the past. Baker and Paulson (1991) found that lecture and case analysis are the primary methods used to teach organizational theory through the Academies of Management. Shore (1990) found that in higher education the most common form of instruction was lecture.
**Mass Instruction**

According to Houston (1990), mass instruction involves large scale activities aimed at disseminating information or to influence the opinion of the general public (p. 156).

**Memorization**

Memorization is the act or an instance of memorizing (Gove, 1981, p. 1409).

**Multimedia Instruction**

Houston (1990) states that multimedia instruction is the integration of more than one medium in a presentation or module of instruction (p. 169). Multimedia instruction and the lecture method proved to be equally effective in the teaching of geriatric pharmacy course content (Miller & Jackson, 1985).

**Multisensory Learning**

Houston (1990) defined multisensory learning as learning that involves the processing of stimuli through two or more senses (p. 169). Nichols (1990) conducted a study which involved presenting 160 individuals, of varying ages, with natural history facts on a nature trail through tactual and/or visual means. After the nature trail experience, the individuals in the study were tested to determine how much information they had retained when provided with tactual, visual, or tactual and visual stimuli. Nichols (1990) found that each of the approaches (tactual, visual, or tactual and visual) proved to be equal in the majority of cases.
**Peer Teaching**

Peer teaching involves peer tutoring and cooperative learning (Houston, 1990, p. 168). King (1991) found that preservice teachers' comprehension and retention was improved when self-questioning and reciprocal peer-questioning was used in the learning of orally presented information. According to Jenkins and Jenkins (1987), peer tutoring is an exceptionally cost effective method which yields significant gains in achievement.

**Precision Teaching**

Houston (1990) states that precision teaching is a teaching method, based on behavior modification, that uses daily measurement and charting procedures as reinforcement for learning (p. 198).

**Problem Solving**

Problem solving, as defined by McNeil (1985), involves learning that combines two or more principles to produce a solution and in the process acquires the capability to deal with future similar problems with greater facility (p. 54).

**Programmed Instruction**

According to Houston (1990), programmed instruction is instruction in which learners progress at their own rate using workbooks, textbooks, or electromechanical devices that provide information in discrete steps, test learning at each step, and provide immediate feedback about achievement (p. 204). Programmed instruction was found to be a highly
effective method of instruction when based on relevant research in preparing introductory psychology students for a quiz (Fernald & Jordan, 1991).

**Questioning Techniques**

Questioning techniques are methods used for constructing and presenting questions in order to promote effective discussions and learning or to elicit information (Houston, 1990, p. 210).

**Simulation**

Houston (1990) defined simulation as the duplication of the essential characteristics of a task or situation (p. 239). A semester-long graduate exercise was developed by Crosbie-Burnett and Eisen (1992) in which master's students were divided into simulated families whereby the participants would experience divorce and remarriage. This simulation resulted in successfully sensitizing students to the challenges faced by postdivorce families.

**Small Group Instruction**

Page and Page (1987) found that small group instruction was used significantly more by associate professors than by assistant professors (p. 11). Glidden and Kurfiss (1990) found that small group instruction was at least as effective as lecture when used in a philosophy course, and in some cases small group instruction proved to be more effective than lecture.
Teaching Machines

Houston (1990) defined teaching machines as devices that mechanically, electrically and/or electronically present instructional programs at a rate controlled by the learners' responses (p. 264).

Thematic Approach

According to Houston (1990), the thematic approach is a teaching approach that organizes subject matter around unifying themes (p. 270). Kovalik (1986) suggests the following factors for implementing the thematic approach: create a trusting learning environment free of threat; nurture students; allow students to choose from a variety of activities that they deem meaningful; allow time for understanding; provide experiences that simulate real-life situations.

Modeling

The most extensive system of thought on modeling as a concept of teaching (social learning) was developed by Bandura (1963). Bandura (1963) acknowledged reinforcement theories of conditioning, such as Skinner's, was able to account for the control of previously learned matching responses, but unable to account for the way new response patterns are acquired through observation and imitation.

In teaching by modeling, the teacher behaves in ways that he wants the learner to imitate. The teacher's basic technique is role modeling. Bandura and Walters (1963) identified three kinds of effects from exposing the learner to a model: (1) a modeling effect, whereby the learner acquires new kinds of response
patterns; (2) an inhibitory or disinhibitory effect, whereby the learner decreases or increases the frequencies, latency or intensity of previously acquired responses; and (3) an eliciting effect, whereby the learner merely receives from the model a cue for releasing a response that is neither new nor inhibited.

For example, the modeling effect occurs when the teacher shows learners how to listen empathetically to one another by himself listening empathetically to them. The inhibiting or disinhibiting effect occurs when the teacher lets the learners know, through modeling, that it is or is not approved behavior to express their feelings openly, and thus inhibits or disinhibits an old response. The eliciting effect occurs when, through modeling, the teacher teaches the art of giving and receiving feedback by inviting the learners to criticize his own performance helpfully, thus providing a cue eliciting a response neither new nor inhibited (p. 195).

Bandura and Walters (1963) further state that one's effectiveness as a model will be influenced by such characteristics as age, sex, socio-economic status, social power, ethnic background, and intellectual and vocational status (p. 195).

Several research studies have indicated the importance of modeling as in the study conducted by Smith (1990) which found that teaching metacognitive thinking skills to college students with poor reading skills was ineffective without modeling. Volet (1991) found that modeling and coaching of college students using metacognitive strategies in a 13-week computer science course had significant long-term and short-term effects on cognitive and affective learning outcomes. After interviews and observations with student teachers, Lasley (1991) discovered that preservice teachers had little exposure to a wide range of teaching methods. He concluded
that more intense modeling and practice regimens are needed to ensure acquisition of unfamiliar teaching methods (p. 6).

**Teacher/Student Roles**

Dewey (1938) stated the following:

The educator is responsible for a knowledge of individuals and for a knowledge of subject-matter that will enable activities to be selected which lend themselves to social organization, an organization in which all individuals have an opportunity to contribute something, and in which the activities in which all participate are the chief carrier of control...The principle that development of experience comes about through interaction means that education is essentially a social process...the teacher loses the position of external boss or dictator but takes on that of leader of group activities (p. 61).

It is possible of course to abuse the office, and to force the activity of the young into channels which express the teacher's purpose rather than that of the pupils. But the way to avoid this danger is not for the adult to withdraw entirely. The way is, first, for the teacher to be intelligently aware of the capacities, needs, and past experiences of those under instruction, and, secondly, to allow the suggestion made to develop into a plan and project by means of the further suggestions contributed and organized into a whole by the members of the group. The plan, in other words, is a cooperative enterprise, not a dictation (p. 85).

Dewey's idea of the teacher's role as a leader of group activities carried over into Rogers' beliefs with amazing similarity. Rogers (1969) defines the role of the teacher as that of a facilitator of learning. He suggested that the personal relationship between the teacher (facilitator) and student (learner) was a crucial element in the learning process. Rogers (1969) identified three attitudinal qualities that must be present in the facilitator for the
relationship to be successful: (1) realness or genuineness, (2) nonpossessive caring, prizing, trust, and respect, and (3) empathetic understanding and sensitive and accurate listening (p. 106).

The facilitator is primarily responsible for determining the climate of the learning experience, establishing purpose, organizing and making accessible a wide variety of learning resources, remaining flexible, acknowledging and responding to both intellectual and emotional attitudes, and once the group climate is established the facilitator gradually becomes part of the group by sharing his own views as an individual. However, the facilitator must always remain acutely aware of his own limitations and the influence he has on the learner (Rogers, 1969, pp. 164-166).

Thorndike saw teaching essentially as the control of learning by the management of reward. The teacher and learner must know the characteristics of a good performance in order that practice may be appropriately arranged. Errors must be diagnosed so that they will not be repeated. The teacher is not primarily concerned with the internal states of the organism, but instead with structuring the situation so that rewards will operate to strengthen desired responses (Knowles, 1984, p. 67).

Gage (1972) believed that the learning theory subscribed to by a teacher would influence his theory of teaching. He
advocated the necessity of recognizing the various theories of teaching and learning in the following statements:

Teaching becomes the process of providing for the learner what a given learning theory regards as essential. For the conditioning theorists, the teacher must provide cues for a given response and reinforcement of that response. For the modeling theorists, the teacher must provide a model to be observed and imitated. For the cognitive theorist, the teacher must provide a cognitive structure or the stimuli that will produce one (Gage, 1972, p. 19).

Gagne (1965) specified eight functions of the instructional situation that must be managed by the teacher: presenting the stimulus; directing attention and other learner activities; providing a model for terminal performance; furnishing external prompts; guiding the direction of thinking; inducing transfer of knowledge; assessing learning attainments; providing feedback (p. 268).

These functions, then, represent the ways in which the learner's environment acts on him. These are external conditions of learning that, when combined with certain prerequisite capabilities within the learner, bring about the desired change in his performance (p. 271).

Skinner (1968) stated the following:

In college and graduate schools the aversive pattern survives in the now almost universal system of "assign and test." The teacher does not teach, he simply holds the student responsible for learning. The student must read books, study tests, perform experiments, and attend lectures, and he is responsible for doing so in the sense that, if he does not correctly report what he has seen, heard, or read, he will suffer aversive consequences....A test which proves to be too easy is made harder before being given again, ostensibly because an easy test does not discriminate, but more probably because the teacher is afraid of weakening the
threat under which his students are working. A teacher is judged by his employers and colleagues by the severity of the threat he imposes: he is a good teacher if he makes his students work hard, regardless of how he does so or of how much he teaches them by doing so (p. 99).

The human organism does, of course, learn without being taught. It is a good thing that this is so, and it would no doubt be a good thing if more could be learned in that way...But discovery is no solution to the problems of education. A culture is no stronger than its capacity to transmit itself. It must impart an accumulation of skills, knowledge, and social and ethical practices to its new members. The institution of education is designed to serve this purpose...It is dangerous to suggest to the student that it is beneath his dignity to learn what others already know, that there is something ignoble (and even destructive of "rational powers") in memorizing facts, codes, formulae, or passages from literary works, and that to be admired he must think in original ways. It is equally dangerous to forego teaching important facts and principles in order to give the student a chance to discover them for himself (p. 110).

White (1989) acknowledged changes in society and how these changes effect teaching and learning. He stated that:

Teachers should no longer be perceived as the cognitive stuffers of information and skills. Teachers should no longer be held accountable as the only teaching agent in student's learning and whose pedagogy is the delivery of reinforcement to "correct" behavior. Students must be self motivated and self regulating if quality instruction is to take place (p. 6).

The teacher/student roles are not always clear in education. However, the role of the teacher in vocational education is to include being a facilitator of learning and not simply a dictator of facts. As stated by Marshall (1990), if students don't learn the way we teach them, then we need to teach them the way they learn. This should be the
case even if it requires changes in methodology and traditional roles played by the vocational teacher.
METHODOLOGY

This exploratory study will identify and identify the relationship of methodological content and teaching delivery used by selected university vocational teacher education faculty in the United States baccalaureate degree programs. This chapter presents information regarding the methodology used in conducting this study. Topics specifically addressed include: population and sample, instrumentation, data collection, and data analysis.

Population and Sample

Population

The population for this study was defined as: (1) full-time vocational teacher education faculty in programs at Research I, Research II, and Doctorate Granting Colleges and Universities I (Carnegie Foundation for the Advancement of Teaching, 1987); (2) where comprehensive vocational education programs are offered (Peterson's Guides, 1992). Thirty-nine institutions across the United States have comprehensive vocational education programs in Research I, Research II, or Doctorate Granting Colleges and Universities I. Oregon State University and the University of Maryland-College Park are not included in the 39 institutions which meet the population parameters for this study. Upon contacting the UCVE coordinator regarding the membership status of these institutions for 1992-93, the researcher decided to eliminate these institutions to prevent frame errors because of
questionable UCVE membership status. The University of Pittsburgh was also eliminated to prevent frame errors. The administrative leader from the University of Pittsburgh notified the researcher that there was no longer a comprehensive vocational education program at the institution.

Sample

A stratified-random cluster sample by AVA region was drawn with two UCVE institutions (n=10) and two NON-UCVE institutions (n=10) within each region. The sample was drawn from the 39 institutions meeting the population parameters for this study. The rationale for drawing the sample from AVA regions was to ensure a balanced, geographical representation of the United States. The rationale for choosing a minimum of two UCVE institutions and two NON-UCVE institutions in each AVA region was based upon the fact that each region has at least two UCVE and two NON-UCVE institutions. A list of states within each AVA region is in Appendix A. A list of UCVE and NON-UCVE institutions included in this study is in Appendix B.

On January 22, 1993 a list including the name, address, and phone number of all full-time faculty whose responsibility includes teaching methods courses was requested from the vocational education administrative leader of each institution in the sample. Fourteen of the institutions responded to the first request. The same letter
was mailed to all nonrespondents on February 6, 1993. Four institutions provided the requested list after the second mailing. A third request was mailed on February 27, 1993 to the remaining two nonrespondents. The final two lists were received by March 21, 1993. Appendix C contains a copy of the letter and form used to obtain the name, address, and phone number of vocational teacher education faculty (who teach methods courses). This was deemed the most accurate method to determine the actual vocational teacher education faculty (who teach methods courses) to be surveyed at each institution in the sample. The final sample drawn consisted of 83 vocational teacher educators.

**Summary of Population and Sample**

The actual sampling plan utilized in the study included the following steps:

1. Identified the qualified institutions. These were defined as Research I, Research II, and Doctorate Granting Colleges and Universities I, which also had a comprehensive vocational education program.

2. Stratified the population frame by UCVE membership and AVA region.

3. Drew a random sample of two institutions from each region for each level of UCVE membership. This yielded two UCVE and two NON-UCVE institutions within each region.
4. Surveyed the unit heads of the 20 selected institutions to identify vocational education methods course teachers in each institution.

5. Drew a 100 percent sample of the identified vocational education methods teachers in the 20 randomly selected institutions. Appendix B contains the number of vocational teacher educators, who teach methods courses, at each UCVE and NON-UCVE institutions included in this study as identified by the vocational education administrative leader at each institution.

Instrumentation

A three-part (demographics: institution; demographics: vocational teacher educator; content and delivery) mail survey questionnaire was used to obtain data for this study (see Appendix D). The instrument's format and foundational structure was based on an instrument used in a study conducted by Baade (1990). Baade's instrument format was used by permission (see Appendix E). The instrument used in Baade's (1990) study took approximately four months to develop and pilot. Her pilot study contained six respondents. She conducted personal interviews with the six pilot respondents and alterations were made on the original instrument to reflect their recommendations. The first part of Baade's (1990) questionnaire was designed to obtain information regarding the gender, professional rank, and
educational background of the respondents. She also requested information about years of experience as a social studies instructor and the approximate number of students they had in their social studies methods classes each year (p. 44). The second part of her instrument provided directions for completing the survey in which she included clearly defined response alternatives including: unaware, none, inform, instruct, and model. Part three of Baade's (1990) survey listed reading- and writing-to-learn strategies to which individuals were asked to respond. She provided a brief description of each strategy in order to formulate a more common base for interpretation (p. 45). The final section of her questionnaire requested the respondents indicate any other reading- or writing-to-learn strategies with which they were familiar.

The questionnaire utilized in this study was based on the instrument developed by Baade (1990). It was modified to meet the needs of this particular study based on the literature review and the objectives of the study. The questionnaire was printed on 11" x 17" white paper with an 8 1/2" x 11" insert containing descriptions of teaching strategies.

**Demographics: Institution**

The first part of the questionnaire titled, Demographics: Institution, consisted of nine questions designed to provide an institutional foundation for this
study. This section of questions provided a frame of reference for where the information was obtained. Questions relate to the college and administrative location of the vocational program, size of enrollment (general and methods course), number of graduates for a specific academic year, curricula, methods course requirements, and degrees offered through the school, department, or division where vocational education was housed.

**Demographics: Vocational Teacher Educator**

The second part of the questionnaire titled, Demographics: Vocational Teacher Educator, consisted of ten questions pertaining to the vocational teacher educator. These questions provided a frame of reference about the individuals who completed the survey. Questions relate to age, gender, race, academic credentials, number of years experience as a vocational teacher educator and number of years experience in secondary education, professional rank, memberships in professional organizations, and frequency of attendance at national and state professional meetings.

**Content and Delivery**

The third part of the questionnaire titled, Content and Delivery, consisted of a list of 33 terms that were taken from the ERIC Thesaurus under the topic of "teaching methods." The researcher determined that these terms would be most familiar to vocational teacher educators.
Definitions of these terms were included with the questionnaire when mailed to the sample.

The questionnaire was reviewed for content validity by a panel of experts. The experts consisted of vocational teacher educators and vocational teachers from the various program areas within vocational education who were not included in the study.

**Data Collection**

In order to collect the data, a cover letter (see Appendix D), questionnaire (numerically coded for follow-up purposes), and stamped, return envelope was sent to each vocational teacher educator (who teaches methods courses) in the sample in May 1993. The letter contained an assurance of confidentiality.

Approximately two weeks after the initial mailing, nonrespondents were sent a card to encourage their participation (Dillman, 1978). About four weeks after the initial mailing, a second request for participation, an additional questionnaire, and another stamped, return envelope was sent to the remaining nonrespondents. Since the response rate was below 90 percent, a planned, follow-up by telephone survey was conducted of 25 percent or 20 individuals, of the nonrespondents to determine if nonrespondents were different from respondents. Three attempts were made to contact each nonrespondent. The researcher was able to contact only three of the
nonrespondents by telephone. Of the three nonrespondents contacted, one was no longer a vocational teacher educator and the remaining two nonrespondents did not return the completed questionnaire as promised. Therefore, the telephone follow-up yielded no usable data.

Data Analysis

The alpha level was set at .05 a priori. Procedures for statistical analysis are discussed by objective.

Objective one was to describe the vocational teacher education programs at UCVE institutions and other selected NON-UCVE higher education institutions on selected demographic characteristics. The characteristics included: higher education institution classification, American Vocational Association (AVA) region, college, school and/or department where the program is located, enrollment size (small=50 or less and large=more than 50), number of graduates, curricula offered, number of teaching methods courses required (credit hours each), and the degrees offered through the school and/or department where the vocational teacher education program is located.

Variables measured on a categorical scale of measurement (nominal and ordinal scales of measurement) were summarized using frequencies and percentages. The variables measured on a nominal scale were higher education institution classification, American Vocational Association region, college, school, and/or department where the program is
located, and curricula offered. The variables measured on an ordinal scale were enrollment size (total undergraduate and teaching methods course enrollment), number of graduates, number of teaching methods courses required (credit hours each), and the degrees offered through the school and/or department where the vocational teacher education program is located.

Objective two was to describe the vocational teacher educators at UCVE institutions and other selected NON-UCVE higher education institutions on selected personal and professional characteristics. The characteristics included: age, gender, race, academic credentials, number of years experience as a vocational teacher educator, number of years experience in secondary teaching, professional rank, membership in professional organizations, and frequency of attendance at national and state professional meetings.

Variables measured on a categorical scale of measurement (nominal and ordinal scales of measurement) were summarized using frequencies and percentages. The variables measured on a nominal scale were gender, race, and membership in professional organizations. The variables measured on an ordinal scale were age, academic credentials, and professional rank. The variables measured on a continuous scale of measurement (interval scale of measurement) were summarized using means and standard deviations. The variables measured on an interval scale were number of years
experience as a vocational teacher educator, number of years experience in secondary teaching, and frequency of attendance at national and state professional meetings.

Objective three was to describe the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses at UCVE institutions and other selected NON-UCVE higher education institutions. These variables were measured on a nominal scale and summarized with frequencies and percentages.

Objective four was to identify the relationship of the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher. Kendall's correlation coefficients were calculated to determine the degree of association between the top ten delivery methods modeled and the selected demographic characteristics. Kendall's method was used because of the adjustment made for tied ranks.

Objective five was to describe the teaching delivery techniques most frequently taught in methods courses by UCVE institutions' and other selected NON-UCVE higher education institutions' vocational teacher education faculty. These
variables were measured on a nominal scale and summarized with frequencies and percentages.

Objective six was to identify the relationship of the teaching delivery techniques most frequently taught by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher. Scores on the content and delivery portion of the questionnaire were recoded to reflect taught versus nontaught teaching delivery techniques. Kendall's Tau correlation coefficients were calculated to determine the degree of association between the top ten delivery techniques taught and the selected demographic characteristics. Kendall's Tau was used because of the adjustment made for tied ranks.
FINDINGS OF THE STUDY

The eighty-three vocational teacher educators included in the sample for this study were mailed questionnaires. Sixty-three responses were received. Eight of the responses were frame errors caused by incorrect or insufficient information provided to the researcher. Therefore, the drawn sample was reduced to 75 with 55 usable responses for a response rate of 73.3%. These responses represent vocational teacher education faculty from both UCVE (n=37, 67.3%) and NON-UCVE (n=18, 32.7%) institutions.

This chapter is organized and presented according to the objectives of this study.

Objective 1

The first objective of the study was to describe the vocational teacher education programs at UCVE institutions and NON-UCVE higher education institutions on selected demographic characteristics. The characteristics included: higher education institution classification, American Vocational Association (AVA) region, college, school and/or department where the program was located, enrollment size (small=50 or less and large=more than 50), number of graduates, curricula offered, number of teaching methods courses required (credit hours each), and the degrees offered through the school and/or department where the vocational teacher education program is located.
Institutional Demographic Characteristics

Higher Education Institution Classification

The higher education institution classification of the respondents' respective universities are presented in Table 1. Twenty-four (43.6%) of the respondents were from seven Research I institutions, 22 (40.0%) of the respondents were from seven Research II institutions, and there were nine (16.4%) respondents from four Doctorate Granting I institutions. In addition, the number of different institutions represented by responses received from vocational teacher educators are presented in Table 1.

AVA Region

All five AVA regions were sampled and are represented by the respondents. The highest number of respondents were from AVA Region III (n=14, 25.5%). The lowest number of responses came from AVA Region I (n=8, 14.5%) and AVA Region IV (n=8, 14.5%). Twelve of the 37 UCVE respondents were from AVA Region III. Only one (5.6%) NON-UCVE respondent was from AVA Region I, while one-third (n=6, 33.3%) of the NON-UCVE respondents were from AVA Region V (see Table 2).

College Location

Regarding the college within the university where the vocational teacher education program was located, almost two-thirds (63.6%, n=35) of the respondents indicated that the vocational teacher education program was located within the College of Education. Seven (12.7%) of the respondents
Table 1

Higher Education Classification and Vocational Teacher Educators within Institutions

<table>
<thead>
<tr>
<th>Classification</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Research I</td>
<td>24</td>
<td>43.6</td>
<td>24</td>
</tr>
<tr>
<td>Research II</td>
<td>22</td>
<td>40.0</td>
<td>10</td>
</tr>
<tr>
<td>Doctorate Granting I</td>
<td>9</td>
<td>16.4</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

Note. Seven Research I institutions, seven Research II institutions, and four Doctorate Granting I institutions are represented by the responses presented in this table.

Table 2

Representation of University Vocational Teacher Educators within Each American Vocational Association Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>I</td>
<td>8</td>
<td>14.5</td>
<td>7</td>
</tr>
<tr>
<td>II</td>
<td>12</td>
<td>21.8</td>
<td>7</td>
</tr>
<tr>
<td>III</td>
<td>14</td>
<td>25.5</td>
<td>12</td>
</tr>
<tr>
<td>IV</td>
<td>8</td>
<td>14.5</td>
<td>4</td>
</tr>
<tr>
<td>V</td>
<td>13</td>
<td>23.6</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

of the respondents indicated the College of Agriculture. All other colleges identified were reported by less than ten percent of the respondents (see Table 3). All four of the
respondents selecting "Other" indicated that there were vocational teacher education programs dispersed among various colleges within their particular university.

Table 3

College within the University Where the Vocational Teacher Education Program Was Located as Reported by Respondents

<table>
<thead>
<tr>
<th>College</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Education</td>
<td>35</td>
<td>63.6</td>
<td>23</td>
</tr>
<tr>
<td>Agriculture</td>
<td>7</td>
<td>12.7</td>
<td>5</td>
</tr>
<tr>
<td>Applied Human Science</td>
<td>4</td>
<td>7.3</td>
<td>3</td>
</tr>
<tr>
<td>Education &amp; Psychology</td>
<td>2</td>
<td>3.6</td>
<td>2</td>
</tr>
<tr>
<td>Home Economics</td>
<td>2</td>
<td>3.6</td>
<td>2</td>
</tr>
<tr>
<td>Teachers College</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>7.3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

Note. Respondents reporting "Other" stated that the vocational teacher education program at their institution was located in a combined college consisting of two or more of the above colleges.

Administrative Location

Forty-nine (89.1%) of the respondents indicated that the administrative location of the vocational teacher education program at their institution was in a Department. Of the 37 respondents that were from UCVE institutions, four (10.8%) reported the administration to be in a School as compared to one (5.6%) of the 18 NON-UCVE respondents from which responses were received. In addition, one (5.6%) NON-UCVE respondent reported the vocational teacher education program
to be located within a Division while none of the UCVE programs were in a Division (see Table 4). Vocational teacher educators were asked to identify the specific name of their school, department, or division, a list of responses is provided in Appendix H.

Table 4

Administrative Location of the Vocational Teacher Education Program

<table>
<thead>
<tr>
<th>Location</th>
<th>Overall n</th>
<th>Overall %</th>
<th>UCVE n</th>
<th>UCVE %</th>
<th>NON-UCVE n</th>
<th>NON-UCVE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>49</td>
<td>89.1</td>
<td>33</td>
<td>89.2</td>
<td>16</td>
<td>88.8</td>
</tr>
<tr>
<td>School</td>
<td>5</td>
<td>9.1</td>
<td>4</td>
<td>10.8</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Division</td>
<td>1</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
<td>100.0</td>
<td>18</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Program Enrollment

Almost half of the respondents (n=24, 45.3%) indicated that undergraduate enrollment in the vocational teacher education program during Summer/Fall 1992 and Spring 1993 was in the 50 or Less categories. Sixteen respondents (30.2%) indicated that enrollment was over 100. Of the sixteen respondents, 14 (40.0%) were from UCVE institutions and two (11.1%) were from NON-UCVE institutions (see Table 5).

Methods Course Enrollment

Thirty-six respondents (70.6%) reported that undergraduate enrollment in the vocational teacher education
Table 5

Undergraduate Enrollment in Vocational Teacher Education Program Summer/Fall 1992 and Spring 1993

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Overall n</th>
<th>Overall %</th>
<th>UCVE n</th>
<th>UCVE %</th>
<th>NON-UCVE n</th>
<th>NON-UCVE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or Less</td>
<td>8</td>
<td>15.1</td>
<td>3</td>
<td>8.6</td>
<td>5</td>
<td>27.8</td>
</tr>
<tr>
<td>26-50</td>
<td>16</td>
<td>30.2</td>
<td>7</td>
<td>20.0</td>
<td>9</td>
<td>50.0</td>
</tr>
<tr>
<td>51-75</td>
<td>7</td>
<td>13.3</td>
<td>6</td>
<td>17.1</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>76-100</td>
<td>6</td>
<td>11.3</td>
<td>5</td>
<td>14.3</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Over 100</td>
<td>16</td>
<td>30.2</td>
<td>14</td>
<td>40.0</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
<td>100.0</td>
<td>18</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Two vocational teacher educators did not respond to this item.

methods courses was in the 50 or Less categories. Overall, only six respondents (11.8%) indicated that their undergraduate enrollment in vocational teacher education methods courses exceeded 100 students for Summer/Fall 1992 and Spring 1993. Eighteen (54.5%) of the 33 UCVE respondents reported that the methods course enrollment was in the 50 or Less categories. Of the 33 respondents from UCVE institutions, six (18.2%) indicated methods courses enrollment to be over 100. Eighteen (100.0%) of the NON-UCVE respondents reported methods course enrollment to be less than 50 for Spring/Fall 1992 and Spring 1993 (see Table 6).

Graduates

Presented in Table 7 are the number of vocational teacher education program graduates during Summer/Fall 1992
and Spring 1993. Forty-three respondents (81.1%) indicated that there were 50 or less graduates during this time. Five respondents (9.4%) reported over 100 graduates from the vocational teacher education program during Summer/Fall 1992 and Spring 1993. Twenty-four (71.5%) of the 35 UCVE respondents indicated 50 or less graduates during the same period while five (14.3%) of the respondents from UCVE institutions reported over 100. Thirteen (72.2%) of the 18 NON-UCVE respondents indicated 25 or less graduates during Summer/Fall 1992 and Spring 1993.

Table 6

Undergraduate Students Enrolled in Vocational Teacher Education Methods Courses Summer/Fall 1992 and Spring 1993 (All Curricula)

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Overall</th>
<th></th>
<th>UCVE</th>
<th></th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>25 or Less</td>
<td>19</td>
<td>37.3</td>
<td>7</td>
<td>21.2</td>
<td>12</td>
</tr>
<tr>
<td>26-50</td>
<td>17</td>
<td>33.3</td>
<td>11</td>
<td>33.3</td>
<td>6</td>
</tr>
<tr>
<td>51-75</td>
<td>9</td>
<td>17.6</td>
<td>9</td>
<td>27.3</td>
<td>-</td>
</tr>
<tr>
<td>Over 100</td>
<td>6</td>
<td>11.8</td>
<td>6</td>
<td>18.2</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>100.0</td>
<td>33</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

Note. Four vocational teacher educators did not respond to this item.

Curricula Offered

Over 60 percent of the respondents indicated that their institution offered vocational education, home economics
Table 7
Vocational Teacher Education Program Graduates Summer/Fall 1992 and Spring 1993 (All Curricula)

<table>
<thead>
<tr>
<th>Graduates</th>
<th>Overall</th>
<th></th>
<th>UCVE</th>
<th></th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>25 or Less</td>
<td>28</td>
<td>52.8</td>
<td>15</td>
<td>42.9</td>
<td>13</td>
</tr>
<tr>
<td>26-50</td>
<td>15</td>
<td>28.3</td>
<td>10</td>
<td>28.6</td>
<td>5</td>
</tr>
<tr>
<td>51-75</td>
<td>5</td>
<td>9.4</td>
<td>5</td>
<td>14.3</td>
<td>-</td>
</tr>
<tr>
<td>Over 100</td>
<td>5</td>
<td>9.4</td>
<td>5</td>
<td>14.3</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

Note. Two vocational teacher educators did not respond to this item.

education, business education, and agricultural education curricula. In addition, over 50 percent of the respondents indicated that their institution offered adult education and marketing education curricula (see Table 8). Thirty (81.1%) of the respondents from UCVE institutions reported that their institution offered business education while almost 80 percent of the UCVE respondents indicated that their institution offered vocational education (n=29, 78.4%) and home economics education (n=29, 78.4%) programs. In addition, over 60 percent of the respondents from UCVE institutions indicated that their institution offered agricultural education (n=25, 67.6%), adult education (n=25, 67.6%), marketing education (n=23, 62.2%), and training and development (n=23, 62.2%). Eight (44.4%) of the NON-UCVE respondents reported that their institution offered
vocational education, home economics education, and agricultural education. In addition, one-third (n=6, 33.3%) of the NON-UCVE respondents indicated that their institution offered business education and adult education while only one (5.6%) of the NON-UCVE respondents reported industrial arts and extension education.

Table 8
Respondents Reporting Curricula That Were Offered in Their Vocational Teacher Education Program

<table>
<thead>
<tr>
<th>Curricula</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>61 Vocational Education</td>
<td>37 67.3</td>
<td>29 78.4</td>
<td>8 44.4</td>
</tr>
<tr>
<td>61 Home Economics Education</td>
<td>37 67.3</td>
<td>29 78.4</td>
<td>8 44.4</td>
</tr>
<tr>
<td>61 Business Education</td>
<td>36 65.5</td>
<td>30 81.1</td>
<td>6 33.3</td>
</tr>
<tr>
<td>61 Agricultural Education</td>
<td>33 60.0</td>
<td>25 67.6</td>
<td>8 44.4</td>
</tr>
<tr>
<td>61 Adult Education</td>
<td>31 56.4</td>
<td>25 67.6</td>
<td>8 44.4</td>
</tr>
<tr>
<td>61 Marketing Education</td>
<td>28 50.9</td>
<td>23 62.2</td>
<td>5 27.8</td>
</tr>
<tr>
<td>61 Technology Education</td>
<td>27 49.1</td>
<td>22 59.5</td>
<td>5 27.8</td>
</tr>
<tr>
<td>61 Training and Development</td>
<td>27 49.1</td>
<td>23 62.2</td>
<td>4 22.2</td>
</tr>
<tr>
<td>61 Industrial Arts Education</td>
<td>20 36.4</td>
<td>19 51.4</td>
<td>1 5.6</td>
</tr>
<tr>
<td>61 Extension Education</td>
<td>15 27.3</td>
<td>14 37.8</td>
<td>1 5.6</td>
</tr>
<tr>
<td>61 Other</td>
<td>13 23.6</td>
<td>9 24.3</td>
<td>4 22.2</td>
</tr>
</tbody>
</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.

Methods Course(s) and Semester Credit Hours Required

Presented in Tables 9 and 10 is information regarding the number of methods courses required and the number of
semester credit hours required, respectively, in the undergraduate vocational teacher education programs at institutions included in this study. Fifty-one (96.3%) of the respondents indicated that two or more methods courses were required. Fourteen (40.0%) of the 35 UCVE respondents reported that over three methods courses were required while only two (5.7%) UCVE respondents indicated the requirement of one methods courses. All eighteen (100.0%) respondents from NON-UCVE institutions indicated that two or more methods courses were required (see Table 9).

Table 9

Methods Courses Required in the Undergraduate Vocational Teacher Education Program

<table>
<thead>
<tr>
<th>Number of Courses</th>
<th>Overall</th>
<th></th>
<th>UCVE</th>
<th></th>
<th>NON-UCVE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3.8</td>
<td>2</td>
<td>5.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>41.5</td>
<td>14</td>
<td>40.0</td>
<td>8</td>
<td>44.4</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>20.8</td>
<td>5</td>
<td>14.3</td>
<td>6</td>
<td>33.3</td>
</tr>
<tr>
<td>Over 3</td>
<td>18</td>
<td>34.0</td>
<td>14</td>
<td>40.0</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
<td>100.0</td>
<td>18</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Two vocational teacher educators did not respond to this item.

Forty-six (86.8%) of the respondents reported that the semester credit hours in teaching methods courses was six hours or more (see Table 10). Thirty (85.7%) of the 35 UCVE respondents reported the requirement of six or more semester hours of teaching methods courses. Sixteen (88.9%) of the 18
Table 10

Semester Credit Hours Required in Teaching Methods Courses in the Undergraduate Vocational Teacher Education Program

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>5.7</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>5.7</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1.9</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>23</td>
<td>43.4</td>
<td>14</td>
</tr>
<tr>
<td>Over 6</td>
<td>23</td>
<td>43.4</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
</tr>
</tbody>
</table>

Note. Two vocational teacher educators did not respond to this item.

NON-UCVE respondents indicated a requirement of six or more semester hours of teaching methods courses.

Degrees Offered

Information on the degrees offered through the school, department, or division where the vocational teacher education program was located is presented in Table 11. The most frequently offered degree by institutions included in this study was the Baccalaureate degree with fifty-three (96.4%) respondents. The Masters degree was reported by 52 (94.5%) of the respondents and the Doctorate of Philosophy was indicated by 36 (65.5%) of the respondents. Thirty-five (94.6%) of the 37 UCVE respondents reported offering a Baccalaureate degree with the same number and percentage (n=35, 94.6%) also offering Masters degrees. Only one (5.6%)
Table 11

Degrees Offered Through the School, Department, or Division Where the Vocational Teacher Education Program is Located

<table>
<thead>
<tr>
<th>Degree</th>
<th>Overall n</th>
<th>UCVE n</th>
<th>NON-UCVE n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Associate</td>
<td>1</td>
<td>1.8</td>
<td>-</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>53</td>
<td>96.4</td>
<td>35</td>
</tr>
<tr>
<td>Masters</td>
<td>52</td>
<td>94.5</td>
<td>35</td>
</tr>
<tr>
<td>Education Specialist</td>
<td>22</td>
<td>40.0</td>
<td>15</td>
</tr>
<tr>
<td>Education Doctorate</td>
<td>28</td>
<td>50.9</td>
<td>20</td>
</tr>
<tr>
<td>Doctorate of Philosophy</td>
<td>36</td>
<td>65.5</td>
<td>28</td>
</tr>
</tbody>
</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.

a Total number of respondents reporting that each degree is offered through their school, department, or division (n=55).
b Total number of respondents reporting from UCVE institutions that each degree is offered through their school, department, or division (n=37).
c Total number of respondents reporting from NON-UCVE institutions that each degree is offered through their school, department, or division (n=18).

respondent from a NON-UCVE institution indicated offering an Associate degree. However, all eighteen (100%) of the respondents from NON-UCVE institutions indicated that their school, department, or division offered a Baccalaureate degree. Seventeen (94.4%) NON-UCVE respondents reported that a Masters degree was available.

Objective 2

The second objective of the study was to describe the vocational teacher educators at UCVE institutions and other NON-UCVE higher education institutions on selected personal and professional characteristics. The characteristics
included: age, gender, race, academic credentials, number of years experience as a vocational teacher educator and number of years experience in secondary education, professional rank, membership in professional organizations, and national and state professional meeting attendance.

Vocational Teacher Educator Demographic Characteristics

Age

Ages of the respondents, which are presented in Table 12, ranged from as low as 26 to over 65. The largest number of respondents were in the 36-45 age range (n=19, 35.8%). However, over 60 percent of the respondents were between the ages of 46 and 65 (n=32, 60.4%). Fourteen (40.0%) of the 35 respondents from UCVE institutions were between 36 and 45, while only nine (25.7%) of the UCVE respondents reported being in the 56-65 range. Of the 18 NON-UCVE respondents, seven (38.9%) indicated being in the 56-65 age range, while half of the NON-UCVE respondents fell between the ages of 36 and 55 (n=9, 50.0%). Only one (5.6%) NON-UCVE respondent reported being over the age of 65.

Gender

Of the vocational teacher educators participating in this study, 30 (55.6%) respondents were male and 24 (44.4%) respondents were female (see Table 13). Half (n=18) of the respondents from UCVE institutions were male and the other half (n=18) were female. Respondents from NON-UCVE
institutions were represented by twice as many males ($n=12$) as females ($n=6$).

Table 12

**Age of Respondents**

<table>
<thead>
<tr>
<th>Years of Age</th>
<th>Overall</th>
<th></th>
<th>UCVE</th>
<th></th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>26-35</td>
<td>1</td>
<td>1.9</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>36-45</td>
<td>19</td>
<td>35.8</td>
<td>14</td>
<td>40.0</td>
<td>5</td>
</tr>
<tr>
<td>46-55</td>
<td>16</td>
<td>30.2</td>
<td>13</td>
<td>34.3</td>
<td>4</td>
</tr>
<tr>
<td>56-65</td>
<td>16</td>
<td>30.2</td>
<td>9</td>
<td>25.7</td>
<td>7</td>
</tr>
<tr>
<td>Over 65</td>
<td>1</td>
<td>1.9</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

*Note.* Two vocational teacher educators did not respond to this item.

Table 13

**Gender of Respondents**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Overall</th>
<th></th>
<th>UCVE</th>
<th></th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Male</td>
<td>30</td>
<td>55.6</td>
<td>18</td>
<td>50.0</td>
<td>12</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td>44.4</td>
<td>18</td>
<td>50.0</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100.0</td>
<td>36</td>
<td>100.0</td>
<td>18</td>
</tr>
</tbody>
</table>

*Note.* One vocational teacher educator did not respond to this item.

**Race**

Almost 93 percent ($n=49$) of the respondents belonged to the caucasian ethnic group (see Table 14). Only four (7.6%)
of the respondents belong to an ethnic group other than caucasian. Two (11.1%) of the 18 respondents from NON-UCVE institutions were African American, however, none of the respondents from UCVE institutions were in this ethnic group.

Table 14

**Ethnic Group of Respondents**

<table>
<thead>
<tr>
<th>Race</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Caucasian</td>
<td>49</td>
<td>92.5</td>
<td>34</td>
</tr>
<tr>
<td>African American</td>
<td>2</td>
<td>3.8</td>
<td>-</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>1.9</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.9</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td>35</td>
</tr>
</tbody>
</table>

Note. Two vocational teacher educators did not respond to this item. The respondent who reported "Other" wrote in human as his race.

**Academic Credentials**

Presented in Table 15 is the educational level reported by the vocational teacher educators included in this study. Forty-seven (85.5%) of the 55 respondents held doctorate degrees. Four (10.8%) of the respondents from UCVE institutions and four (22.2%) from NON-UCVE institutions reported that the highest degree they held was a masters degree.

**Vocational Teacher Educator Experience**

Years experience as a vocational teacher educator for the respondents ranged from one to 39 years. The largest
Table 15

Educational Level of Respondents

<table>
<thead>
<tr>
<th>Highest Degree Earned</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Doctorate</td>
<td>47</td>
<td>85.5</td>
<td>33</td>
</tr>
<tr>
<td>Masters</td>
<td>8</td>
<td>14.5</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

number of respondents (n=17, 30.9%) indicated having 10 or less years as a vocational teacher educator. The next largest group of respondents (n=15, 27.3%) indicated 21 to 25 years experience as a vocational teacher educator (see Table 16). The average number of years experience as a vocational teacher educator was 17.2 (standard deviation=9.8). UCVE respondents' average number of years experience as a vocational teacher educator was 17.5 (standard deviation=9.4). NON-UCVE respondents' average number of years as a vocational teacher educator was 16.6 (standard deviation=10.8).

Secondary Education Experience

The number of years experience in secondary education for the respondents ranged from zero to 21 years. The average number of years experience in secondary education was 6.3 (standard deviation=4.8). Over half (n=34, 61.8%) of the respondents had five or less years experience in secondary education while over one-third (n=19, 34.6%) of the
respondents had between six and 15 years of experience teaching in secondary education (see Table 17). UCVE respondents' average number of years experience in secondary education was 5.9 (standard deviation=4.6). Only one (2.7%) of the 37 UCVE respondents had over 20 years experience in secondary education. Respondents from NON-UCVE institutions average number of years experience in secondary was 7.1 (standard deviation=5.1). Only one (5.6%) of the 18 NON-UCVE respondents had 16 to 20 years experience in secondary education.

Table 16

<table>
<thead>
<tr>
<th>Years Experience as a Vocational Teacher Educator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>10 or Less</td>
</tr>
<tr>
<td>11-15</td>
</tr>
<tr>
<td>16-20</td>
</tr>
<tr>
<td>21-25</td>
</tr>
<tr>
<td>26-30</td>
</tr>
<tr>
<td>31-35</td>
</tr>
<tr>
<td>Over 35</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Note. Average number of years experience as a vocational teacher educator: Overall=17.2 (standard deviation=9.8); UCVE=17.5 (standard deviation=9.4); NON-UCVE=16.6 (standard deviation=10.8).

Professional Rank

Regarding the professional rank of the respondents presented in Table 18, 26 (47.3%) of the 55 respondents
indicated the rank of Associate Professor. Only 11 (20.0%) of the respondents reported that they held the rank of Professor. Ten (27%) of the 37 respondents from UCVE institutions indicated the rank of Assistant Professor. About one-third (n=6, 33.3%) of the 18 respondents from NON-UCVE institutions held the rank of Professor while less than 14 percent (n=5) of the respondents from UCVE institutions held this same rank.

Table 17
Years Experience in Secondary Education

<table>
<thead>
<tr>
<th>Years</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>5 or Less</td>
<td>34</td>
<td>61.8</td>
<td>24</td>
</tr>
<tr>
<td>6-10</td>
<td>9</td>
<td>16.4</td>
<td>7</td>
</tr>
<tr>
<td>11-15</td>
<td>10</td>
<td>18.2</td>
<td>5</td>
</tr>
<tr>
<td>16-20</td>
<td>1</td>
<td>1.8</td>
<td>-</td>
</tr>
<tr>
<td>Over 20</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

Note: Average number of years experience in secondary education: Overall=6.3 (standard deviation=4.8); UCVE=5.9 (standard deviation=4.6); NON-UCVE=7.1 (standard deviation=5.1).

Professional Organization Membership

Fifty-one (92.7%) of the vocational teacher educators responding to this item indicated membership in AVA. The next largest group of respondents (n=44, 80.0%) indicated membership in at least one additional "Other" professional organization. While only about five percent (n=2) of the
respondents from UCVE institutions indicated membership in ASTD, almost 28 percent (n=5) of the respondents from NON-UCVE institutions reported membership in the same organization (see Table 19).

Table 18
Professional Rank of Respondents

<table>
<thead>
<tr>
<th>Rank</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Instructor</td>
<td>4</td>
<td>7.3</td>
<td>2</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>12</td>
<td>21.8</td>
<td>10</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>26</td>
<td>47.3</td>
<td>18</td>
</tr>
<tr>
<td>Professor</td>
<td>11</td>
<td>20.0</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3.6</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

Note. The two vocational teacher educators who responded "Other" both indicated Lecturer as their professional rank.

Professional Meeting Attendance

Information is presented in Tables 20 and 21 regarding the number of meetings attended by vocational teacher educators at national and state professional meetings, respectively. Forty-one (74.6%) of the 55 respondents reported that they attended national professional meetings one to two times each year. Only 11 (20.0%) indicated that they attended national professional meetings three or more times each year. On the average, respondents attended national professional meetings two times a year (mean=1.9,
Table 19

Professional Organization Membership of Respondents

<table>
<thead>
<tr>
<th>Organization</th>
<th>Overall n^a</th>
<th>%</th>
<th>UCVE n^b</th>
<th>%</th>
<th>NON-UCVE n^c</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVA</td>
<td>51</td>
<td>92.7</td>
<td>35</td>
<td>94.6</td>
<td>16</td>
<td>88.9</td>
</tr>
<tr>
<td>ASCD</td>
<td>14</td>
<td>25.5</td>
<td>8</td>
<td>21.6</td>
<td>6</td>
<td>33.3</td>
</tr>
<tr>
<td>ASTD</td>
<td>7</td>
<td>12.7</td>
<td>2</td>
<td>5.4</td>
<td>5</td>
<td>27.8</td>
</tr>
<tr>
<td>AACTE</td>
<td>9</td>
<td>16.4</td>
<td>6</td>
<td>16.2</td>
<td>3</td>
<td>16.7</td>
</tr>
<tr>
<td>Other</td>
<td>44</td>
<td>80.0</td>
<td>32</td>
<td>86.5</td>
<td>12</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.

^aTotal number of respondents reporting membership in each professional organization (n=55).
^bTotal number of UCVE respondents reporting membership in each professional organization (n=37).
^cTotal number of NON-UCVE respondents reporting membership in each professional organization (n=18).

AVA=American Vocational Association
ASCD=Association of Supervision and Curriculum Development
ASTD=American Society for Training and Development
AACTE=American Association of Collegiate Teacher Educators
Other=Responses reflected individual program foci.

standard deviation=1.5). Of the 37 UCVE respondents, two (5.4%) had not attended national professional meetings, while one (2.7%) respondent had attended over five national meetings. None of the respondents from NON-UCVE institutions attended more than three national professional meetings each year.

Twenty-eight (50.9%) of the 55 respondents indicated that they attended state professional meetings one to two times a year. Twenty-six of the respondents (47.3%) indicated that they attended state professional meetings
three or more times a year. On the average, respondents attended three state professional meetings a year (mean=3.0, standard deviation=2.1). Six (16.2%) of the 37 UCVE respondents reported that they attended over five state professional meetings each year, while only one respondent (5.6%) from a NON-UCVE institution reported the same.

Table 20

National Professional Meeting Attendance of Respondents

<table>
<thead>
<tr>
<th>Attendance Per Year</th>
<th>Overall</th>
<th>UCVE</th>
<th>NON-UCVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>5.5</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>21</td>
<td>38.2</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>36.4</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>12.7</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>5.5</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Over 5</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
</tr>
</tbody>
</table>

Note: Average number of national professional meetings attended by vocational teacher educators: Overall=1.9 (standard deviation=1.5); UCVE=2.03 (standard deviation=1.68); NON-UCVE=1.61 (standard deviation=.85).

Objective 3

The third objective of the study was to describe the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses at UCVE institutions and other selected NON-UCVE higher education institutions.
Table 21

State Professional Meeting Attendance of Respondents

<table>
<thead>
<tr>
<th>Attendance Per Year</th>
<th>Overall n</th>
<th>Overall %</th>
<th>UCVE n</th>
<th>UCVE %</th>
<th>NON-UCVE n</th>
<th>NON-UCVE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>20.0</td>
<td>6</td>
<td>16.2</td>
<td>5</td>
<td>27.8</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>30.9</td>
<td>13</td>
<td>35.1</td>
<td>4</td>
<td>22.2</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>18.2</td>
<td>6</td>
<td>16.2</td>
<td>4</td>
<td>22.2</td>
</tr>
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<td>4</td>
<td>6</td>
<td>10.9</td>
<td>5</td>
<td>13.5</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>5.5</td>
<td>1</td>
<td>2.7</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td>Over 5</td>
<td>7</td>
<td>12.7</td>
<td>6</td>
<td>16.2</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>37</td>
<td>100.0</td>
<td>18</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Average number of state professional meetings attended by vocational teacher educators: Overall=3.0 (standard deviation=2.1); UCVE=3.11 (standard deviation=1.97); NON-UCVE=2.72 (standard deviation=2.29).

Top Teaching Strategies Modeled by Vocational Teacher Educators

The top ten teaching strategies modeled by vocational teacher educators are identified in Table 22. Full disclosure of frequencies for all 33 teaching strategies modeled is included in Appendix I. Discussion was the most frequently identified modeled teaching strategy by the respondents. The four most frequently identified teaching strategies modeled (discussion, demonstration, questioning techniques, and problem solving) are the same for both UCVE respondents and NON-UCVE respondents. UCVE respondents included creative teaching in the top ten teaching strategies.
Table 22

Top Teaching Strategies Modeled by Vocational Teacher Educators Based on Frequency of Response

<table>
<thead>
<tr>
<th>Teaching Strategy</th>
<th>Overall Frequency Model</th>
<th>UCVE Frequency Model</th>
<th>NON-UCVE Frequency Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>n²</td>
<td>%</td>
</tr>
<tr>
<td>Discussion</td>
<td>1</td>
<td>49</td>
<td>89.1</td>
</tr>
<tr>
<td>Demonstration</td>
<td>2</td>
<td>45</td>
<td>81.8</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>3</td>
<td>42</td>
<td>76.4</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>4</td>
<td>40</td>
<td>72.7</td>
</tr>
<tr>
<td>Peer Teaching</td>
<td>5</td>
<td>33</td>
<td>62.3</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>6</td>
<td>32</td>
<td>59.3</td>
</tr>
<tr>
<td>Small Group Instruction</td>
<td>7</td>
<td>32</td>
<td>58.2</td>
</tr>
<tr>
<td>Lecture</td>
<td>8</td>
<td>31</td>
<td>57.4</td>
</tr>
<tr>
<td>Simulation</td>
<td>9</td>
<td>31</td>
<td>55.6</td>
</tr>
<tr>
<td>Multimedia Instruction</td>
<td>10</td>
<td>27</td>
<td>49.1</td>
</tr>
<tr>
<td>Creative Teaching</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Case Studies</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.

²Total number of respondents reporting top teaching strategies modeled (n=55).
³Total number of UCVE respondents reporting top teaching strategies modeled (n=37).
⁴Total number of NON-UCVE respondents reporting top teaching strategies modeled (n=18).
modeled. NON-UCVE respondents included creative teaching and case studies, however, did not include lecture.

**Objective 4**

The fourth objective of the study was to identify the relationship of the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses by categories of selected demographic characteristics including: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher. Kendall's correlation coefficient was used to determine the degree of association of the top ten delivery methods modeled with the selected demographic characteristics.

**Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Methods Course Enrollment**

Each method received a measurement on "modeled" for each respondent either modeled or not (yes=1, no=0). Also each respondent indicated a category of methods course enrollment, higher value=higher enrollment (example: 3=51-75 enrollment category), therefore, $T=-.50$ means that higher values on one variable tended to be associated with lower values on the other. The correlation between the discussion method being modeled and method course enrollment was $T=-.50$, this indicated that higher methods course enrollment categories tended to be those that did not model the discussion teaching
method. Likewise, the correlation between the demonstration method being modeled and method course enrollment was $T=-.47$, this indicated that higher methods course enrollment categories tended to be those that did not model the demonstration teaching method (see Table 23).

When the top ten teaching strategies modeled by vocational teacher educators were correlated with methods course enrollment, overall, there were no significant relationships found. However, when examining the strategies modeled by NON-UCVE vocational teacher educators, discussion was the most highly related strategy with methods course enrollment ($T=-.50, p=.04$). Using Davis' descriptors (1971) this correlation would be classified as a substantial negative relationship. Also for NON-UCVE vocational teacher educators, demonstration was found to have a moderate negative association (Davis, 1971) with methods course enrollment ($T=-.47, p=.05$).

Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Required Methods Course Hours

Each method received a measurement on "modeled" for each respondent either modeled or not (yes=1, no=0). Also each respondent indicated a category of required methods course hours, higher value=greater number of hours required (example: 4=5 semester credit hours), therefore, $T=.28$ means that higher values on one variable tended to be associated
Table 23

Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Methods
Course Enrollment

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Teaching</td>
<td>5</td>
<td>-.25</td>
<td>.06</td>
<td>7</td>
<td>-.25</td>
<td>.12</td>
<td>5</td>
<td>-.31</td>
<td>.23</td>
</tr>
<tr>
<td>Simulation</td>
<td>9</td>
<td>-.18</td>
<td>.17</td>
<td>9</td>
<td>-.16</td>
<td>.31</td>
<td>6</td>
<td>-.25</td>
<td>.32</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>4</td>
<td>-.11</td>
<td>.39</td>
<td>4</td>
<td>.29</td>
<td>.07</td>
<td>2</td>
<td>-.19</td>
<td>.44</td>
</tr>
<tr>
<td>Small Group Instruction</td>
<td>7</td>
<td>-.10</td>
<td>.46</td>
<td>6</td>
<td>-.30</td>
<td>.07</td>
<td>10</td>
<td>.08</td>
<td>.74</td>
</tr>
<tr>
<td>Multimedia Instruction</td>
<td>10</td>
<td>-.10</td>
<td>.46</td>
<td>10</td>
<td>-.15</td>
<td>.35</td>
<td>8</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>3</td>
<td>-.07</td>
<td>.93</td>
<td>3</td>
<td>.01</td>
<td>.97</td>
<td>2</td>
<td>-.19</td>
<td>.44</td>
</tr>
<tr>
<td>Lecture</td>
<td>8</td>
<td>.06</td>
<td>.65</td>
<td>5</td>
<td>.04</td>
<td>.83</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Discussion</td>
<td>1</td>
<td>-.03</td>
<td>.83</td>
<td>1</td>
<td>.14</td>
<td>.39</td>
<td>1</td>
<td>-.50</td>
<td>.04</td>
</tr>
<tr>
<td>Demonstration</td>
<td>2</td>
<td>.02</td>
<td>.85</td>
<td>2</td>
<td>.14</td>
<td>.39</td>
<td>2</td>
<td>-.47</td>
<td>.05</td>
</tr>
<tr>
<td>Brainstorming</td>
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<td>-.02</td>
<td>.86</td>
<td>8</td>
<td>.08</td>
<td>.65</td>
<td>7</td>
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<td>.19</td>
</tr>
<tr>
<td>Creative Teaching</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>.01</td>
<td>.97</td>
<td>9</td>
<td>-.09</td>
<td>.72</td>
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<tr>
<td>Case Studies</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-.16</td>
<td>.51</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
with higher values on the other. The correlation between the problem solving method being modeled and required methods course hours was $T = .28$, this indicated that the categories with the greater number of required methods course hours tended to be those that did model the problem solving teaching method. Likewise, when UCVE vocational teacher educators responses were examined, the correlation between the problem solving method being modeled and required methods course hours was $T = .48$, this indicated that the categories with the greater number of required methods course hours at UCVE institutions tended to be those that did model the problem solving teaching method.

Presented in Table 24 are the correlation coefficients used in measuring the association between the top ten teaching strategies modeled and the number of required methods course hours. Overall, the only significant relationship found was between problem solving and required methods course hours ($T = 28, \ p = .03$). According to Davis (1971), this would indicate a low association between the problem solving method and required methods course hours. However, when UCVE data was examined, a significant relationship between problem solving and required methods course hours was also found ($T = .48, \ p = .01$), which according to Davis (1971) would indicate a moderate association between the problem solving method and required methods course hours.
Table 24
Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Required Methods Course Hours

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>4</td>
<td>.28</td>
<td>.03</td>
<td>4</td>
<td>.48</td>
<td>.01</td>
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<td>-.16</td>
<td>.48</td>
</tr>
<tr>
<td>Lecture</td>
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<td>-.19</td>
<td>.15</td>
<td>5</td>
<td>-.31</td>
<td>.06</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Simulation</td>
<td>9</td>
<td>.16</td>
<td>.23</td>
<td>9</td>
<td>.33</td>
<td>.04</td>
<td>6</td>
<td>-.22</td>
<td>.36</td>
</tr>
<tr>
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<td>-.13</td>
<td>.34</td>
<td>1</td>
<td>.02</td>
<td>.92</td>
<td>1</td>
<td>-.40</td>
<td>.09</td>
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<td>Small Group Instruction</td>
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<td>.43</td>
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<td>-.01</td>
<td>.99</td>
<td>10</td>
<td>-.34</td>
<td>.14</td>
</tr>
<tr>
<td>Demonstration</td>
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<td>-.09</td>
<td>.50</td>
<td>2</td>
<td>-.03</td>
<td>.87</td>
<td>2</td>
<td>-.22</td>
<td>.35</td>
</tr>
<tr>
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<td>-.09</td>
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<td>10</td>
<td>-.01</td>
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<td>.05</td>
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<td>.14</td>
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<td>.04</td>
<td>.79</td>
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<td>.14</td>
<td>.40</td>
<td>7</td>
<td>-.16</td>
<td>.49</td>
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<td>.03</td>
<td>.85</td>
<td>2</td>
<td>-.16</td>
<td>.48</td>
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<tr>
<td>Creative Teaching</td>
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<td>-</td>
<td>-</td>
<td>10</td>
<td>.13</td>
<td>.42</td>
<td>9</td>
<td>.01</td>
<td>.96</td>
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<tr>
<td>Case Studies</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-.34</td>
<td>.14</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Highest Degree Awarded within Program

Each method received a measurement on "modeled" for each respondent either modeled or not (yes=1, no=0). Also each respondent indicated a category of highest degree awarded within the vocational teacher education program, higher value=higher degree (example: 6=Doctorate of Philosophy), therefore, $T=-.25$ means that higher values on one variable tended to be associated with lower values on the other. The correlation between the simulation method being modeled and highest degree awarded within the program was $T=-.25$, this indicated that the higher the degree awarded within the vocational teacher education program the less tended to be those that did not model the simulation teaching method. Likewise, when UCVE vocational teacher educators responses were examined, the correlation between the simulation method being modeled and the highest degree awarded within the program was $T=-.39$, this indicated that the higher the degree awarded within the vocational teacher education program at UCVE institutions tended to be those that did not model the simulation teaching method.

When the top ten teaching strategies were correlated with the highest degree awarded within the program (see Table 25), overall, the only significant relationship found was between the simulation method and highest degree awarded within the program ($T=-.25, p=.05$). According to Davis
Table 25

Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Highest Degree Awarded within Program

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulation</td>
<td>9</td>
<td>-.25</td>
<td>.05</td>
<td>9</td>
<td>-.39</td>
<td>.02</td>
<td>6</td>
<td>-.04</td>
<td>.88</td>
</tr>
<tr>
<td>Questioning Techniques</td>
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<td>-.21</td>
<td>.10</td>
<td>3</td>
<td>-.31</td>
<td>.06</td>
<td>2</td>
<td>-.12</td>
<td>.61</td>
</tr>
<tr>
<td>Lecture</td>
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<td>.18</td>
<td>.16</td>
<td>5</td>
<td>.24</td>
<td>.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Multimedia Instruction</td>
<td>10</td>
<td>-.17</td>
<td>.19</td>
<td>10</td>
<td>-.30</td>
<td>.06</td>
<td>8</td>
<td>-.01</td>
<td>.96</td>
</tr>
<tr>
<td>Peer Teaching</td>
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<td>-.16</td>
<td>.23</td>
<td>7</td>
<td>-.31</td>
<td>.06</td>
<td>5</td>
<td>.03</td>
<td>.91</td>
</tr>
<tr>
<td>Brainstorming</td>
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<td>.32</td>
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<td>-.06</td>
<td>.72</td>
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<td>-.31</td>
<td>.17</td>
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<tr>
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<td>.45</td>
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<td>.22</td>
<td>.17</td>
<td>1</td>
<td>-.15</td>
<td>.50</td>
</tr>
<tr>
<td>Problem Solving</td>
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<td>-.09</td>
<td>.48</td>
<td>4</td>
<td>-.08</td>
<td>.64</td>
<td>2</td>
<td>-.12</td>
<td>.61</td>
</tr>
<tr>
<td>Small Group Instruction</td>
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<td>-.05</td>
<td>.67</td>
<td>6</td>
<td>-.28</td>
<td>.08</td>
<td>10</td>
<td>.12</td>
<td>.60</td>
</tr>
<tr>
<td>Demonstration</td>
<td>2</td>
<td>-.01</td>
<td>.97</td>
<td>2</td>
<td>-.06</td>
<td>.72</td>
<td>2</td>
<td>-.03</td>
<td>.91</td>
</tr>
<tr>
<td>Creative Teaching</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-.03</td>
<td>.88</td>
<td>9</td>
<td>.30</td>
<td>.20</td>
</tr>
<tr>
<td>Case Studies</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>.24</td>
<td>.30</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
(1971), this would indicate a low negative association between the simulation method and the highest degree offered within the program. However, when UCVE data was examined, a significant relationship between the simulation method and the highest degree awarded within the program was also found \((T=-.39, p=.02)\), which according to Davis (1971) would indicate a moderate negative association between the simulation method and the highest degree awarded within the program.

**Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Highest Degree Held by Methods Teacher**

Each method received a measurement on "modeled" for each respondent either modeled or not (yes=1, no=0). Also each respondent indicated a category of highest degree held by the methods teacher, higher value=higher degree (example: 4=Doctorate), therefore, \(T=.27\) means that higher values on one variable tended to be associated with higher values on the other. The correlation between the lecture method being modeled and highest degree held by the methods teacher was \(T=.27\), this indicated that the higher the degree held by the methods teacher the more they tended to be those that modeled the lecture method. Likewise, when UCVE vocational teacher educators responses were examined, the correlation between the discussion method being modeled and the highest degree held by the methods teacher was \(T=-.44\), this indicated that the higher the degree held by the UCVE methods teacher tended
to be those that modeled the discussion teaching method. The correlation between the multimedia instruction being modeled and the highest degree held by the methods teacher was $T = .34$, this indicated that the higher the degree held by the UCVE methods teacher tended to be those that modeled multimedia instruction. Also, the correlation between the problem solving being modeled and the highest degree held by the methods teacher was $T = .34$, this indicated that the higher the degree held by the UCVE methods teacher tended to be those that modeled the problem solving strategy. When NON-UCVE vocational teacher educators responses were examined, the correlation between the simulation method being modeled and the highest degree held by the methods teacher was $T = .66$, this indicated that the higher the degree held by the NON-UCVE methods teacher tended to be those that modeled the simulation teaching method. Also, the correlation between brainstorming being modeled and the highest degree held by the methods teacher was $T = -.48$, which indicated that the higher the degree held by the NON-UCVE methods teacher tended to be those that modeled the brainstorming technique.

Presented in Table 26 are the correlation coefficients used in determining the association between the top ten teaching strategies modeled by vocational teacher educators with the highest degree held by the methods teacher. When the top ten teaching strategies were correlated with the
Table 26

Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Highest Degree held by the Methods Teacher

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>8</td>
<td>.27</td>
<td>.05</td>
<td>5</td>
<td>.13</td>
<td>.46</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Discussion</td>
<td>1</td>
<td>.19</td>
<td>.17</td>
<td>1</td>
<td>.44</td>
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<td>.44</td>
</tr>
<tr>
<td>Simulation</td>
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<td>.15</td>
<td>.27</td>
<td>9</td>
<td>-.15</td>
<td>.38</td>
<td>6</td>
<td>.66</td>
<td>.01</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>6</td>
<td>-.13</td>
<td>.33</td>
<td>8</td>
<td>.08</td>
<td>.63</td>
<td>7</td>
<td>-.48</td>
<td>.05</td>
</tr>
<tr>
<td>Questioning Techniques</td>
<td>3</td>
<td>.13</td>
<td>.32</td>
<td>3</td>
<td>.21</td>
<td>.21</td>
<td>2</td>
<td>.04</td>
<td>.88</td>
</tr>
<tr>
<td>Multimedia Instruction</td>
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<td>10</td>
<td>.21</td>
<td>.39</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
highest degree held by the methods teacher, overall, the only significant relationship found was between the lecture method and highest degree held by the methods teacher \((T=0.27, \ p=0.05)\). According to Davis (1971), this would indicate a low association between the lecture method and the highest degree held by the methods teacher. However, when UCVE data was examined, a significant relationship between the highest degree held by the methods teacher and each of the following strategies: discussion method \((T=0.44, \ p=0.01)\), multimedia instruction \((T=0.34, \ p=0.04)\), problem solving \((T=0.34, \ p=0.04)\). According to Davis (1971), this would indicate a moderate association between the highest degree held by the methods teacher and the discussion method, multimedia instruction, and problem solving, respectively. Significant relationships were also found when the NON-UCVE data was examined. The simulation method was found to be significant when correlated to the highest degree held by the methods teacher \((T=0.66, \ p=0.01)\), which according to Davis (1971) would indicate a substantial association. Brainstorming was also found to be significant when correlated with the highest degree held by the methods teacher(s) at NON-UCVE institutions \((T=-0.48, \ p=0.05)\). Davis’ (1971) descriptors for correlation coefficients indicated that a moderately negative relationship exists between brainstorming and the highest degree held by the methods teacher.
Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Professional Membership Status

Each method received a measurement on "modeled" for each respondent either modeled or not (yes=1, no=0). Also each respondent indicated membership in one or more professional organization(s), higher value=at least one membership (membership=1, no membership=0), therefore, $T=-.34$ means that higher values on one variable tended to be associated with lower values on the other. The correlation between the discussion method being modeled and membership in one or more professional organization(s) was $T=-.34$, this indicated that the UCVE vocational teacher educators that held membership in one or more professional organization(s) tended to be those that did not model the discussion teaching method. Likewise, the correlation between the lecture method being modeled and membership in one or more professional organization(s) was $T=-.32$, this indicated that the UCVE respondents that held membership in one or more professional organization(s) tended to be those that did not model the lecture teaching method.

When the top ten teaching strategies modeled by vocational teacher educators were compared with professional membership status of the methods teacher, overall, there were no significant relationships found. However, when examining the strategies modeled by UCVE vocational teacher educators, discussion ($T=-.34, p=.03$) and lecture ($T=-.32, p=.05$) methods were found to have a moderately negative relationship.
(Davis, 1971) to the professional membership status of the methods teacher (see Table 27).

**Objective 5**

The fifth objective of the study was to describe the teaching delivery techniques most frequently taught in methods courses by UCVE institutions' and other selected NON-UCVE higher education institutions' vocational teacher education faculty.

**Top Teaching Strategies Taught by Vocational Teacher Educators**

The most frequently identified teaching strategies taught by vocational teacher educators are identified in Table 28, full disclosure of frequencies for all 33 teaching strategies taught is included in Appendix J. Discussion was the most frequently identified teaching strategy taught by of the respondents. Demonstration and questioning techniques tied for the next most frequently taught techniques with 53 (96.4%) of the respondents. UCVE respondents (n=28, 75.7%) included multimedia instruction as one of the top teaching strategies taught. NON-UCVE respondents included multimedia instruction (n=14, 77.8%) and individualized instruction (n=14, 77.8%) as two of the top teaching strategies taught. Discussion, demonstration, and questioning techniques were taught by 18 (100.0%) of the NON-UCVE respondents. Lecture, multimedia instruction, and individualized instruction were taught by over 75 percent (n=14) of the NON-UCVE respondents.
Table 27

Relationship of Top Teaching Strategies Modeled by Vocational Teacher Educators with Professional Membership Status of the Methods Teacher

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
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<td>.23</td>
<td>.08</td>
<td>9</td>
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<td>.13</td>
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<td>.37</td>
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<td>Discussion</td>
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<td>.69</td>
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<td>.08</td>
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<td>.96</td>
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<td>.01</td>
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<td>.64</td>
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<tr>
<td>Brainstorming</td>
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<td>-.03</td>
<td>.80</td>
<td>8</td>
<td>-.25</td>
<td>.12</td>
<td>7</td>
<td>.34</td>
<td>.13</td>
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<tr>
<td>Problem Solving</td>
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<td>-.16</td>
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<td>.31</td>
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<td>-</td>
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</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
Table 28
Top Teaching Strategies Taught by Vocational Teacher Educators Based on Frequency of Response

<table>
<thead>
<tr>
<th>Teaching Strategy</th>
<th>Overall Frequency</th>
<th>UCVE Frequency</th>
<th>NON-UCVE Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>(n^a)</td>
<td>(%)</td>
</tr>
<tr>
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<td>55</td>
<td>100.0</td>
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<tr>
<td>Demonstration</td>
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<td>96.4</td>
</tr>
<tr>
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<td>2</td>
<td>53</td>
<td>96.4</td>
</tr>
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<td>Problem Solving</td>
<td>4</td>
<td>51</td>
<td>92.7</td>
</tr>
<tr>
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<td>50</td>
<td>90.9</td>
</tr>
<tr>
<td>Brainstorming</td>
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<td>47</td>
<td>87.0</td>
</tr>
<tr>
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<td>6</td>
<td>47</td>
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<td>46</td>
<td>86.8</td>
</tr>
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<td>46</td>
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<td>81.5</td>
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<tr>
<td>Multimedia Instruction</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Individualized Instruction</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.

\(a\) Total number of respondents reporting top teaching strategies taught (\(n=55\)).

\(b\) Total number of UCVE respondents reporting top teaching strategies taught (\(n=37\)).

\(c\) Total number of NON-UCVE respondents reporting top teaching strategies taught (\(n=18\)).
Objective 6

The sixth objective of the study was to identify the relationship of the teaching delivery techniques most frequently taught by vocational teacher education faculty in methods courses by categories of selected demographic characteristics including: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher. Kendall's correlation coefficient was used to determine the degree of association found when comparing the top ten teaching techniques taught with the selected demographic characteristics.

Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Methods Course Enrollment

When the top ten teaching strategies taught by vocational teacher educators were compared with methods course enrollment, overall, there were no significant relationships found (see Table 29).

Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Required Methods Course Hours

Each method received a measurement on "taught" for each respondent either taught or not (yes=1, no=0). Also each respondent indicated a category of required methods course hours, higher value=greater number of hours required (example: 4=5 semester credit hours), therefore, $T=0.39$ means that higher values on one variable tended to be
Table 29

Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Methods Course Enrollment

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.21</td>
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<td>4</td>
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<td>4</td>
<td>.17</td>
<td>.48</td>
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<tr>
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<td>-.27</td>
<td>.10</td>
<td>7</td>
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<td>.55</td>
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<td>.52</td>
<td>5</td>
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<td>.30</td>
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<td>-.20</td>
<td>.22</td>
<td>9</td>
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<td>.87</td>
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<td>.30</td>
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<td>.69</td>
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<td>8</td>
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<td>10</td>
<td>-.19</td>
<td>.44</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
associated with higher values on the other. Relevant to the UCVE teacher educators, the correlation between brainstorming being taught and required methods course hours was $T=.39$, this indicated that the categories with the greater number of required methods course hours tended to be those that taught the brainstorming technique. The correlation between the lecture method being taught and required methods course hours was $T=-.37$, this indicated that the categories with the greater number of required methods course hours at UCVE institutions tended to be those that did not teach the lecture method. When examining the NON-UCVE findings, the correlation between peer teaching and required methods course hours was $T=-.48$, this indicated that the categories with the greater number of methods course hours tended to be those that did not teach the peer teaching method.

Presented in Table 30 are the correlation coefficients used in measuring the association between the top ten teaching strategies taught and the number of required methods course hours. Overall, there were no significant relationships found. However, when UCVE data was examined, a significant relationship between brainstorming and required methods course hours was found ($T=.39$, $p=.02$), which according to Davis (1971) would indicate a moderate association between the brainstorming method and required methods course hours. Also, a significant
<table>
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<tr>
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<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
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<td>8</td>
<td>-.02</td>
<td>.95</td>
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<td>-.24</td>
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<td>.00</td>
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<td>.48</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
relationship was found between the lecture method and required methods course hours ($T=-.37$, $p=.03$), which according to Davis' (1971) descriptors of correlation coefficients, indicated a moderate negative association between the lecture method and required methods course hours.

**Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Highest Degree Awarded within the Program**

When the top ten teaching strategies taught were correlated with the highest degree awarded within the program (see Table 31), no significant relationship was found.

**Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with the Highest Degree Held by the Methods Teacher**

Each method received a measurement on "taught" for each respondent either taught or not (yes=1, no=0). Also each respondent indicated a category of highest degree held by the methods teacher, higher value=higher degree (example: 4=Doctorate), therefore, $T=.27$ means that higher values on one variable tended to be associated with higher values on the other. The correlation between the lecture method being taught and highest degree held by the methods teacher was $T=.27$, this indicated that the higher the degree held by the methods teacher the more they tended to be those that taught
### Table 31

**Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Highest Degree Awarded within Program**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall</th>
<th></th>
<th></th>
<th>UCVE</th>
<th></th>
<th></th>
<th>NON-UCVE</th>
<th></th>
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<tbody>
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<td>p</td>
<td>Rank</td>
<td>T</td>
<td>p</td>
<td>Rank</td>
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<td>-26</td>
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*Note.* Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
the lecture method. Likewise, when UCVE vocational teacher educators responses were examined, the correlation between the multimedia instruction being modeled and the highest degree held by the methods teacher was $T=.41$, this indicated that the higher the degree held by the UCVE methods teacher tended to be those that taught multimedia instruction methods.

Presented in Table 32 are the correlation coefficients used in determining the association between the top ten teaching strategies taught by vocational teacher educators with the highest degree held by the methods teacher.

When the top ten teaching strategies taught were correlated with the highest degree held by the methods teacher, overall, the only significant relationship found was between the lecture method and highest degree held by the methods teacher ($T=.27$, $p=.05$). According to Davis (1971), this would indicate a low association between the lecture method and the highest degree held by the methods teacher.

However, when UCVE data was examined, a significant relationship between multimedia instruction and the highest degree held by the methods teacher ($T=.41$, $p=.01$) appeared to exist. According to Davis (1971), this would indicate a moderate association between the highest degree held by the methods teacher and multimedia instruction.
Table 32

Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Highest Degree held by the Methods Teacher

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Overall Rank</th>
<th>Overall T</th>
<th>Overall P</th>
<th>UCVE Rank</th>
<th>UCVE T</th>
<th>UCVE P</th>
<th>NON-UCVE Rank</th>
<th>NON-UCVE T</th>
<th>NON-UCVE P</th>
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<td>-</td>
<td>10</td>
<td>.36</td>
<td>.14</td>
</tr>
</tbody>
</table>

Note. Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
Relationship of Top Teaching Strategies Taught by Vocational Teacher Educators with Professional Membership Status of Methods Teacher

Each method received a measurement on "taught" for each respondent either taught or not (yes=1, no=0). Also each respondent indicated membership in one or more professional organization(s), higher value=at least one membership (membership=1, no membership=0), therefore, $T=.29$ means that higher values on one variable tended to be associated with higher values on the other. The correlation between the case studies and professional membership status of the methods teacher was $T=.29$, this indicated that the vocational teacher educators that held membership in one or more professional organization(s) tended to be those that taught the case studies method. Also, the correlation between small group instruction and professional membership status of the methods teacher was $T=-.25$, this indicated that the vocational teacher educators that held membership in one or more professional organization(s) tended to be those that did not teach small group instruction. Relevant to UCVE respondents, the correlation between case studies being taught and professional membership status was $T=.34$, this indicated that the UCVE respondents that held membership in one or more professional organization(s) tended to be those that taught the case studies method. In addition, the correlation between the lecture method and professional
membership status of the methods teacher ($T=-.32, p=.05$) was found to be significant, which means that those vocational teacher educators that held membership in one or more professional organization(s) tended to be those that did not teach the lecture method. On the other hand, when examining the NON-UCVE data, a significant relationship was found between individualized instruction and the professional membership status of the methods teacher ($T=-.46, p=.04$), which means that those NON-UCVE respondents that held membership in one or more professional organization(s) tended to be those who did not teach individualized instruction.

When the top ten teaching strategies taught by vocational teacher educators were compared with professional membership status of the methods teacher, overall, there were two significant relationships found (see Table 33). One between case studies and the professional membership status of the methods teacher ($T=.29, p=.03$), and the other relationship found was between small group instruction and the professional membership status of the methods teacher ($T=-.25, p=.05$). Using Davis' (1971) descriptors for correlation coefficients, the relationship between case studies and professional membership status of methods teacher would be a low association. According to Davis (1971), there would be a low negative association between small group instruction and professional membership status of the methods teacher. Likewise, when examining the data from UCVE
<table>
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<tr>
<th>Strategy</th>
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<th>T</th>
<th>p</th>
<th>UCVE Rank</th>
<th>T</th>
<th>p</th>
<th>NON-UCVE Rank</th>
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<th>p</th>
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<td>-</td>
<td>-</td>
<td>10</td>
<td>-.46</td>
<td>.04</td>
</tr>
</tbody>
</table>

**Note.** Rank was based on the frequency of response. T represents Kendall's Tau correlation coefficient.
respondents, a significant relationship was found between case studies and professional membership status of the methods teacher ($T=0.34$, $p=0.02$), which according to Davis (1971), would be interpreted as a moderate association. There was also a significant relationship found between the lecture method and professional membership status of the methods teacher ($T=-0.32$, $p=0.05$), which would be interpreted as a moderate negative association by Davis (1971) (see Table 33). Upon examination of the NON-UCVE data, a moderately negative relationship (Davis, 1971) between individualized instruction and professional membership status of the methods teacher ($T=-0.46$, $p=0.04$) was found.
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Purpose

The purpose of this study was to identify of the methodological content and teaching delivery used by selected university vocational teacher education faculty in the United States baccalaureate degree programs. In order to accomplish the purpose of this exploratory study, specific objectives were formulated.

Objectives

The specific objectives of the study were to:

1. Describe the vocational teacher education programs at UCVE institutions and other selected NON-UCVE higher education institutions on selected demographic characteristics. The characteristics included: higher education institution classification, American Vocational Association (AVA) region, college, school and/or department where the program is located, enrollment size (small=50 or less and large=more than 50), number of graduates, curricula offered, number of teaching methods courses required (credit hours each), and the degrees offered through the school and/or department where the vocational teacher education program is located.

2. Describe the vocational teacher educators at UCVE institutions and other selected NON-UCVE higher education institutions on selected personal and professional
characteristics. The characteristics included: age, gender, race, academic credentials, number of years experience as a vocational teacher educator and number of years experience in secondary education, professional rank, membership in professional organizations, and attendance at national and state professional meetings.

3. Describe the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses at UCVE institutions and other selected NON-UCVE higher education institutions.

4. Identify the relationship of the methodological content delivery methods most frequently modeled by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher.

5. Describe the teaching delivery techniques most frequently taught in methods courses by UCVE institutions' and other selected NON-UCVE higher education institutions' vocational teacher education faculty.

6. Identify the relationship of the teaching delivery techniques most frequently taught by vocational teacher education faculty in methods courses by categories of selected demographic characteristics which included: methods
course enrollment; methods credit hours required; highest degree awarded within program; highest degree held by methods teacher; professional membership status of methods teacher.

Methodology

Population

The population for this study was defined as: (1) full-time vocational teacher education faculty in programs at Research I, Research II, and Doctorate Granting Colleges and Universities I (Carnegie Foundation for the Advancement of Teaching, 1987); (2) where comprehensive vocational education programs are offered (Peterson's Guides, 1992). Thirty-nine institutions across the United States have comprehensive vocational education programs in Research I, Research II, or Doctorate Granting Colleges and Universities I.

Sample

The actual sampling plan utilized in the study included the following steps:

1. Identified the qualified institutions. These were defined as Research I, Research II, and Doctorate Granting Colleges and Universities I, which also had a comprehensive vocational education program.

2. Stratified the population frame by UCVE membership and AVA region.

3. Drew a random sample of two institutions from each region for each level of UCVE membership. This yielded two UCVE and two NON-UCVE institutions within each region.
4. Surveyed the heads of the 20 selected institutions to identify vocational education methods course teachers in each institution.

5. Drew a 100 percent sample of the identified vocational education methods teachers in the 20 randomly selected institutions.

**Instrumentation**

A three-part (demographics: institution; demographics: vocational teacher educator; content and delivery) mail survey questionnaire was used to obtain data for this study. The questionnaire utilized in this study was based on the instrument developed by Baade (1990). It was modified to meet the needs of this particular study based on the literature review and the objectives of the study. The questionnaire was reviewed for content validity by a panel of experts. The experts consisted of vocational teacher educators and vocational teachers from the various program areas within vocational education who were not included in the study.

**Data Collection**

In order to collect the data, a cover letter, questionnaire, and stamped, return envelope was sent to each vocational teacher educator in the sample. Nonresponse follow-up procedure included a reminder postcard, a second questionnaire, and telephone survey. The total number of
vocational teacher educators responding to the questionnaire was 55 (73.3%).

**Data Analysis**

The alpha level was set at .05 a' priori. Frequencies, percentages, means, standard deviations, and correlation coefficients were used in the data analysis.

**Findings**

**Objective 1**

Relevant to institutional demographics:

1. The majority of responses were from UCVE, Research I institutions (n=24, 43%).

2. There were responses from all five AVA regions—AVA Region I (n=8, 14.5%), AVA Region II (n=12, 21.8%), AVA Region III (n=13, 25.5%), AVA Region IV (n=8, 14.5%), and AVA Region V (n=13, 23.6%).

3. The majority of the respondents indicated that their vocational teacher education programs were located in Departments (n=49, 89.1%) within Colleges of Education (n=35, 63.6%).

4. Almost half of the respondents (n=24, 45.3%) indicated undergraduate enrollment in the vocational teacher education program during Summer/Fall 1992 and Spring 1993 was 50 or less.

5. The majority (n=36, 70.6%) of the respondents reported that undergraduate enrollment in vocational teacher
education methods courses were 50 or less for Summer/Fall 1992 and Spring 1993.

6. The majority (n=43, 81.1%) of respondents indicated that there were 50 or less graduated during the Summer/Fall 1992 and Spring 1993.

7. The majority (n=51, 96.3%) of vocational teacher education programs require two or more methods courses which total six or more semester credit hours (n=46, 86.8%), according to respondents.

8. The majority of respondents reported that vocational education (n=37, 67.3%), home economics education (n=37, 67.3%), business education (n=36, 65.5%), agricultural education (n=33, 60.0%), and adult education (n=31, 56.4%) curricula were offered through their vocational teacher education programs.

9. The baccalaureate degree (n=53, 96.4%) and the masters degree (n=52, 94.5%) were the two most frequently offered degrees through the vocational teacher education programs included in this study.

Objective 2

Relevant to vocational teacher educator demographics:

1. The majority of the respondents were between the ages of 36 and 55 (n=35, 66.0%).

2. The majority (n=30, 55.6%) of the respondents were male.
3. The majority ($n=49, 92.5\%$) of respondents were caucasian.

4. The majority ($n=36, 85.5\%$) of vocational teacher educators hold earned doctorate degrees.

5. On the average, respondents have less than 20 years experience ($\text{mean}=17.2$) as vocational teacher educators.

6. On the average, respondents have less than seven years experience ($\text{mean}=6.3$) in secondary education.

7. The majority of respondents hold membership in two or more professional organizations.

8. The majority of respondents ($n=41, 74.6\%$) attend national professional meetings one to two times each year.

9. The majority of respondents ($n=28, 50.9\%$) attend state professional meetings one to two times each year.

**Objective 3**

Discussion, demonstration, questioning techniques, problem solving, peer teaching, brainstorming, small group instruction, lecture, simulation, multimedia instruction, creative teaching, and case studies are the most frequently modeled teaching strategies by vocational teacher educators.

**Objective 4**

Relationship of most frequently modeled teaching strategies with selected demographic characteristics:

1. A substantial negative correlation (Davis, 1971) existed between methods course enrollment and discussion ($T=-.50, \ p=.04$). At NON-UCVE institutions there was a
moderate negative correlation (Davis, 1971) between methods course enrollment and demonstration ($T= -.47, p=.05$).

2. A low correlation (Davis, 1971) existed between number of required methods course hours and the problem solving teaching method ($T= 28, p=.03$). UCVE institutions had a moderate correlation (Davis, 1971) between number of required methods course hours and the problem solving teaching method ($T= 48, p=.01$).

3. A low negative correlation (Davis, 1971) existed between the simulation method and the highest degree awarded within the program ($T= -.25, p=.05$). A moderate negative correlation (Davis, 1971) existed between the simulation method and highest degree awarded within the UCVE programs ($T= -.39, p=.02$).

4. A low correlation (Davis, 1971) existed between the lecture method and highest degree held by the methods teacher ($T= .27, p=.05$).

5. At UCVE institutions, a moderate correlation (Davis, 1971) existed between discussion method and highest degree held by the methods teacher ($T= .44, p=.01$); multimedia instruction and highest degree held by the methods teacher ($T= .34, p=.04$); and problem solving and highest degree held by the methods teacher ($T= .34, p=.04$).

6. At NON-UCVE institutions, a substantial correlation (Davis, 1971) existed between the simulation method and highest degree held by the methods teacher ($T= .66, p=.01$).
7. At NON-UCVE institutions, a moderate negative correlation (Davis, 1971) between brainstorming and highest degree held by the methods teacher ($T=-.48, p=.05$).

8. A moderate negative correlation (Davis, 1971) existed between the discussion method and professional membership status ($T=-.34, p=.03$) of vocational teacher educators at UCVE institutions. Also, a moderate negative correlation (Davis, 1971) existed between the lecture method and the professional membership status ($T=-.32, p=.05$) of vocational teacher educators at UCVE institutions.

**Objective 5**

Discussion, demonstration, questioning techniques, problem solving, small group instruction, brainstorming, simulation, peer teaching, lecture, and case studies are the most frequently taught teaching strategies by vocational teacher educators.

**Objective 6**

Relationship of most frequently taught teaching strategies with selected demographic characteristics:

1. At UCVE institutions, a moderate correlation (Davis, 1971) existed between brainstorming and required methods course hours ($T=.39, p=.02$).

2. At UCVE institutions, a moderate negative correlation (Davis, 1971) existed between the lecture method and required methods course hours ($T=-.37, p=.03$).
3. At NON-UCVE institutions, a moderate negative correlation (Davis, 1971) existed between peer teaching and required methods course hours ($T = -.48$, $p = .03$).

4. A low correlation (Davis, 1971) existed between the lecture method and highest degree held by the methods teacher ($T = .27$, $p = .05$).

5. A moderate correlation (Davis, 1971) existed between multimedia instruction and highest degree held by the methods teacher ($T = .41$, $p = .01$) at UCVE institutions.

6. A low correlation (Davis, 1971) existed between case studies and professional membership status of the methods teacher ($T = .29$, $p = .03$).

7. A low negative correlation (Davis, 1971) existed between small group instruction and the professional membership status of the methods teacher ($T = -.25$, $p = .05$).

8. A moderate correlation (Davis, 1971) existed between case studies and professional membership status of the methods teacher ($T = .34$, $p = .02$) at UCVE institutions.

9. A moderate negative correlation (Davis, 1971) existed between the lecture method and professional membership status of the methods teacher ($T = -.32$, $p = .05$).

10. A moderate negative correlation (Davis, 1971) existed between individualized instruction and professional membership status of the methods teacher ($T = -.46$, $p = .04$) at NON-UCVE institutions.
Conclusions and Recommendations

Based on the findings of this study, the following conclusions were drawn by the researcher.

Conclusions for Objective 1

1. Vocational teacher educators at UCVE Research I institutions tend to be more responsive to research on teaching methodology and strategies than other vocational teacher educators. This is based on the finding that the majority of the responses were from UCVE, Research I institutions (n=24, 43.6%).

2. Vocational teacher education programs in the United States are most often located in Departments and within Colleges of Education. This is based on the finding that the majority of the respondents indicated that their vocational teacher education programs were located in Departments (n=49, 89.1%) within Colleges of Education (n=35, 63.6%).

3. Vocational teacher education programs in the United States are generally small with similar methods course enrollment and number of graduates per year. This is based on the finding that almost half of the respondents (n=24, 45.3%) indicated undergraduate enrollment in the vocational teacher education program during Summer/Fall 1992 and Spring 1993 was 50 or less. The majority (n=36, 70.6%) of the respondents reported that undergraduate enrollment in vocational teacher education methods courses were 50 or less for Summer/Fall 1992 and Spring 1993. Also, the majority
(n=43, 81.1%) of respondents indicated that there were 50 or less graduates during the Summer/Fall 1992 and Spring 1993.

4. Vocational teacher education programs in the United States require at least one three credit hour methods course. This conclusion is based on the finding that almost all (n=51, 96.3%) of the respondents reported vocational teacher education program requirements of two or more methods courses or at least six semester credit hours in methodological content and delivery.

5. Institutions of higher education offer multiple vocational teacher education programs with specific curricula in: vocational education, home economics education, business education, agricultural education, and adult education. This is based on the finding that the majority of respondents reported that vocational education (n=37, 67.3%), home economics education (n=37, 67.3%) business education (n=36, 65.5%), agricultural education (n=33, 60.0%), and adult education (n=31, 56.4%) curricula were offered through vocational teacher education.

6. The institutions that have vocational teacher education programs offer more than one degree. This is based on the finding that the baccalaureate degree (n=53, 96.4%) and the masters degree (n=52, 94.5%) were the two most frequently offered degrees through vocational teacher education programs included in this study.
Conclusions for Objective 2

1. The typical vocational teacher educator is between the ages of 36 and 55, male, caucasian, and holds an earned doctorate. He has 17.2 years experience as a vocational teacher educator, 6.3 years experience in secondary education, and holds the rank of associate professor. This typical vocational educator is an AVA member, as well as, being a member of at least one other professional organization, attends national professional meetings twice a year, and state professional meetings three times a year. This conclusion is based on the finding that the majority of the respondents were between the ages of 36 and 55 (n=35, 66.0%); the majority (n=49, 92.5%) of respondents were caucasian; the majority (n=36, 85.5%) of vocational teacher educators hold earned doctorate degrees; on the average, respondents have less than 20 years experience (mean=17.2) as vocational teacher educators; on the average, respondents have less than seven years experience (mean=6.3) in secondary education; the majority of respondents hold membership in two or more professional organizations; the majority of respondents (n=41, 74.6%) attend national professional meetings one to two times each year; and the majority of respondents (n=28, 50.9%) attend state professional meetings one to two times each year.

2. Faculty in vocational teacher education programs lack ethnic diversity. This is based on the
finding that 92.5% (n=49) of the respondents were caucasian.

3. Faculty members of NON-UCVE institutions are more likely to hold the rank of Professor than are respondents from UCVE institutions. This is based on the finding that 33.3% of the respondents (n=6) from NON-UCVE institutions hold the rank of Professor while only 13.5% (n=5) of the respondents from UCVE institutions hold the same rank.

**Recommendations for Objective 2**

Based on the conclusions for Objective 2, the researcher recommends future research to:

a. Describe the vocational teacher educators by discipline, i.e., agricultural education, business education, home economics education, technology education, and etc.

b. Determine why there is a lack of ethnic diversity among faculty within the vocational teacher education programs at institutions included in this study.

**Conclusion for Objective 3**

Vocational teacher educators model a variety of teaching methods. This is based on the finding that discussion, demonstration, questioning techniques, problem solving, peer teaching, brainstorming, small group instruction, lecture, simulation, multimedia instruction, creative teaching, and case studies are the most frequently modeled teaching strategies by vocational teacher educators.
**Recommendations for Objective 3**

Based on the conclusion for Objective 3, the researcher recommends future research to determine the congruence of learning style of students and teaching style of the vocational teacher educators through the methods course. This would provide opportunity for greater awareness and provision for individual style while honoring the diversity of all students through varied methodologies.

**Conclusions for Objective 4**

1. The vocational teacher educators at NON-UCVE institutions with higher methods course enrollment are less likely to model the discussion and demonstration methods. This is based on the finding that a substantial negative correlation (Davis, 1971) existed between methods course enrollment and discussion modeled ($T=-.50, p=.04$). There was a moderate negative correlation (Davis, 1971) between methods course enrollment and demonstration ($T=-.47, p=.05$).

2. Vocational teacher educators at institutions that require a greater number of methods course hours are more likely to model problem solving. This is based on the finding that a low correlation (Davis, 1971) existed between number of required methods course hours and the problem solving teaching method ($T=28, p=.03$).

3. The higher the degree offered through the vocational teacher education program the less likely the simulation method will be modeled by vocational teacher
educators. This is based on the finding that a low negative correlation (Davis, 1971) existed between the simulation method and the highest degree awarded within the program ($T=-.25$, $p=.05$). A moderate negative correlation (Davis, 1971) existed between the simulation method and highest degree awarded within the UCVE programs ($T=-.39$, $p=.02$).

4. The higher the degree held by the vocational teacher educator the more likely lecture will be modeled. This is based on the finding that a low correlation (Davis, 1971) existed between the lecture method and highest degree held by the methods teacher ($T=.27$, $p=.05$).

5. The higher the degree held by vocational teacher educators at UCVE institutions the more likely the discussion method, multimedia instruction, and problem solving will be modeled. This is based on the finding that at UCVE institutions a moderate correlation (Davis, 1971) existed between discussion method and highest degree held by the methods teacher ($T=.44$, $p=.01$); multimedia instruction and highest degree held by the methods teacher ($T=.34$, $p=.04$); and problem solving and highest degree held by the methods teacher ($T=.34$, $p=.04$).

6. The higher the degree held by the methods teacher at NON-UCVE institutions the more likely the simulation method will be modeled. This is based on the finding that at NON-UCVE institutions a substantial correlation (Davis, 1971)
existed between the simulation method and highest degree held by the methods teacher ($T=0.66, p=0.01$).

7. The higher the degree held by the methods teacher at NON-UCVE institutions the less likely brainstorming will be modeled. This is based on the finding that at NON-UCVE institutions a moderate negative correlation (Davis, 1971) between brainstorming and highest degree held by the methods teacher ($T=-0.48, p=0.05$).

8. UCVE vocational teacher educators that hold membership in one or more professional organization(s) are less likely to model the discussion and lecture methods. This is based on the finding that a moderate negative correlation (Davis, 1971) existed between the discussion method and professional membership status ($T=-0.34, p=0.03$) of vocational teacher educators at UCVE institutions. Also, that a moderate negative correlation (Davis, 1971) existed between the lecture method and the professional membership status ($T=-0.32, p=0.05$) of vocational teacher educator at UCVE institutions.

**Recommendations for Objective 4**

Based on the conclusions for Objective 4, the researcher recommends future research to compare the most frequently modeled teaching strategies by the vocational teacher educators' age, gender, ethnic origin, and years experience in secondary education.
Conclusions for Objective 5

Vocational teacher educators teach a variety of teaching methods. This conclusion is based on the finding that discussion, demonstration, questioning techniques, problem solving, small group instruction, brainstorming, simulation, peer teaching, lecture, and case studies are the most frequently taught teaching strategies by vocational teacher educators.

Conclusions for Objective 6

1. Vocational teacher educators at UCVE institutions with a greater number of required methods course hours are more likely to teach the brainstorming technique. This is based on the finding that at UCVE institutions a moderate correlation (Davis, 1971) existed between brainstorming and required methods course hours ($T=.39, p=.02$).

2. Vocational teacher educators at UCVE institutions which require a greater number of methods course hours less likely to teach the lecture method. This is based on the finding that at UCVE institutions a moderate negative correlation (Davis, 1971) existed between the lecture method and required methods course hours ($T=-.37, p=.03$).

3. Vocational teacher educators at NON-UCVE institutions with a greater number of required methods course hours are less likely to teach the peer teaching method. This is based on the finding that at NON-UCVE institutions a moderate negative correlation (Davis, 1971) existed between
peer teaching and required methods course hours ($T=-.48$, $p=.05$).

4. The higher the degree held by the methods teacher the more likely (s)he is to teach the lecture method. This is based on the finding that a low correlation (Davis, 1971) existed between the lecture method and highest degree held by the methods teacher ($T=.27$, $p=.05$).

5. The higher the degree held by the methods teacher at UCVE institutions the more likely (s)he is to teach multimedia instruction. This is based on the finding that a moderate correlation (Davis, 1971) existed between multimedia instruction and highest degree held by the methods teacher ($T=.41$, $p=.01$) at UCVE institutions.

6. Overall, vocational teacher educators that hold membership in one or more professional organization(s) are more likely to teach case studies. This is based on the finding that a low correlation (Davis, 1971) existed between case studies and professional membership status of the methods teacher ($T=.29$, $p=.03$).

7. Overall, vocational teacher educators that hold membership in one or more professional organization(s) less likely to teach small group instruction. This is based on the finding that a low negative correlation (Davis, 1971) existed between small group instruction and the professional membership status of the methods teacher ($T=-.25$, $p=.05$).
8. Methods teachers at UCVE institutions that hold membership in one or more professional organization(s) are more likely to teach case studies. This is based on the finding that a moderate correlation (Davis, 1971) existed between case studies and professional membership status of the methods teacher ($T=.34$, $p=.02$) at UCVE institutions.

9. Methods teachers at UCVE institutions that hold membership in one or more professional organization(s) are less likely to teach the lecture method. This is based on the finding that a moderate negative correlation (Davis, 1971) existed between the lecture method and professional membership status of the methods teacher ($T=-.32$, $p=.05$).

10. Methods teachers at NON-UCVE institutions that hold membership in one or more professional organization(s) are less likely to teach individualized instruction. This is based on the finding that a moderate negative correlation (Davis, 1971) existed between individualized instruction and professional membership status of the methods teacher ($T=-.46$, $p=.04$) at NON-UCVE institutions.

**Recommendations for Objective 6**

Based on the conclusions for Objective 6, the researcher recommends a comparison of the most frequently taught teaching strategies by the vocational teacher educators' age, gender, ethnic origin, and years experience in secondary education.
Other Recommendations

1. Compare UCVE and NON-UCVE institutions by institutional demographics, vocational teacher educator demographics, and methods content and delivery techniques most frequently modeled and taught.

2. Research should be conducted to determine the strengths and weaknesses of the vocational teacher education programs in the United States.

3. Further research should be conducted on exemplary vocational teacher education programs to identify characteristics of a successful program.

4. Follow-up research of program graduates should be conducted to provide a reflective product perspective of the vocational teacher education programs in the United States.
REFERENCES


Battle, M. V. (1986). *Dialogical activities to improve communication of first-semester university freshmen through teaching reading literature and writing compositions interrelatedly*. (University Microfilms No. 86-19455).


Cuban, L. (1992). Better teaching or "just the facts, ma'am"?. *Education Digest, 58*(1), 40-42.


APPENDIX A

AMERICAN VOCATIONAL ASSOCIATION REGIONS
AMERICAN VOCATIONAL ASSOCIATION (AVA) REGIONS

REGION I
(UCVE=2/NON-UCVE=2)*
Connecticut  Delaware  Maine  Maryland  Massachusetts  Michigan  New Hampshire  New Jersey  New York  Ohio  Pennsylvania  Rhode Island  Vermont  West Virginia

REGION II
(UCVE=6/NON-UCVE=6)*
Alabama  Florida  Georgia  Kentucky  North Carolina  South Carolina  Tennessee  Virginia

REGION III
(UCVE=4/NON-UCVE=4)*
Illinois  Indiana  Iowa  Minnesota  Missouri  Wisconsin

REGION IV
(UCVE=4/NON-UCVE=4)*
Arkansas  Louisiana  Mississippi  New Mexico  Oklahoma  Texas

REGION V
(UCVE=3/NON-UCVE=4)*
Alaska  Arizona  California  Colorado  Hawaii  Idaho  Kansas  Montana  Nebraska  Nevada  North Dakota  Oregon  South Dakota  Utah  Washington  Wyoming

*Indicates number of UCVE and NON-UCVE institutions that meet the criteria for this study.
APPENDIX B

UCVE AND NON-UCVE INSTITUTIONS
<table>
<thead>
<tr>
<th>Institution</th>
<th>AVA Region</th>
<th>UCVE/NON-UCVE</th>
<th>Total Number of Methods Teachers</th>
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<td>Ohio State University</td>
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<tr>
<td>Rutgers State University</td>
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<td>NON-UCVE</td>
<td>1</td>
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<tr>
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<td>NON-UCVE</td>
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<td>NON-UCVE</td>
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<td>Washington State University</td>
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<td>NON-UCVE</td>
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APPENDIX C

INITIAL PERSONAL CORRESPONDENCE TO DIRECTORS AND/OR CHAIRPERSONS OF INSTITUTIONS INCLUDED IN THIS STUDY
Dear

Please send me the name, address, and phone number of each faculty member in the vocational education department at your institution whose teaching responsibility includes teaching undergraduate methods courses. A form and return envelope is enclosed for your convenience.

I am currently conducting dissertation research at Louisiana State University (under the direction of Dr. Betty C. Harrison) and need your assistance to successfully complete this study. The purpose of my study is to compare the methodological content and teaching delivery used by vocational teacher education faculty in the University Council for Vocational Education institutions and other selected higher education institutions.

Your institution was selected to be included in this study because it was identified in Peterson's 1993 Guide to Four Year Colleges as having a comprehensive vocational education program. Because of the relatively small number of institutions that meet the criteria for my study, it is very important for your faculty to participate.

If you would like to receive a summary of the findings when the study is completed, mark "yes" on the enclosed form and return it by Friday, January 29, 1993.

Should you have questions or comments, you may contact me at (615) 672-3228 (H) or (615) 325-9201 (W). Thank you for your cooperation!

Sincerely yours

Robert B. Blair, CPS

Enclosures: Address Form
            Return Envelope
VOCATIONAL TEACHER EDUCATORS RESPONSIBLE
FOR TEACHING METHODS COURSES AT

(Name of Institution)

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAMPUS ADDRESS</th>
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____ Yes, I would like a summary of the findings when the study is completed.

____ No, I do not want a summary of your findings.
942 McCurdy Road
White House, TN 37188
January 22, 1993

Dear

Please send me the name, address, and phone number of each faculty member in the vocational education department at your institution whose teaching responsibility includes teaching undergraduate methods courses. A form and return envelope is enclosed for your convenience.

I am currently conducting dissertation research at Louisiana State University (under the direction of Dr. Betty C. Harrison) and need your assistance, as requested above, to successfully complete this study. The purpose of my study is to compare the methodological content and teaching delivery used by vocational teacher education faculty in the University Council for Vocational Education institutions and other selected higher education institutions.

Your institution was selected to be included in this study because of its membership in the University Council for Vocational Education. Because of the relatively small number of institutions that meet the criteria for my study, it is very important for your faculty to participate.

If you would like to receive a summary of the findings when the study is completed, mark "yes" on the enclosed form and return it by Friday, January 29, 1993.

Should you have questions or comments, you may contact me at (615) 672-3228 (H) or (615) 325-9201 (W). Thank you for your cooperation!

Sincerely yours,

Robert B. Blair, CPS

Enclosures: Address Form
            Return Envelope
VOCATIONAL TEACHER EDUCATORS RESPONSIBLE FOR TEACHING METHODS COURSES AT

(Name of Institution)

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<th>NAME</th>
<th>CAMPUS ADDRESS</th>
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___ Yes, I would like a summary of the findings when the study is completed.

___ No, I do not want a summary of your findings.
APPENDIX D

COVER LETTER AND QUESTIONNAIRE
April 30, 1993

Dear

In the field of education today, an increased emphasis is being placed on multifaceted teaching and learning. The intent is to enable educators to meet individual learning needs by appropriate methodological content and teaching delivery techniques. However, a review of research literature has yielded an alarming void, and unfortunately without such information and without a clear understanding of the methodologies being used, enhancement of methodological content and teaching delivery techniques will be difficult.

A study is currently underway which will attempt to examine the methodological content and teaching delivery used by vocational teacher educators. You have been randomly selected as a member of a small group of vocational teacher educators to participate in this study. Your name was provided by the vocational education administrative leader at your institution because of your background in teaching undergraduate vocational methods courses. Your participation is crucial to the success of this study because of the relatively small number of vocational teacher educators being included.

Be assured that your responses will be reported only as group data. At no time will your answers be identified with your name. Identification numbers on questionnaire will only be used for follow-up. I will look for your response by Monday, May 10, 1993. A return envelope is enclosed for your convenience.

Should you have questions or comments, you may contact Barry at (615) 672-3228 or Dr. Harrison at (504) 388-5748. Thank you for your cooperation and your prompt response!

Sincerely yours,

Robert B. Blair, CPS         Betty C. Harrison, Ph.D.
### Vocational Teacher Education

#### Methodological Content & Teaching Delivery

**Questionnaire**

Please respond to the following questions by placing a check (✓) in the appropriate blank or providing the requested information.

---

#### Demographics: Institution

1. College within the University where the vocational teacher education program is located.
   - Agriculture
   - Education
   - Applied Human Science
   - Human Ecology
   - Education & Psychology
   - Home Economics
   - Teachers College
   - Other (please specify)

2. Administrative location of the vocational teacher education program.
   - School
   - Department
   - Division

   Please specify title of School, Department, or Division.

3. Total current (Summer/Fall 1992 & Spring 1993) undergraduate enrollment in vocational teacher education program. (all curricula)
   - 25 or Less
   - 26 - 50
   - 51 - 75
   - 76 - 100
   - Over 100

4. Total number of Summer/Fall 1992 & Spring 1993 vocational teacher education program graduates. (all curricula)
   - 25 or Less
   - 26 - 50
   - 51 - 75
   - 76 - 100
   - Over 100

5. Total number of Summer/Fall 1992 & Spring 1993 undergraduate students enrolled in vocational teaching methods course(s) each year.
   - 25 or Less
   - 26 - 50
   - 51 - 75
   - 76 - 100
   - Over 100

6. Curricula offered by your School, Department, or Division. (check all that apply)
   - Adult Education
   - Agricultural Education
   - Business Education
   - Home Economics Education
   - Industrial Arts Education
   - Marketing Education
   - Technology Education
   - Vocational Education
   - Training and Development
   - Extension Education
   - Other (please specify)

---

7. Number of methods courses required in your undergraduate vocational teacher education program. (all curricula)
   - 1 course
   - 2 courses
   - 3 courses
   - Over 3 courses
8. Total number of semester credit hours required in teaching methods course(s) for the undergraduate vocational teacher education program at your institution.

   Less than 3 hours
   3 hours
   4 hours
   5 hours
   6 hours
   Over 6 hours (please specify)

9. Degrees offered through your School, Department, or Division. (check all that apply)

   Associate
   Baccalaureate
   Masters
   Education Specialist
   Education Doctorate
   Doctorate of Philosophy

Demographics: Vocational Teacher Educator

10. What is your age at the time of this study?

     25 or Younger
     26 - 35
     36 - 45
     46 - 55
     56 - 65
     Over 65

11. Please identify your gender?

     Male
     Female

12. What is your race?

     African American
     Asian
     Caucasian
     Hispanic
     Other (please specify)

13. What is the highest degree you have earned?

     Baccalaureate
     Masters
     Education Specialist
     Doctorate

14. How many years have you been a vocational teacher educator?

     years

15. How many years of secondary teaching experience do you have?

     years

16. What professional rank do you currently hold?

     Instructor
     Assistant Professor
     Associate Professor
     Professor
     Other (please specify)

17. In the space provided, identify memberships you hold in professional organizations.

18. How often do you attend national professional meetings?

     times per year

19. How often do you attend state professional meetings?

     times per year
Many teaching methods have been developed and utilized by vocational teacher educators to enhance student learning. Following is a list of some of these teaching strategies that can be used in the vocational education classroom. A brief description of each strategy is enclosed for your reference. Please check (✓) the response that best indicates the degree of emphasis that you place on each strategy in your vocational education methods courses. Response alternatives are defined as follows:

**Unaware:** You are unfamiliar with the strategy.

**None:** You are familiar with the strategy but prefer not to refer to it in your methods classes.

**Inform:** You make reference to the strategy in your methods classes but you do not directly teach your students how it is implemented.

**Instruct:** You teach your methods students the appropriate steps involved in the strategy so that they can promote the use of the strategy in their teaching.

**Model:** You enhance your students' understanding of the strategy by demonstrating and/or by implementing the strategy in your own teaching.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Unaware</th>
<th>None</th>
<th>Inform</th>
<th>Instruct</th>
<th>Model</th>
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<tbody>
<tr>
<td>1. Brainstorming</td>
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<td>2. Case Studies</td>
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<td>3. Cloze Procedure</td>
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<td>4. Computer Simulation</td>
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<td>5. Computer Assisted Instruction</td>
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<td>6. Creative Teaching</td>
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<td>7. Demonstration</td>
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<td>8. Diagnostic Teaching</td>
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<td>9. Discussion</td>
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<td>10. Dramatic Play (Role Play)</td>
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<td>13. Guided Design</td>
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<td>15. Individualized Instruction</td>
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<td>21. Mass Instruction</td>
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Brief Description of Teaching Strategies

1. **Brainstorming**—activity or technique to encourage the creative generation of ideas—usually a group process, in which group members contribute suggestions in a spontaneous, noncritical manner (Houston, 1990, p. 28).

2. **Case Studies**—detailed analysis, usually focusing on a particular problem of an individual, group, or organization (Houston, 1990, p. 32).

3. **Cloze Procedure**—completion of exercises requiring the reader to insert missing words with the aid of surrounding context (Houston, 1990, p. 40).

4. **Computer Simulation**—computer based representation of real situations or systems (Houston, 1990, p. 50).

5. **Computer Assisted Instruction**—interactive instruction technique in which a computer is used to present instructional material, monitor learning, and select additional instructional material in accordance with individual learner needs (Houston, 1990, p. 49).

6. **Creative Teaching**—development and use of novel, original, or inventive teaching methods (note: refers to teaching that results from the teacher's creativity, not to teaching that is intended to develop the learner's creativity (Houston, 1990, p. 58).

7. **Demonstration**—to illustrate or explain in an orderly and detailed way, especially with many examples, specimens, and particulars (Gove, 1981, p. 600).

8. **Diagnostic Teaching**—process of diagnosing students abilities, needs, and objectives and prescribing requisite learning activities (Houston, 1990, p. 69).

9. **Discussion**—oral, and sometimes written, exchange of opinions—usually to analyze, clarify, or reach conclusions about issues, questions or problems (Houston, 1990, p. 71).

10. **Dramatic Play**—sociodramatic play or role play (Houston, 1990, p. 73).

11. **Drills**—repetition of tasks or procedures (Houston, 1990, p. 73).

12. **Experimental Teaching**—teaching that uses new or innovative ideas, methods, or devices (Houston, 1990, p. 93).

13. **Guided Design**—reasoning-centered instructional method developed by Charles E. Wales and Robert A. Stager that uses small-group techniques and a prepared outline of decision making steps to guide students through the process of resolving open-ended problems (Houston, 1990, p. 113).

14. **Hypermedia**—computerized compilations of information units (text, graphics, animation, and/or sound) interconnected by logical nonlinear linkages that enable users to follow optional paths through the material—also, the systems, used to create and display this information (Houston, 1990, p. 121).

15. **Individualized Instruction**—adapting instruction to individual needs within the group (note: do not confuse with "independent study" or "individual instruction." (Houston, 1990, p. 124).

16. **Instructional Films**—for the purpose of this study, instructional films refer to films and/or video tapes used to introduce or enhance subject matter for better student understanding.

17. **Interactive Video**—online video computing systems capable of rapid, accept and reject communications with human beings (Houston, 1990, p. 131).

18. **Interviews**—to question or converse with especially in order to obtain information or ascertain personal qualities (Gove, 1981, p. 1184).

19. **Learner Controlled Instruction**—instruction in which the individual learner has considerable influence over what is taught, how it is taught, and the pace of instruction—often used in relation to student interaction with courseware (Houston, 1990, p. 145).

20. **Lecture Method**—teaching method in which information is presented orally to a class with a minimal amount of class participation (Houston, 1990, p. 146).
21. **Mass Instruction**—large scale activities aimed at disseminating information or to influence the opinion of the general public (Houston, 1990, p. 156).

22. **Memorization**—the act or an instance of memorizing (Gove, 1981, p. 1409).

23. **Multimedia Instruction**—the integration of more than one medium in a presentation or module of instruction (Houston, 1990, p. 169).

24. **Multisensory Learning**—learning that involves the processing of stimuli through two or more senses (Houston, 1990, p. 169).

25. **Peer Teaching**—peer tutoring, cooperative learning (Houston, 1990, p. 168).

26. **Precision Teaching**—teaching method, based on behavior modification, that uses daily measurement and charting procedures as reinforcement for learning (Houston, 1990, p. 198).

27. **Problem Solving**—learning that combines two or more principles to produce a solution and in the process acquires the capability to deal with future similar problems with greater facility (McNeil, 1985, p. 54).

28. **Programmed Instruction**—instruction in which learners progress at their own rate using workbooks, textbooks, or electromechanical devices that provide information in discrete steps, test learning at each step, and provide immediate feedback about achievement (Houston, 1990, p. 204).

29. **Questioning Techniques**—methods used for constructing and presenting questions in order to promote effective discussions and learning or to elicit information (Houston, 1990, p. 210).

30. **Simulation**—duplication of the essential characteristics of a task or situation (Houston, 1990, p. 239).

31. **Small Group Instruction**—for the purpose of this study, small group instruction refers to instruction aimed at disseminating information to a small group of people.

32. **Teaching Machines**—devices that mechanically, electrically and/or electronically present instructional programs at a rate controlled by the learners' responses (Houston, 1990, p. 264).

33. **Thematic Approach**—teaching approach that organizes subject matter around unifying themes (Houston, 1990, p. 270).

References


APPENDIX E

PERMISSION REQUEST AND APPROVAL TO USE MODIFIED VERSION OF BAADE'S QUESTIONNAIRE
Ms. Sandra L. Baade
1902 Franklin Street
Cedar Falls, IA 50613

Dear Ms. Baade:

Thank you for granting me permission to use a modified version of the survey instrument that you developed for your thesis, titled, *Assessment of the Implementation of Recommended Teaching Strategies at the College Level*.

My dissertation research, at Louisiana State University, will compare the methodological content and teaching delivery strategies used by vocational teacher educators at selected University Council for Vocational Education institutions and non-Council institutions. The basic design of your instrument has helped me define the structural foundation for my questionnaire.

As you requested during our telephone conversation this morning, a copy of the instrument that I propose to use in my study is enclosed. In order to properly document your permission for me to use a modified version of your questionnaire, I will need a letter from you.

For your convenience, I have prepared and enclosed a letter of permission. Please sign and return the letter in the envelope provided. Should you prefer to prepare your own letter of permission, please feel free to do so.

Should you have questions, you may contact me after 2:30 p.m. at (615) 672-3228.

Sincerely yours,

Robert B. Blair, CPS

Enclosures: Blair Questionnaire
            Permission Letter
            Return Envelope
1902 Franklin Street  
Cedar Falls, IA  50613  
January 15, 1993

Mr. Robert B. Blair, CPS  
942 McCurdy Road  
White House, TN  37188

Dear Mr. Blair:

Please accept this letter as documentation for granting you permission to use a modified version of the survey instrument developed for my study titled, Assessment of the Implementation of Recommended Teaching Strategies at the College Level, which was completed in August 1990.

I hope that my survey will be of value to you as you examine the methodological content and teaching delivery strategies used in vocational teacher education programs. Mr. Blair, should you have questions or need further assistance, please feel free to contact me again.

Sincerely yours,

Sandra L. Baade
APPENDIX F

FOLLOW-UP CARD
Dear Vocational Teacher Educator:

Approximately two weeks ago you should have received a questionnaire designed to identify methodological content and teaching delivery used by vocational teacher educators. If you have already returned the questionnaire, I sincerely appreciate your response. If you have not yet responded, please do so by MAY 20, 1993. If you did not receive a questionnaire or have misplaced your copy, please call me at (615) 672-3228 and I will send you a replacement. Thank you for your participation!

Sincerely,

Robert B. Blair, CPS
Louisiana State University
APPENDIX G

SECOND FOLLOW-UP LETTER
June 1, 1993

Dear

About a month ago a study was begun which is attempting to examine the methodological content and teaching delivery used by vocational teacher educators. The many questionnaires that have been returned is very encouraging. However, we have not yet received your completed questionnaire. To describe accurately the methodological content and teaching delivery being used by vocational teacher educators depends upon you and the other vocational teacher educators who have not yet responded. This is because our past experience suggests that those of you who have not yet returned your questionnaire may use quite different methods and techniques than those who have responded.

If you have recently returned your questionnaire, please accept this note as our thanks. In case you did not receive the previous copy or your copy has been misplaced, another questionnaire is enclosed for your convenience. I will look for your response by Friday, June 11, 1993.

Be assured that your responses will be reported only as group data. At no time will your answers be identified with your name. Identification numbers on the questionnaire will only be used for follow-up.

Should you have questions or comments, you may contact Barry at (615) 672-3228 or Dr. Harrison at (504) 388-5748. Thank you for your cooperation and your prompt response!

Sincerely yours,

Robert B. Blair, CPS Betty C. Harrison, Ph.D.
APPENDIX H

SPECIFIC TITLE OF RESPONDENTS' SCHOOL, DEPARTMENT, OR DIVISION
SCHOOL, DEPARTMENT, OR DIVISION TITLES

SCHOOL

SCHOOL OF VOCATIONAL EDUCATION
SCHOOL OF OCCUPATIONAL AND EDUCATIONAL STUDIES

DEPARTMENT

AGRICULTURAL EDUCATION
AGRICULTURAL EDUCATION AND STUDIES DEPARTMENT
AGRICULTURAL EDUCATION AND TECHNOLOGY
AGRICULTURAL LEADERSHIP, EDUCATION, AND COMMUNICATION

DEPARTMENT OF ADULT EDUCATION, INSTRUCTIONAL SYSTEMS AND VOCATIONAL AND INDUSTRIAL EDUCATION
DEPARTMENT OF BIOSYSTEMS ENGINEERING
DEPARTMENT OF INDUSTRY AND TECHNOLOGY
DEPARTMENT OF SECONDARY EDUCATION
DEPARTMENT OF TECHNOLOGY AND EDUCATION
DEPARTMENT OF VOCATIONAL AND ADULT EDUCATION
DEPARTMENT OF WORKFORCE EDUCATION AND DEVELOPMENT

EDUCATIONAL DEPARTMENT OF OCCUPATIONAL TRAINING AND DEVELOPMENT
EDUCATIONAL STUDIES

FAMILY AND CONSUMER SCIENCES
FAMILY AND CONSUMER SCIENCE EDUCATION DEPARTMENT

PRACTICAL ARTS AND VOCATIONAL-TECHNICAL EDUCATION

TECHNOLOGICAL AND ADULT EDUCATION

VOCATIONAL EDUCATION
VOCATIONAL EDUCATION STUDIES
VOCATIONAL AND CAREER DEVELOPMENT

DIVISION

TEACHER EDUCATION DIVISION
APPENDIX I

FREQUENCIES OF MODELED TEACHING STRATEGIES
### Frequencies of Teaching Strategies Modeled By Vocational Teacher Educators

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**Note.** Percentages do not total 100 since respondents were asked to mark all that apply.

- a Total number of respondents reporting top teaching strategies modeled (n=55).
- b Total number of UCVE respondents reporting top teaching strategies modeled (n=37).
- c Total number of NON-UCVE respondents reporting top teaching strategies modeled (n=18).
APPENDIX J

FREQUENCIES OF TAUGHT TEACHING STRATEGIES
### Frequencies of Teaching Strategies Taught By Vocational Teacher Educators

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</table>

Note. Percentages do not total 100 since respondents were asked to mark all that apply.
\(^{a}\)Total number of respondents reporting top teaching strategies taught (n=55).
\(^{b}\)Total number of UCVE respondents reporting top teaching strategies taught (n=37).
\(^{c}\)Total number of NON-UCVE respondents reporting top teaching strategies taught (n=18).
VITA

Robert Barry Blair is a native of Tennessee. He graduated with honors from White House High School in 1982. He received a Bachelor of Science degree in Business Education and Business Administration (double major) from Oral Roberts University in 1986. In 1987, he received a Master of Business Education degree from Middle Tennessee State University. In 1989, Barry received the Certified Professional Secretary (CPS) Rating from the Institute for Certifying Secretaries. He received the Certified Reporter Instructor (CRI) designation from the National Court Reporters Association in 1993.

For four years he served as Chairman of the Secretarial Science Department at Jimmy Swaggart Bible College and Seminary (JSBC&S) in Baton Rouge, Louisiana. He also served as Chairman of the General Education Department and Director of the Associate of Arts Programs. Barry returned to Tennessee in August 1992 and began teaching in the Business Department at Portland High School in Portland, Tennessee after serving as a graduate assistant in the School of Vocational Education at Louisiana State University from January through July 1992. He taught in the Court Reporting Program at Middle Tennessee State University during June 1993 as an adjunct faculty member.

He authored, "(CPS) Study Looks at Benefits," and co-authored the following articles: "Getting Around to Business
with the 4MAT System," and "Profile of the Louisiana Court Reporter."

Barry is an active member in the following professional organizations: American Vocational Association, National Business Education Association, Professional Secretaries International, Delta Pi Epsilon (Gamma Eta Chapter), Southern Business Education Association, Louisiana Association of Business Educators, Tennessee Business Education Association, Association for Business Communications, National Court Reporters Association, Tennessee Shorthand Reporters Association, National Education Association, and the Tennessee Education Association.

Barry is a member of Shallowford Pentecostal Church where he serves as Director of Christian Education. He has taught Sunday School at the Primary through Adult levels at his church.

Robert Barry Blair is the son of Robert A. and Rebecca J. Blair of White House, Tennessee. He has one sister, Julia A. Keene, and two nephews, Robert D. Keene and Gordon A. Keene, who also reside in White House, Tennessee.

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DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Robert Barry Blair

Major Field: Vocational Education

Title of Dissertation: Methodological Content and Teaching Delivery Used By Vocational Teacher Education Faculty in University Council and Other Selected Higher Education Institutions

Approved:

Betty E. Harrison
Major Professor and Chairman

Daniel Engl
Dean of the Graduate School

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Date of Examination:

October 27, 1993