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Relationship of moral reasoning levels to professional development activities of vocational teachers

Loyd, Charles Michael, Ph.D.
The Ohio State University, 1988

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UMI
RELATIONSHIP OF MORAL REASONING LEVELS
TO PROFESSIONAL DEVELOPMENT ACTIVITIES OF VOCATIONAL TEACHERS

Dissertation
Presented in Partial Fulfillment of the Requirements for
the Doctor of Philosophy in the Graduate
School of The Ohio State University

by
Charles Michael Loyd, B.A., M.S.

* * * * *
The Ohio State University
1988

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1988
For my parents

I am blessed to be their son.
ACKNOWLEDGMENTS

Without the support of my friends, teachers and relatives, some of whom were not with me in person, but were in spirit, this tribute to my parents would not have been possible.

Dr. Sharon S. Redick
Dr. Joan Gritzmaccher
Dr. Lena Bailey
Dr. William Moore
Mrs. Lillian Upton
Mr. and Mrs. James DeVaughn
Miss Olive Loyd
Miss Mae Loyd
Miss Juanita Diggins
Dr. Herbert Loyd and family
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Mr. Joe Pultz
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and
Mr. Tim Cashin,
whose early mornings and late nights were sacrificed for a timely completion of this work.

Each of them has a special place in my heart.
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CHAPTER I
INTRODUCTION

The professional development of practicing teachers is a current focus for the improvement of education. While educational research had a strong focus in the 1960s on pre-service education of teachers, the seventies and eighties have been the time of significant research and support concerning in-service education. The public demand for improvement of teacher quality, the declining pool of prospective effective teachers, recommendations for enhancing in-service activities from various reports on secondary and vocational education (National Commission on Secondary Vocational Education, 1984; Blue Ribbon Committee on Secondary Vocational Education, 1984), and the several criticisms leveled against current in-service programs are a few of the reasons there is an increased emphasis on understanding and utilizing in-service education.

Secondary vocational teachers suffer from all the teacher problems described of teachers in general secondary education. While their in-service training is also plagued by problems (National Commission on Secondary Vocational Education, 1984), the potential value of effective professional development and in-service activities is
clearly recognized. For example, in Ohio "there are 8,000 vocational teachers who need regular and frequent updating and retraining if they are to be attuned to current and emerging issues and technologies related to occupational education and training" (Blue Ribbon Committee on Secondary Vocational Education, 1984, p. 9). In some ways, the need to provide effective in-service education for vocational teachers may be greater than for other secondary teachers since many come to teaching from an industry background with a need to improve teaching skills. On the other hand, those teachers with baccalaureate degrees often need more occupational expertise which could be provided through in-service activities.

Only in the last decade have there been research efforts toward developing a holistic view of the purposes of professional development and in-service education. Until then, the descriptions of individual programs that were perceived as effective and identification of the elements of effective programs (i.e. purposes, structure, content, motivations to participate, resources needed) dominated the literature. Limitations of this phase of teacher education were also being studied.

As this body of literature has grown, researchers have begun to build models and conceptual frameworks and clarify
definitions related to in-service education. However, this body of knowledge is still considered to be in its infancy.

Eraut (1987) contrasted four paradigms of in-service education: (a) "defect", (b) "growth", (c) "change", and (d) "problem-solving". The "defect paradigm" aims at improving teachers, regarding them as obsolete or inefficient. The "growth paradigm" aim is a redirection of teachers to seek new options and perspectives and increased professional competence. The "change paradigm" is based on teachers' needs to keep abreast of changes in society and schooling. And, the "problem-solving paradigm" is to improve teachers via internally diagnosed teaching problems which inevitably arise for teachers.

The "defect" and "problem-solving" paradigms have the goal of improvement whereas the "change" and "growth" paradigms have the goal of redirection. Internal stimuli are viewed as the reason for in-service involvement with the "problem-solving" and "growth" paradigms whereas external stimuli are viewed as the reason for in-service involvement with the "defect" and "change" paradigms.

Joyce and Showers (1985) have produced a model of staff development which suggests that (a) teachers' individual and personal characteristics, (b) contextual factors of in-service programming, and (c) elements of the specific in-service activity impact on the outcome(s) of an in-service program. This model is supported by Lawrence and Harrison
(1980), who reviewed 59 studies of in-service programming and concluded that:

the most successful programs treated their participants as professionals, as conscientious people who want to continue to expand their skills and their range of professional competence. (p. 159)

They also found that more successful programs seemed to fit the design and methods to the people—to their purposes and to the context in which they worked.

By far the literature has focused on the contextual factors and elements of programming. Undoubtedly, this body of literature has resulted in improved design and support of in-service programming. However, application of the body of literature concerning the teachers' individual characteristics to improve in-service education has been limited, even though individual characteristics are recognized as being important, particularly with the use of the "growth" and "problem-solving" paradigms. There have been studies concerning the personal and professional growth of teachers, materials developed to assist in personal and professional growth, and an increasing number of recommendations for further investigations of the individual characteristics which impact upon a teacher's professional development and in-service participation. These individual characteristics may be thought of as demographic variables and as psychological, cognitive, mental, and emotional traits and behaviors.
Rubin stated in 1969:

There does not seem to be any way to escape the need to individualize teacher in-service education. Like their students, teachers learn at different rates, in different ways, and through different experiences. (p. 16)

Yet, Lanier and Little (1986) noted that continuing education decision making is often determined by needs assessment approaches and other majority-driven instruments, which consequently overlook the professional development needs of above average teachers and may be a factor in their exodus from teaching. That is to say, even though it may be recognized that it is important to account for individual and personal characteristics, professional development activities and in-service education programs still do little to address them.

Cruickshank et al. (1986) reviewed the literature about adult and teacher development, which is appropriate to do for the better understanding of the complex individual characteristics of teachers. They found four themes in the writings: (a) life span development, (b) stage development, (c) career development, and (d) teacher development. Three perspectives from the literature were:

1) Teachers experience life-span development, much of which is a function between work and personal events; 2) Teachers develop cognitively, morally, and personally, in terms of ego development; and, 3) Teaching has a life-span, ages and stages, and career patterns. (p. 354)
It can be concluded that using a developmental theory approach is a valid base for building an understanding of teachers' individual characteristics. Newman and Newman (1987) support this conclusion by stating that:

In designing programs and services to address critical needs in such areas as education, health care, housing, and social welfare, the developmental stage approach is very helpful in keeping attention focused on the needs and resources of the population(s) being served. (p. 29)

Further, developmental theories support the thinking that many adults' (teachers') individual characteristics can be changed in positive ways through experiences, which is a basic assumption in providing in-service education. Researchers have noted that emphasis on change in in-service education is shifting (or should shift) from remediation to growth enhancing activities (Ainsworth, 1974; Howey and Vaughn, 1983).

Though the purposes of professional development and in-service education are many and varied, understanding better the complex individual characteristics which help to explain the nature of teachers' involvement and participation, or lack of, could enhance desired outcomes. Holly (1984) concluded that if teachers are to be active and self-directing, which is an idea that has been identified as a purpose of in-service education, provisions should be based upon the principles of human growth and development. Further, she concluded from a conceptual basis, in-service
effectiveness could be enhanced through: (a) improved attitudes of teachers' about the value of professional growth, and (b) trust and support in teachers' abilities to make decisions about professional development.

Reasoning skills, specifically moral reasoning skills, stand out among the individual characteristics as a potential explanation for the practices of teachers concerning professional development and in-service. That is, the level at which a teacher morally reasons may influence or determine his/her decision to participate in professional development as well as the attitude which a teacher "brings along" to the in-service program. In other words, the moral reasoning level of a teacher could be identified or thought of as an intrinsic motivator or inhibitor for professional development involvement.

The study of moral reasoning can be attached to a sound, though sometimes criticized, theory base largely developed by Lawrence Kohlberg. The theory contends that there are six developmental stages of moral reasoning which, in part, explain a person's behaviors by revealing underlying thought processes. It is a theory that is in accord with other developmental theories, particularly those of cognitive development.

Kohlberg's model has been widely used to study the moral development of children/students and, to a lesser extent, adults. Moral reasoning levels of teachers have been
related to disciplinary actions used (Johnston, Lumbomudrob, and Parsons, 1982), but relatively little has been done to understand or identify the moral reasoning levels of teachers. No studies have been found that have implications for understanding any possible association between teachers' moral reasoning levels and participation in professional development activities. Yet, investigating the possibility of these relationships seems worthy as an addition to the literature on teacher development and to a possible enlightenment about teacher behaviors.

Problem Statement

The purpose in this study was to identify selected characteristics of vocational teachers, and then, to determine if these characteristics were associated with involvement in professional development and in-service education activities. Further, the investigator's purpose in this study was to determine if one characteristic, that is, the moral reasoning levels of vocational teachers, was associated with their practices of selection and participation in professional development activities. Demographic characteristics of age, gender, marital status, family composition, degrees, service area, certificates(s) held, teaching experience, and perceived job security were studied for their relationships to moral reasoning, type of professional development activities in which teachers participated, and teachers' practices of selecting
Significance of Problem

Professional development and in-service education are important components of teacher education and can significantly impact on improving the quality of the nation's teaching force. Yet, poorly designed, unattended, or attended with negative attitudes, in-service programs do little but waste time and money. The impact of teachers' personal characteristics on programming designed to improve or redirect teachers is clearly recognized, but not clearly understood. Research that leads to greater clarity about the effects of teachers' personal characteristics on their participation in professional development activities will ultimately be part of the solution to improving the quality of education.
Research Questions

The following questions gave direction to this research study.

What are the moral reasoning levels of vocational teachers?

What are the professional development activities in which vocational teachers participate?

Do vocational teachers, collectively, exhibit patterns of involvement in professional development activities?

Are the moral reasoning levels of vocational teachers associated with any identified pattern(s) of involvement in professional development activities?

Are the moral reasoning levels of vocational teachers associated with their practices of selecting professional development activities?

Are the moral reasoning levels of vocational teachers associated with the selected demographic variables?

Are any identified pattern(s) of professional development activities associated with the selected demographic variables?

Are the professional development practices associated with the selected demographic variables?
Hypotheses

Vocational teachers have varying levels of moral reasoning.

Vocational teachers have patterns, or similarities that can group teachers, of involvement in professional development activities.

Vocational teachers with higher moral reasoning levels are involved differently in professional development activities than those with lower moral reasoning levels.

Selected demographic variables of vocational teachers are related to their involvement in professional development activities and their moral reasoning levels.

Limitations

Involvement in professional development activities was attained through a self-reporting instrument and, therefore, subject to the errors of self-reporting (Campbell and Stanley, 1966).

Assumptions

Teachers are professionals and their educational activities should enhance professionalism.

Vocational teachers' involvement in professional development activities is necessary to the attainment and maintenance of effective teaching because of the developmental nature of teaching in an evolving society.
Vocational teachers are capable of active, self-directed life-long learning that leads to optimal professional development.

Involvement in professional development activities can pose moral dilemmas that require moral reasoning for resolution.

Definitions

For the purpose of this study the following definitions were selected or developed.

In-service education— In-service education activities are formally designed and delivered experiences in the attempt to help an individual teacher become self-actualizing and to assist him/her in upgrading performance as a teacher, and/or to attain his/her own professional goals. Because of vagueness of language related to in-service education, variation of a chart by Nicholson (1976) is used to elaborate terms that are synonymous with in-service education. Choose 1 term from columns A and/or B and then 1 from column C and the combination of terms will be synonymous with in-service education.

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<td>continuous</td>
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Moral reasoning— Moral reasoning refers to the cognitive processes related to making decisions of right or wrong. Moral reasoning is synonymous with moral judgement. Moral reasoning decisions are related to the concerns of and for other people. It is not inclusive of all processes or actions needed in order for a person to behave "morally".

Patterns of involvement in professional development activities— For an individual, it is the rank ordering of four categories of professional development activities; colleges and universities, professional associations, non-degree in-service, and personal activities. For the sample, it is the collective similarities or groupings of the rank order patterns of individual teachers.

Professional— A professional is "characterized by the ability to make informed judgments and perform important tasks in complex environments. These judgments and performances are grounded in an identifiable, empirically supported knowledge base to which the members of the profession contribute." (Howey, Mathes, & Zimpher, 1985, p. 86)

Professional development-- All experiences perceived by a teacher which enhances his/her performance as a teacher or assists in the attainment of his/her professional goals. It includes, but is not limited to, in-service education experiences.
CHAPTER II
REVIEW OF LITERATURE

In order to develop rationale and background for studying the moral reasoning levels of practicing teachers and possible associations with their professional development activities and participation, it is necessary to address the: (a) meaning and purposes of professional education of teachers, (b) characteristics of current professional development and in-service education activities, (c) development of adults, particularly as it applies to moral reasoning, and (d) implications of moral reasoning on behaviors. In addition, methodologies used to measure moral reasoning levels and involvement in professional development activities must be reviewed to ascertain the most appropriate techniques for collection of data.

Meaning and Purpose of Professional Education of Teachers

Is teaching a profession or an occupation? At first, the answer to this question seems far removed from building a case for this study. Yet, the conception of what teachers "should" be is central to determining the parameters of research in teacher education. For some, the answer may be
obvious. For others the claim that teaching is a profession is still open to question (Etzioni, 1969; Griffin, 1986).

Tyler (1978, p. 135) defines "a profession as an occupation that assumes responsibility for some tasks too complex to be guided by specific rules". Some definitions of a profession include criteria such as accredited in-depth training programs, a code of ethics, life-long learning requirements, and certification of the practicing professionals by the professional association.

By rigid definitional standards teaching is not a profession, yet the need to strengthen teaching as a profession is a central theme in educational literature. For example, the Holmes Group (1986) and the Carnegie Forum (1986) recommend abolition of an undergraduate teaching major in favor of a graduate level program, strengthening processes of credentialing and licensing, and providing incentives for long term careers. The movement is propelled by an assumption that by directing teaching towards becoming a profession, greater numbers of higher quality people will enter and stay in teaching, even though that assumption may be incorrect (Mertens and Yarger, 1988).

If teaching is not a profession, can we justify expecting teachers to perform as professionals? The most appropriate answer to the question is found by looking at the responsibilities and tasks that society attributes to persons viewed as professionals.
What it Means to be a Professional

Howey, et al. (1985) characterizes a professional:

by the ability to make informed judgments and perform important tasks in complex environments. These judgments and performances are grounded in an identifiable, empirically supported knowledge base to which the members of the profession contribute. (p.86)

In law, medicine, and engineering, no major difference exists between the researcher and practitioner. Though this is not the case for the teaching "profession", Howey supports collaborative efforts that would advance the status of teachers in this regard.

Tyler (1978) describes professionals as: (a) performing tasks with artistic adaptation of general principles together with a code of professional ethics, (b) using an internalized "cognitive map" of the phenomenon with which they are dealing to apply general, relevant principles to devise and follow courses of action, and (c) working out appropriate answers for individual situations. He contrasts this view with that of some teacher educators who argue that a teacher's tasks are not that complex. Thus, teacher education objectives are simply to develop certain skills, such as lecturing, questioning, discussing and disciplining.

Empowerment is also a concept related to being a professional (Mertens and Yarger, 1988). For teachers as professionals, empowerment is the basic authority and power to practice teaching based on professional knowledge and being involved in decision making which impacts on their
professional practice. Mertens and Yarger believe that, in spite of organizational structure, most teachers conduct themselves as empowered professionals, though most of it is when the classroom door is shut. Lortie (1986) sees the professional empowering of teachers being reduced as the bureaucratic controls on the practice of teaching increase.

Griffin (1986) identifies four conceptions of teachers that would be needed to identify them as professionals: (a) the teacher as informed about a substantial and still growing body of educational knowledge, (b) the teacher as providing a service for the public based on that specialized knowledge, (c) the teacher as committed to inquiry that contributes to the educational knowledge base, and (d) the teacher as part of a community of peers with control over who should become and remain a member. Clearly, not all of these are true of teachers, but, the movements to improve education try to enhance these conceptions.

Brown (1980) identifies four points about practicing professionals in personal service professions, such as Education. The practitioners:

a) set tasks for themselves which bring about changes in the personality of clients, b) carry out those tasks in ways which reflect reciprocity in relationship with clients, expecting critical reflection of both professional and client in an atmosphere of mutual respect, interdependence, trust, and love, c) recognize great moral significance and obligation in professional action, and d) make value judgments about the goals or ends to be accomplished in each professional act in the interest of the client and of society. (p. 29)
Whether or not teaching is a profession is an issue not intended to be resolved from this review. It is, however, critical that it be understood that this research effort is based on the view that teachers are professionals in terms of their expected performance. Colleges and universities have been assigned the work of teacher education because of recognized value of viewing teachers as professionals, as opposed to routine workers (Tyler, 1978).

In fact, in today's society, it is imperative to view the teacher as a professional. Tyler (1978) supports this position by discussing teacher accountability. He notes that teacher accountability has always been in existence, but what teachers are held accountable for has changed, particularly since the 1960s. Prior to then, if teachers knew their subject, presented it accurately, presented exercises, and firmly required fulfillment of assignments, the process of schooling considered was satisfactory. If the student did not learn, it was the pupil's fault. Now, because of the effects of the uneducated on society, there is increased pressure to be accountable for the educational achievement of pupils. This switch in what teachers are accountable for requires teachers to be thought of as professionals.
Goals of Professional Education

The view of the teacher as a professional, as opposed to a routine worker, has significant implications for the goals related to their education. Determining "how" professionals perform and what "internal" resources are used, not just the highly specific skills that often represent an occupation, become the central concerns for educating teachers. In opposition with occupational or paraprofessional training that involves attaining information and skills that can be efficiently taught, readily learned, easily observed, and quickly remedied, professional education:

gives careful attention to the need for the professional to have at his or her command the most relevant and recent knowledge about the tasks at hand and to select from that knowledge what the specific work situation demands. (Griffin, 1986, p.3)

The education of professionals, unlike many occupations, also requires a system for lifelong learning that enhances opportunity for growth and change in relation to the evolving society and knowledge base. That is, the pre-service and in-service education programs are critical to the goal of educating full-functioning teaching professionals. Tyler (1978) sees the goals of pre-service education at the colleges and universities to be the formulation of a substantial beginning of a lifelong, professional education program. It is the time to assist students in learning how to draw upon science and scholarship to deal with professional tasks and to begin
developing their conceptual maps. He states that concepts, principles and professional practices are matters of continued, lifelong inquiry.

Rubin (1978) stated that it is unlikely most teachers will ever reach their full potential. As such, he supports the lifelong notion of professional education by suggesting that a routine aspect of professional life should be to improve teaching skills and that time and resources to assess and carry on improvement should be provided.

Tyler (1978) also addressed the issue of accountability and its relation to professional education. He stated that:

if teachers are to be held accountable for their professional performance, then the entire fabric of their pre-service and in-service education must provide a solid base, continuing network of supportive and evaluation procedures to help them become more effective in performing their professional tasks. (p. 132)

Thus, the goals of professional education can be thought of as those goals which are necessary to achieve in order to perform professional tasks. Such goals can only be achieved through an educational program that provides lifelong learning for its students, which includes effective pre-service and in-service education.

Professional Development and In-service Education

The lifelong process of professional development can be accomplished in many ways through a variety of activities. For some teachers, personal growth activities, such as
travel, reading, and community work, can also serve to develop them professionally, that is, make them more effective teachers or help them to attain other professional goals. In-service education activities, those formally structured experiences for practicing teachers, are intended to assure that all teachers involve themselves in professional development. Because in-service education programming is a primary means of professional development for teachers, the body of literature about in-service education is part of this review.

Eraut (1987) contrasted four paradigms of in-service education: (a) "defect", (b) "growth", (c) "change", and (d) "problem-solving". The "defect paradigm" aims at improving teachers, regarding them as obsolete or inefficient. The "growth paradigm" aim is a redirection of teachers to seek new options and perspectives and increased professional competence. The "change paradigm" is based on teachers' needs to keep abreast of changes in society and schooling. And, the "problem-solving paradigm" is to improve teachers via internally diagnosed teaching problems which inevitably arise for teachers.

The "defect" and "problem-solving" paradigms have the goal of improvement whereas the "change" and "growth" paradigms have the goal of redirection. Internal stimuli are viewed as the reason for in-inservice involvement with the "problem-solving" and "growth" paradigms whereas external
stimuli are viewed as the reason for in-service involvement with the "defect" and "change" paradigms.

There are many variables which effect the outcome of in-service education. A model by Joyce and Showers (1985) placed these variables into three categories: (a) Teachers individual and personal characteristics, that is, what they bring to the in-service activities, e.g. knowledge, skills, growth states, personality, conceptual levels, etc.; (b) Contextual factors of the schools and systems, e.g. leadership styles, climate, governance, community connections; and, (c) Elements of the specific in-service programs, e.g. goals, training content and process, and implementation measures. The outcome of the model is viewed as the cognitive and affective learnings of students, with in-service being an intermediary. Using this model, the purpose in this section of the review is to attain an overview of the research on in-service education while being focused on attaining insight about relationships of teacher characteristics as variables that impact on in-service education programming.

The Current Scene of Research on In-service Education

The body of literature concerning in-service education is expanding rapidly, but it is still considered to be in its infancy. Researchers are beginning to feel "growing pains" from the vague language used in the field, the weaknesses of models and evaluation, and the lack of
theoretical frameworks of past research (Howey et al., 1985; Yarger and Galuzzo, 1983).

Yarger and Galuzzo (1983) explored in-service education research literature by using a matrix as an advanced organizer and to generate a research agenda. The matrix consisted of research types (rows) by research questions (columns). Their exploration included studies that would have been discarded by those using a conservative understanding of research. A broad definition of research was deemed appropriate since research on in-service teacher education is at the starting point and that by so doing, the field could benefit through greater perceptual understandings.

The five research types were: (a) program descriptions, (b) case studies, (c) surveys, (d) correlational studies, and (e) experimental studies. They are viewed as hierarchial in nature, with the most unsophisticated research types first. Program descriptions, case studies and surveys provide findings primarily for the contextual factors and elements of in-service programs. Multitudes of needs assessment surveys provide preferences of teachers regarding elements of in-service programs. Yarger and Galuzzo found no correlational studies related to in-service education, but they believe this type of study could be valuable. The experimental studies generally are intervention studies that deal with enhancing the outcomes
of in-service education through teacher development of specific teaching behaviors. A large bulk of the literature is found within the first three research types.

Four research questions were used in the matrix: (a) What exists? (b) What is appropriate? (c) What is feasible? and, (d) What is effective? Yarger and Galuzzo do not claim that these are all, or even the most important, questions to research. The questions are more accurately described as question "areas" which were identified from the most frequent objects of focus in past reviews (Lawrence, 1974; Joyce and Showers, 1980; Nicholson and Joyce, 1976).

The question area of "What exists?" includes investigations of content, delivery systems, governance structures, costs, instructors, and so on. The "What is appropriate?" area is defined not only from the teachers' perspective, but from all involved in the process, e.g., school administrators, policy makers, teacher educators. Perceived appropriateness, substantive appropriateness, and policy appropriateness are included in this area. The "What is feasible?" area refers to content as well as to political conditions, economics, and motivation of clients. And, the "What is effective?" area addresses outcomes of in-service education for teachers and students that go beyond perceptions.

To this point, the research matrix has been presented as an useful organizer for gaining knowledge about the variable
categories of the in-service education model by Joyce and Showers. Keeping in mind the four questions of the matrix, the review will now focus on the impact of teacher related variables on in-service education activities. That is, what exists, what is appropriate, what is feasible, and/or what is effective concerning the relationship of variables related to teachers and in-service education? Issues or findings that may be more appropriately classified in other categories of the model will be addressed only as they impact on this focus.

Teacher Characteristics as Variables in In-service Education

In-service education as a system of education is more frequently criticized than it is praised. In a survey called the In-service Teacher Education Study (ITES) (Yarger, Howey, and Joyce, 1979) 30% of teachers, administrators, professors, and parents viewed in-service education as in poor or bad condition. Around 40% viewed it as only fair, while only about one quarter of them viewed it as in good or excellent condition. At the same time, the need and desire to make it effective because of its potential for addressing educational problems is widely accepted.

In almost any list of problems or recommendations for change of in-service education, the lack of relevance to teachers' situations or individual needs is identified. When praise is given, it is usually associated with an
individual program that overcomes this criticism.

From ITES data, the researchers suggest that:

in-service must be consonant with the values systems held by teachers and this speaks directly to the where, when, and how of these activities. More personalized and individualized forms of in-service are needed. (Yarger et al., 1979, p. 27)

Some of the individual characteristics which impact on the where, when and how of these activities are frequently identified with need assessment surveys. However, the ITES researchers conclude that teachers should have a more central role in all parts of the process, which calls for transcending current "needs assessments".

In the capsulized findings from a study of 1300 practitioners done for the Phi Delta Kappa's Commission on Professional Renewal (King, Hayes, and Newman, 1977), the theme of teacher involvement, which includes and goes beyond needs assessment, is identified again. The study was directed to understanding the apparent eagerness of teachers to improve performance while, at the same time, frequently disdaining local in-service efforts. Recommendations for improvement of local in-service included the selection of "real" teacher needs, cooperative determination and planning, and balancing personal and organizational benefits as well as individualized and collective offerings.

Rubin (1978) in a list of problems about the state of affairs of in-service education mentioned three concerns related to teacher variables and in-service activities.
First, we have not exploited the potential inherent in teachers educating one another. Second, with preoccupation of teaching techniques, we have overlooked the "personological" skills that should be developed. And, third, educational and social values teachers embrace have received little systematic attention. He also noted that in-service training units should accommodate individuality with alternative training methods, allowing them to start at their own level and progress at their own rates.

Ward (1985) identified four dimensions that warrant special attention for the professional development of experienced teachers. She notes that the changing nature and demographics in one of the dimensions, the work force of teachers, will force attention to what is known about adult learning, cognition, and change as in-service is implemented for teachers.

Another criticism is that staff development is often presented and perceived as deficit correction rather than as part of normal growth experience (Howey and Vaughn, 1983). Little attention is paid to learning style or the stage of development of the participants. The result is:

an in-service program of externally determined nature which does not adequately consider the individuals' present skills or knowledge. Despite recent attempts to consider adult stages of development, and individual attitudes and behaviors toward a particular desired in-service focus, the norm in structuring appropriate staff development activities continues to be a largely, undifferentiated group approach. (p. 99)
Seaward (1984) in an article about teacher burnout states that the personal development of teachers is rarely discussed in in-service programs. Though she recognizes the teacher burnout syndrome still needs much research, she sees truly meaningful in-service as a way to foster morale and performance.

To this point in the review, teacher characteristics that relate to in-service education have been identified through citations about criticisms and problems of in-service. Now, data about teachers' amount of involvement, reasons for involvement, what motivates their participation, and what teachers are capable of in the in-service setting will be used to identify other teacher characteristics.

The ITES survey revealed that the modal form of in-service was a lecture/discussion or workshop format occurring after school. However, there was strong support for other formats, e.g., released time during the day, paid summer study.

Teachers also reported that they participated in relatively small amounts of staff development. A great majority reported that they engaged in various forms less than once a year. However, they also reported that staff development generally was a good idea.

The primary reason ITES teachers participated in in-service was their intrinsic beliefs that it could help them to do their jobs better. In a study by Berman and
McCloughlin (1978) extrinsic rewards had insignificant or negative effects for teachers who participated in training. Palmer (1978) suggests that extrinsic rewards are important, but often overused and relied upon, whereas, intrinsic motivation is underutilized.

Joyce and Showers (1980) examined more than 200 studies on the ability of teachers to acquire teaching skills. They found that teachers are "wonderful learners". The research revealed conditions (forms of training, e.g. presentation of theory, modeling or demonstrations, practice under controlled conditions, feedback, and coaching) necessary to help teachers learn. Information about designing staff development activities was also identified, however, it was also found that the conditions for learning were not common in in-service settings, even when the teachers participated in governance of the settings.

To summarize this literature in regard to the research matrix questions, "what exists" is that teacher variables are weakly accounted for in the in-service setting. When teacher variables are accounted for, they seem to be the "surface" variables related to enhancing participation or perceptions of the experience through needs assessments or extrinsic motivators. The criticisms and problems identified in this review suggest that "what is appropriate" is to support greater teacher input into governance and to seek to account for the more complex individual
characteristics of teachers, e.g., learning styles, values, developmental levels, and growth states, as in-service education is planned and implemented. "What is feasible" is more easily discerned from other parts of the literature that relate to the contextual factors of in-service, thus has not been addressed in this review. Clearly, "what is effective" is accounting for those complex individual teacher variables which relate to their participation and learning, and consequently, to what their students may learn.

At this point in the review, rationales have been provided for viewing teachers as professionals that perform complex tasks and for studying the relationship of teachers' individual characteristics and in-service education. The review is now directed towards building a rationale and framework for the study of one individual characteristic of teachers, moral reasoning.

Moral reasoning was selected because it is a component of moral action. As such, moral reasoning can be an indicator of professionality. Eraut (1987) and Brown (1980) have recognized professional teachers as having moral commitment in their actions with clients.

Framework for the Study of Moral Reasoning

Individual characteristics do not develop or function singly, but in conjunction with one another. Moral reasoning as a teacher characteristic must be placed in a
context with other characteristics to provide a frame of reference for understanding. Developmental theory, in this case for adults, provides that frame of reference.

Adult Developmental Theory and Teacher Education

Adult developmental theories and life-span approaches have been recognized by several researchers as useful frameworks for the study of teachers and teacher education (Sutton and Peters, 1983; Chickering, 1976; Sprinthall and Sprinthall, 1983b; Fuller, 1969; Kohlberg, 1973; and Loveinger, 1976). Application of developmental theories are relatively recent to teacher education, with the works of Fuller and Kohlberg in the past two decades significantly starting the movement. It should be noted that other frameworks not based on developmental theory continue to grow also, particularly those which connect teacher effectiveness to instructional models (Berliner and Rosenshine, 1977). Though use of developmental theories has been criticized as a framework for determining the effectiveness (outcomes) of teacher education programs, they are recognized as a way of determining likely effects of the programs, that is, they have diagnostic value (Floden and Feiman, 1980).

These theories recognize human development as a product of inheritance, life expectations, personal choice, social expectations and chance (Newman and Newman, 1987). General assumptions that underlie most of these theories are (Sutton

1) Growth and behavior change occur at any point, from conception through old age.

2) Change occurs in many ways, such as, quantitatively, qualitatively, abruptly, gradually, positively, and/or negatively.

3) The goals of use of these theories are to explain, describe, and modify established patterns and interrelationships.

4) Growth and development are contextual, thus, it is important to conceptualize and describe the changing environmental contexts that impinge on individual development.

5) There is a need to understand the whole person, because individuals function in an integrative manner.

Most developmental theories deal with the stages, or classifications in which an individual may be categorized. Cognitive development theories, a class of theories in which moral reasoning theory is placed, have further assumptions related to stages. These assumptions are:

1) All humans process experience through cognitive structures called stages. That is, changes in the organization of a person's thinking (stage) represents new ways of looking at the world (Floden and Feiman, 1980).
2) These cognitive structures (stages) are hierarchial in complexity and are predictable.

3) Growth occurs first within a stage and only then to the next stage. These stages are qualitatively different.

4) In order to move to higher stages, persons pass through the same invariant sequence of stages.

5) Growth is not automatic nor unilateral, but occurs with appropriate individual and environmental interaction.

6) There is a tendency to prefer or function at the highest stage that has been developed.

7) Behavior can be determined and predicted by an individual's particular stage of development, however, not exactly.

Feiman and Floden (1981) believe that cognitive developmental stage theories have strong implications for educating adults within teacher education programs. However, no single cognitive developmental theory has been recognized as being superordinate (Sprinthall and Sprinthall, 1983a). And, most of these theories have somewhat comparative stages, giving credence to the assumption that development is not unilateral. Howey and Gardner (1983) have explicated the comparison of stages of development for theories often used in teacher education research.

Floden and Feiman (1980) recognize that use of a particular theory leads to a view of desired outcomes of teacher education which implies definitions of effective or
"good" teachers. With Fullers' model of levels of teacher concern, "good" teachers are concerned about impact on pupils. In Hall's model of teacher acceptance of innovation, a "good" teacher is one who adopts externally produced materials. Sprinthall and Sprinthall's model of Deliberate Psychological Education describes a "good" teacher as one who is at the higher stages of conceptual, ego, and moral development as respectively defined by Hunt, Loveinger, and Kohlberg. Other views of a "good" teacher do not necessarily relate to any cognitive development theory, for example, the view of a "good" teacher as capable of somewhat mechanically implementing a wide variety of strategies and methods. Feiman and Floden contend that the theories make assumptions concerning effective teaching which are incomplete, thus, no one model or theory to date is sufficient. Further, they criticize the theories because the conditions and learning experiences needed to move from one stage to the next are vague.

In summary, if teachers are desirably viewed as professionals, as is contended in this study, it seems the most desired outcomes of teacher education are best aligned to theories of conceptual, ego, and moral development. Researchers describe higher stage teachers as having characteristics which are also professional, that is, teachers of higher stages are described as more flexible, adaptive, creative, and empathetic; tolerant of stress,
conflict, and ambiguity; respective of individuality; cherishing of interpersonal ties; and capable of seeing a greater social perspective (Witherall and Erickson, 1978; Harvey, Hunt, and Schroeder, 1961; Sprinthall and Sprinthall, 1983a).

A Perspective on Moral Reasoning Developmental Theories

Cognitive developmental theories of moral development deal with the structure of thought or the reasoning processes related to moral concepts, that is, with ways of thinking about the social world, about right and wrong, and about these in relation to the self (Gelfand and Hartmann, 1980). The distinguishing characteristic is a series of stages that are qualitatively distinct, coherent, hierarchically arranged, and invariant. Individuals develop, or move through these stages, as they actively cope and resolve conflicts in their social environments. Kohlberg (1976, p. 48) lists 10 theories which fall into this description. These theories contrast with social learning and psychoanalytic theories that are not based on stages.

It is important to note that cognitive developmental theories of moral development do not address all aspects of morality, but rather, they focus only on a portion of it, the cognitive processes of making judgments. Hersh, Miller and Fielding (1980) have identified three components of moral education from their view of morality: caring,
judging, and acting.

The larger framework of morality is also recognized in the "Four Component Model" (Rest, 1986b) of basic psychological processes needed for "behaving morally". First, the person must be able to view the possible alternative actions in a given situation and how such action would effect interested parties. Second, the person would have to be able to judge the course of action(s) morally right, fair or just. Third, the person must give priority to moral values over personal values in order to intend to perform morally, and lastly, the person must have perseverance, ego strength, and skills to follow through with the morally right intention. These components, collectively, not as single, unitary processes represent moral behavior. This does not mean, however, that study concerning one component of morality is a worthless endeavor.

Lawrence Kohlberg has combined work in philosophy, psychology, and educational practice to construct an explanation of moral development based on the judgement component of morality. His theory provides a framework for trying to associate the states of teachers' moral reasoning to their actions regarding participation in professional development activities.
Kohlberg's Model of Moral Judgement and Development

Kohlberg's theory of moral development is more precisely a theory of moral judgement. "Good" or "proper" actions or behavior are to him most powerfully explained in terms of the logical thought processes and patterns through which one conceives and justifies choices, particularly revealed when there is a conflict of values within a person. He has delineated the structure of moral reasoning from middle-childhood to adulthood.

Kohlberg's (1981) model of moral judgement (reasoning) has four levels and six stages of moral growth. See Appendix B for elaboration of these stages. Each level and stage represents qualitatively different structures of thinking employed by people as they deal with moral dilemma questions. The Preconventional Level, Level A, has two stages, Stage 1, Punishment and Obedience, and Stage 2, Individual Instrumental Purpose and Exchange. The Conventional Level, Level B, is composed of Stage 3, Mutual Interpersonal Expectations, and Stage 4, Social System and Conscience Maintenance. The Postconventional Level, Level C, contains Stage 5, Prior Rights and Social Contract or Utility, and Stage 6, Universal Ethical Principles. Level B/C is a fourth, more recently identified, level and is postconventional but not yet principled.

An individual progresses through these stages, becoming less dependent on immediate personal and interpersonal
reference points to the highest stages of universal principles of justice. Kohlberg has estimated that over 80% of the adult population stay at Level B, mostly at Stage 4 (Hersh et al., 1980). At Level B, Stage 4, the person is capable of empathizing to "generalized", as opposed to "significant" others as in Stage 3, thus taking on the perspective of the social system and various institutions with which one is affiliated. The view of the potential effect on the whole system provides a basis for moral judgement. Law emerges as a central value as a means of codifying social and moral agreement, which when broken, threatens the system. Law and life are both sacred when these values come in conflict, they have difficulty with decision making. Kohlberg believes people at this stage adequately address societal and interpersonal issues, but they inadequately deal with systems that often come into conflict, such as the system of law in conflict with basic human rights. That is, at this stage there is no thinking structure which adequately provides for choosing dissent over adherence.

At the postconventional level of Stages 5 and 6, the autonomous, or principled levels, the individual sees beyond the norms and laws of society to question and judge the principles upon which a good society is based. This is the level, philosophically derived, which draws the most criticism for the model. Moral obligation is seen from the
perspective of a social contract in terms of critically examined general individual rights and standards. The contracts are seen to be taken on by all as equal and freely accepted obligations. Moral conflict is viewed from the perspective of any human being, not merely member of the person's society. Right actions are based on universalized criteria.

Kohlberg has developed the "Moral Judgement Interview" to assess an individual's stage according to his theory. The interview (test) process is quite time consuming and it requires the test scorer to be highly trained if results are to be reliable. The cost of this mandatory training is often prohibitive for researchers. These and other factors have lead Rest to develop an objective measure of moral reasoning, the Defining Issues Test, based on Kohlberg's stages with some small definitional variations.

The Defining Issues Test

as a Measure of Moral Judgement

The Defining Issues Test (DIT) (Rest, 1986a) is based on the premise that people at different stages of development define critical issues related to moral dilemmas differently, and intuitively feel different about what is right and fair in given situations. That is, the underlying structures needed to deal with moral dilemmas may seem to the subject as obvious, without the person necessarily being able to articulate those systems of structure.
The task of a person taking the DIT is to read a moral dilemma and then to indicate from a list of "issues" (questions) those which are important in deciding what to do. The six dilemmas presented in the DIT are each accompanied by a set of 12 items, for a total of 72 items for the whole test. Each item's vocabulary and syntax is comparable and are written as questions to focus on the argument presented instead of the action. The items represent different considerations that have diagnostic value for stage identification. The DIT items are a set of alternatives that in effect present a forced-choice between different concepts of justice. Consistent and predominant selections of items relating to particular concepts of justice places the subject in a stage. Idiosyncratic reasons for selections cancel each other out in aggregated scores.

The most used score of the DIT is the "P" (principled morality) score, which measures the relative importance subjects attribute to stages 5 and 6. The score is expressed in terms of a percentage ranging from 0 to 95 and has shown the most consistent reliability and validity of any index of the DIT. Other scores include: the "D" index based on latent-trait, unfolding models of scaling theory, the M-score consistency measure and the A-score of antiestablishment attitude. A "U" score indicates the extent to which subjects use concepts of justice in choosing
the "right" moral choice.

Rest (1986b) has identified 10 empirical findings from 500 studies using the DIT. They are:

1) Moral judgement changes with time and formal education as predicted by theories of developmental progression. Two meta-analysis studies of 100,000 subjects and a dozen longitudinal studies account for about 30 to 50% of the variance in DIT scores. Formal education is a stronger correlate than age with moral judgement.

2) Evidence for Kohlberg's higher stages is provided by DIT scores.

3) In several studies of life experiences associated with moral judgement development, it appears that specific moral experiences are not as important to foster development as is becoming more aware of the social world and one's place in it.

4) Moral education programs designed to stimulate moral judgement produce modest, but significant gains.

5) Similarities across cultures are more striking than the differences when using the DIT.

6) Sex differences on the DIT are trivial.

7) Conservative versus liberal ideology of religion is moderately, but significantly related to DIT scores.

8) The utilizor score, the degree to which people use justice concepts to make decisions, significantly increases the amount of variance that can be accounted for in
behavioral measures.

9) Meaningful results of over 500 studies indicate that the DIT is a useful measure of moral judgement.

10) Meaningful results of over 50 studies indicate that the DIT scores are significant to a wide variety of behavioral and attitudinal measures. The measures include behaviors such as cooperative behavior, distribution of rewards, cheating, conscientious objection, voting for presidential candidates, clinical performance of medical interns, delinquency, and school problem behavior. Consistent, but modest correlations were found with this wide range of behaviors.

Since this study is not one of intervention, but rather one of association with current behavior (participation in professional development activities), the last empirical finding is important for this study in that it shows the "door is open" to investigate moral reasoning levels and behaviors.

Summary

This review of literature has provided background and rationale for identifying the moral reasoning levels of teachers and for studying the possible relationship of those levels with participation in professional development activities. With the recognition that teachers are professionals, not just routine workers, and that they will need lifelong learning experiences, such as in-service
education activities, to develop professional skills, moral reasoning has been identified as one, possibly significant, teacher characteristic to study.

An overview of the state of the art of in-service education research has highlighted difficulties in making that body of knowledge useful. Further, study of the relationship of teacher characteristics on in-service education activities that goes beyond needs assessment surveys was identified as particularly weak. Yet, by identifying and understanding individual teacher characteristics, i.e. moral reasoning levels, in-service education programming could be made more effective.

A framework for the study of moral reasoning was identified by reviewing cognitive developmental literature and Kohlberg's theory of moral judgement. Finally, an objective measure of moral reasoning levels, the Defining Issues Test, was identified and discussed.

No studies were found that associate the moral reasoning levels of teachers to their professional development activities. However, in the literature reviewed a rationale and theoretical framework was provided that support the study of the possible relationships between moral reasoning and professional development participation.
CHAPTER III
METHODOLOGY

The purpose in this study was to identify characteristics of vocational teachers that may be associated with their involvement in professional development and in-service education activities. Further, the investigator's purpose in this study was to determine if one characteristic, that is, the moral reasoning levels of vocational teachers, were associated with their selection of and participation in professional development activities. Demographic characteristics of age, gender, marital status, family composition, degrees, service area, certificates(s) held, teaching experience, and perceived job security were studied for possible relationships to moral reasoning, types of professional development activities in which teachers participated, and their professional development practices.

Description of Study

This study was exploratory, descriptive, and causal-comparative research. Data were collected from a random sample of Ohio's vocational teachers stratified by five service areas. Four instruments were used: (a) the Defining Issues Test (DIT) by James Rest, (b) the Professional Development Practice instrument, a researcher developed
forced choice questionnaire, (c) the Profile of Professional Activities instrument developed by the researcher, and (d) the General Information questionnaire developed by the researcher. Data analyses provided measures of: (a) moral reasoning levels, (b) patterns of involvement in four categories of professional activities, (c) levels of professional development practices, (d) demographic characteristics, and (e) association between variables.

Research Questions
The following questions gave direction to this research study.

What are the moral reasoning levels of vocational teachers?

What are the professional development activities in which vocational teachers participate?

Do vocational teachers, collectively, exhibit patterns of involvement in professional development activities?

Are the moral reasoning levels of vocational teachers associated with any identified pattern(s) of involvement in professional development activities?

Are the moral reasoning levels of vocational teachers associated with their practices of selecting professional development activities?

Are the moral reasoning levels of vocational teachers associated with the selected demographic variables?
Are any identified pattern(s) of professional development activities associated with the selected demographic variables?

Are the professional development practices associated with the selected demographic variables?

Hypotheses

Vocational teachers have varying levels of moral reasoning.

Vocational teachers have patterns, or similarities that can group teachers, of involvement in professional development activities.

Vocational teachers with higher moral reasoning levels are likely to be involved differently in professional development activities than those with lower moral reasoning levels.

The selected demographic variables of vocational teachers are related to their involvement in professional development activities and their moral reasoning levels.

Sample

A stratified random sample of Ohio's secondary vocational teachers by service area was hand selected from data provided by the Ohio Department of Education (see Table 1). At the time of sampling, 8073 vocational teachers in six vocational service areas were the population. Those service areas, followed by the respective population and, in parentheses, the invited sample size, were:
### Table 1

#### Population and Sample Sizes

<table>
<thead>
<tr>
<th>Service Area</th>
<th>Population</th>
<th>Invited Sample&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Data Producing Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Ag Ed</td>
<td>646</td>
<td>60 9.3</td>
<td>26 43.3</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>1376</td>
<td>60 4.4</td>
<td>29 48.3</td>
</tr>
<tr>
<td>H Ec</td>
<td>1841</td>
<td>71 3.9</td>
<td>38 53.5</td>
</tr>
<tr>
<td>Mrkt</td>
<td>879</td>
<td>60 6.8</td>
<td>25 41.7</td>
</tr>
<tr>
<td>T&amp;I&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3103</td>
<td>119 3.8</td>
<td>51 42.9</td>
</tr>
<tr>
<td>Total&lt;sup&gt;c&lt;/sup&gt;</td>
<td>7845</td>
<td>370 4.7</td>
<td>169 45.7</td>
</tr>
</tbody>
</table>

<sup>a</sup> Classification into service area was done with self-reported data. Original stratification was accomplished with State Department of Education data.

<sup>b</sup> Two persons provided data about the DIT only. They were dropped from analysis except for the DIT findings.

<sup>c</sup> The total used for determining the sample size was 8073, which includes the Health service area that was not sampled.

Agricultural Education, 646 (60); Business Education, 1376 (60); Health, 228 (0); Home Economics, 1841 (71); Marketing, 879 (60); and, Trades and Industry, 3103 (119).

The invited sample size was determined by using established statistical guidelines to insure acceptable bounds for the "P" score of the DIT. The equation used to determine the sample (Shaeffer, et al, 1986, p.54) was:
\[ n = \left( \frac{B}{1.96} \right) \frac{1}{\frac{B^2}{1} + \frac{1}{N}} \]

where \( N \) = total population (8073)

\( n \) = required sample size (301.5)

\( B \) = bound on the error of estimation of (.0175)

\( \frac{\hat{\sigma}^2}{1} \) = estimated variance (.025)

In anticipation of a low return rate the sample size was then increased by 70 to insure that each service area would return sufficient quantity of data (about 30 sets of instruments) for statistical analysis.

Because of the low number of health teachers, the sample size would have been extremely small. Thus, they were eliminated from the sample. The total sample size was 370.

Of the invited sample, 169 produced usable data, that is, returned instruments that were approximately two-thirds or more complete. Two teachers provided data only about the DIT. Thus, their additions to the findings are about the DIT only.

Tables 2 and 3 describe personal demographic characteristics of the sample by service area. Though there was an approximately equal proportion of males and females in the total sample, there was statistical Chi-square difference between service areas. This was the only statistically significant difference between service areas and any of the demographic variables. As expected, Agricultural Education (Ag Ed), Marketing (Mrkt), and Trades
### Table 2

**Demographic Characteristics Describing Sample**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ag Ed n=26</th>
<th>Bus Ed n=29</th>
<th>H Ec n=36</th>
<th>Mrkt n=25</th>
<th>T&amp;I n=49</th>
<th>Totals n=167</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22 84.6</td>
<td>8 27.6</td>
<td>1 3.8</td>
<td>19 76.0</td>
<td>40 81.6</td>
<td>90 53.9</td>
</tr>
<tr>
<td>Female</td>
<td>4 15.4</td>
<td>20 69.0</td>
<td>25 65.8</td>
<td>1 4.0</td>
<td>2 4.1</td>
<td>75 44.9</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>22 84.6</td>
<td>20 69.0</td>
<td>25 65.8</td>
<td>18 72.0</td>
<td>39 79.6</td>
<td>124 74.3</td>
</tr>
<tr>
<td>Never married</td>
<td>1 3.8</td>
<td>6 20.7</td>
<td>2 5.3</td>
<td>1 4.0</td>
<td>2 4.1</td>
<td>12 7.2</td>
</tr>
<tr>
<td>Divorced</td>
<td>2 7.7</td>
<td>2 6.9</td>
<td>8 21.1</td>
<td>2 16.0</td>
<td>4 12.2</td>
<td>22 13.2</td>
</tr>
<tr>
<td>Widowed</td>
<td>1 3.8</td>
<td>0 0.0</td>
<td>2 5.3</td>
<td>1 4.0</td>
<td>2 4.1</td>
<td>6 3.6</td>
</tr>
</tbody>
</table>

* Chi-square (2,n=165) = 77.33, p = 0.000

Note. Gender was not reported by two respondents and marital status was not reported by three respondents.

and Industry (T&I) have high proportions of males where Home Economics (H Ec) and Business Education (Bus Ed) have a high proportion of females.

Approximately, three-fourths of the sample was married. The respective percentage of the sample that was never married, divorced, and widowed was 7%, 13%, and 4%. The mean age for the sample was 42, with a mode of 40. Ages ranged from 22 to 66. The mean number of children was 1.9 and the mode was 2. The number of children ranged from 0 to 6. The mean number of persons living in the household was 3.1 with a mode of 2 and a range of 1 to 7.

These statistics describe the typical vocational teacher as a person who could equally be a male or a female, in the low 40's, married with 2 children. Most frequently, that
Table 3
Demographic Characteristics Describing Sample

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>M</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>38.89</td>
<td>27</td>
<td>24-66</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>40.11</td>
<td>44</td>
<td>25-60</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>40.87</td>
<td>40</td>
<td>22-61</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>40.44</td>
<td>37</td>
<td>27-53</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>46.67</td>
<td>38</td>
<td>25-62</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>42.08</td>
<td>40</td>
<td>22-66</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>2.04</td>
<td>2</td>
<td>0-5</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>1.29</td>
<td>2</td>
<td>0-3</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>1.94</td>
<td>2</td>
<td>0-6</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>1.76</td>
<td>2</td>
<td>0-5</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>2.35</td>
<td>2</td>
<td>0-6</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>1.94</td>
<td>2</td>
<td>0-6</td>
</tr>
<tr>
<td><strong>Number of persons living in household</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>3.65</td>
<td>4</td>
<td>1-7</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>2.86</td>
<td>2</td>
<td>1-5</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>2.89</td>
<td>2</td>
<td>0-6</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>3.08</td>
<td>4</td>
<td>1-5</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>3.14</td>
<td>2</td>
<td>1-7</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>3.11</td>
<td>2</td>
<td>0-7</td>
</tr>
</tbody>
</table>

person lives with only one other person.

Table 4 provides data about the highest degree earned by service area. The highest degree for most of the sample was a bachelors (45%). However, over a third of the sample had a masters degree (36%). Twenty in the sample (12%) had no degree, most of who were in T&I service area. However, no
Table 4

**Highest Degree Earned**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Ag Ed (n=26)</th>
<th>Bus Ed (n=29)</th>
<th>H Ec (n=29)</th>
<th>Mrkt (n=25)</th>
<th>T&amp;I (n=49)</th>
<th>Totals (n=167)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No degree</td>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
</tr>
<tr>
<td>2-Year</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
<td>3.4</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Bachelors</td>
<td>3</td>
<td>11.5</td>
<td>1</td>
<td>3.4</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Masters</td>
<td>12</td>
<td>46.2</td>
<td>13</td>
<td>44.8</td>
<td>23</td>
<td>60.5</td>
</tr>
<tr>
<td>Masters + PhD</td>
<td>9</td>
<td>34.6</td>
<td>10</td>
<td>34.5</td>
<td>14</td>
<td>36.8</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>3.8</td>
<td>4</td>
<td>13.8</td>
<td>1</td>
<td>2.6</td>
</tr>
</tbody>
</table>

significant Chi-square differences were found.

Table 5 presents data related to years of teaching.

The mean number of years that teachers were in their first position was 3.4, however, the mode was 0 and a range of 0 to 17. The mean number of years that teachers were in their current positions was 9.5 years, with the mode of 2 years and a range of 0 to 31. The mean total number of years of teaching was 14.0 with a mode of 16, and range of 1 to 32. The mean anticipated years of teaching was 12.2 with a mode of 15 and a range of 0 to 30. These findings describe an average vocational teacher's years of teaching experience as being in their current position for about 10 years, having about 14 years of teaching, with about 12 years of teaching remaining.

Approximately one-third of the sample had 8-year provisional certificates and another third had 4-year
Table 5

Demographic Characteristics Describing Years of Teaching

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>M</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in first position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>1.52</td>
<td>0</td>
<td>0-5</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>2.67</td>
<td>0</td>
<td>0-9</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>2.50</td>
<td>1</td>
<td>0-13</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>6.44</td>
<td>0</td>
<td>0-16</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>3.95</td>
<td>0</td>
<td>0-17</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>3.41</td>
<td>0</td>
<td>0-17</td>
</tr>
<tr>
<td>Years in current position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>11.19</td>
<td>4</td>
<td>2-31</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>8.64</td>
<td>2</td>
<td>2-22</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>9.34</td>
<td>1</td>
<td>0-22</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>8.08</td>
<td>2</td>
<td>1-18</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>10.00</td>
<td>3</td>
<td>1-20</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>9.52</td>
<td>2</td>
<td>0-31</td>
</tr>
<tr>
<td>Total years of teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>12.42</td>
<td>16</td>
<td>2-31</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>12.82</td>
<td>8</td>
<td>2-25</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>13.66</td>
<td>13</td>
<td>1-28</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>16.72</td>
<td>16</td>
<td>2-29</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>14.43</td>
<td>16</td>
<td>2-32</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>14.01</td>
<td>16</td>
<td>1-32</td>
</tr>
<tr>
<td>Anticipated years of teaching remaining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>9.35</td>
<td>0</td>
<td>0-25</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>12.56</td>
<td>10</td>
<td>0-30</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>14.21</td>
<td>15</td>
<td>0-30</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>14.36</td>
<td>15</td>
<td>0-30</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>10.80</td>
<td>15</td>
<td>0-30</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>12.21</td>
<td>15</td>
<td>0-30</td>
</tr>
</tbody>
</table>
provisional certificates (see Table 6). About one-fourth of the sample have permanent certificates. Less than one-tenth have 1-year temporary certificates. It is likely that those who hold the 8-year provisional certificates are the same ones who hold Master degrees.

The teaching situation is briefly described through three demographic variables: maximum number of daily preparations, the maximum number of teaching periods, and the number of teachers in his/her department (see Table 7). The mean maximum number of preparations was 3.1 with a mode of 2 and a range of 1 to 9. The mean maximum number of teaching periods was 4.8, with a mode of 6 and a range of 1 to 9. The mean number of teachers in the department was 4.6, with a mode of 1 and a range of 1 to 30. It is not clear why some teachers reported what seems to be extremely heavy loads of work, i.e. 9 daily preparations or 9 teaching periods. It may be that these teachers were teaching different students each period. This could happen if the teacher was instructing correlated vocational classes, such as math or sciences applicable to the vocations being studied by the student. The results of the means and modes in these three areas seem to be within reason as one considers how most schools structure schooldays.

Instruments

The Defining Issues Test (DIT) developed by James Rest was selected as a measure of moral reasoning levels. The DIT
<table>
<thead>
<tr>
<th>Type</th>
<th>Ag Ed n=26</th>
<th>Bus Ed n=29</th>
<th>H Ec n=38</th>
<th>Mkt n=25</th>
<th>T&amp;I n=49</th>
<th>Totals n=167</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-yr temporary</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>5.3</td>
</tr>
<tr>
<td>4-yr provisional</td>
<td>14</td>
<td>53.8</td>
<td>9</td>
<td>31.0</td>
<td>14</td>
<td>36.8</td>
</tr>
<tr>
<td>8-yr provisional</td>
<td>6</td>
<td>23.1</td>
<td>9</td>
<td>31.0</td>
<td>14</td>
<td>36.8</td>
</tr>
<tr>
<td>Permanent</td>
<td>6</td>
<td>23.1</td>
<td>9</td>
<td>31.0</td>
<td>8</td>
<td>21.1</td>
</tr>
<tr>
<td>No response</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>7.0</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

provides information about the processes people use to judge what ought to be done in moral dilemmas. The DIT assumes, as does Kohlberg's theory, that basic problem-solving strategies of people can be characterized in terms of six stages or types, although the stages are designed slightly differently than Kohlberg's theory. A database about the DIT contains the largest amount of data collected on any single measure of moral judgement.

A book by Rest (1979) discusses validity of the DIT at length. Findings of face validity, reliability, test-retest correlation, criterion group validity, longitudinal, convergent-divergent correlations, experimental studies and faking studies have been used to confirm the construct validity. A review of studies by Davison and Robbins (1978) found test-retest reliabilities for the P and D scores of the DIT to be in the high .70s or .80s with Cronbach's Alpha index of internal consistency generally in the high .70s.
Table 7

Description of the Teaching Situations

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>n</th>
<th>M</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of daily preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>3.46</td>
<td>3</td>
<td>1-6</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>4.19</td>
<td>3</td>
<td>1-9</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>3.32</td>
<td>2</td>
<td>1-5</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>2.41</td>
<td>2</td>
<td>1-6</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>2.55</td>
<td>2</td>
<td>1-7</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>3.12</td>
<td>2</td>
<td>1-9</td>
</tr>
<tr>
<td>Maximum number of teaching periods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>5.08</td>
<td>6</td>
<td>1-8</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>5.50</td>
<td>6</td>
<td>1-9</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>4.66</td>
<td>5</td>
<td>0-9</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>3.23</td>
<td>4</td>
<td>0-7</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>5.27</td>
<td>6</td>
<td>1-9</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>4.84</td>
<td>6</td>
<td>0-9</td>
</tr>
<tr>
<td>Number of teachers in department</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>2.65</td>
<td>1</td>
<td>1-18</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>7.14</td>
<td>6</td>
<td>1-22</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>3.24</td>
<td>2</td>
<td>0-20</td>
</tr>
<tr>
<td>Mrkt</td>
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<td>5.46</td>
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<td>0-30</td>
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<tr>
<td>Total</td>
<td>167</td>
<td>4.64</td>
<td>1</td>
<td>0-30</td>
</tr>
</tbody>
</table>

The DIT is a multiple-choice test that can be administered via mailing. Most subjects take 35 to 40 minutes to complete it. Each subject is asked to respond to six dilemmas (stories). Each story has 12 statements (issues) that s/he rates on a
5-point scale of importance. Then the respondent rank orders the four most important statements in each story.

The internal consistency checks within the questionnaire detect random responses or people who may not have followed directions. Scoring is completely objective and can be done with scoring keys or by computer.

The DIT yields scores for Stages 2, 3, 4, 4 1/2, 5A, 5B, and 6. In addition, 3 indices (the "P", the "D", and "U" scores) are used to represent the relative importance that a subject gives to principled moral considerations, to indicate the extent to which a subject is using the concepts of justice in choosing the "right" moral choice, and to develop a composite score. Two internal reliability scores are used as a check on the usefulness of each subject's information. Complete scoring is described by Rest (1986a).

Responses of 169 teachers to the DIT instrument were sent to the Center for Ethical Development for analysis. Of these, responses from 39 (23%) were invalidated for statistical analysis due to failing the M-Score checking and the Consistency Check. Therefore, findings are reported for 130 teachers. Rest (1987) reports it normal to lose between 5% and 15% of a sample to these checks. The high percentage
of rejection for this sample may have been due to the sample size.

The second instrument, "Professional Development Practice" (PDP), is a forced choice questionnaire developed by the researcher in order to have an instrument that would match moral reasoning levels with professional development practices (see Appendix B). Twelve items, two for each of the six stages and levels of Kohlberg's theoretical model, were developed.

Faculty members and advanced graduate students in The Ohio State University College of Home Economics who had studied Kohlberg's theory were asked to validate the stage and level of each item. A 75% agreement or greater was deemed necessary in order to use an item in the instrument, with the item of greatest agreement being selected to represent the stage.

To develop the forced choice PDP instrument, each item was paired with every other item and directions were prepared. The PDP instrument was then field tested by 15 students enrolled in a graduate vocational home economics education class. The field test sample was composed of all females between the ages of 24 and 59. The racial representation was 20% black and 80% white.
Fourteen of the respondents had teaching experience ranging from 2 to 22 years, with half (7) currently teaching. A B.S. degree was the highest for 10 of them while 4 also held a M.S. degree. One person did not respond to the demographic items.

The PDP was scored for each respondent by a method of tallying the preferred statement in each pair of items. The six statements were then ranked in regard to preference for selecting one statement over another.

Of the fifteen responding to the instrument one scored in Level I, six in Level II, and eight in Level III. The instruments appeared to discriminate. Those with more teaching experience and higher degrees tended to score in level III. A second field testing of the instrument was done with vocational teachers.

The Profile of Professional Activities (PPA) instrument was designed by the researcher to determine the types of professional activities and the extent to which the subjects participated in professional development activities (see Appendix B). The types of professional development experiences gleaned from the literature were placed into four categories: 1) university credit activities, 2) professional association activities, 3) non-degree, continuing
education activities, and 4) personal activities. By assessing the quantity of participation and time spent in each of these categories, the intent was to identify the involvement in professional development activities and the preferred patterns of participation as defined by the relative amount of participation in each category. The PPA instrument also requested the respondents to rank order each category of professional development in regard to benefits and then on the time spent in each category. The PPA was field tested by vocational teachers to insure clarity of responses requested and for preliminary analysis.

The General Information questionnaire was used to gain demographic information that the literature suggested or seemed logical to collect as potential factors effecting results from the other instruments. Data were collected in the following areas: personal and family information, teaching certification, and teaching experiences. The questionnaire was field tested for clarity to the respondents and was found to be acceptable.
Data Collection

The DIT, PDP, PPA, the General Information questionnaire, a cover letter, a No. 2 pencil, a notepad as a token of appreciation, and a stamped return envelope were mailed during March, 1988. The letter described the importance of the study and was jointly signed by the researcher, and a director of a Vocational Education Personnel Development Center, Ohio Department of Education (see Appendix C). The letter also insured participant anonymity, and explained an offer to write a letter of commendation to the administrator of their choice. Participants were asked to return the instruments to the researcher in care of the OSU Department of Home Economics Education by April 15, 1988. Two follow up postcards were mailed: one on April 5, 1988 and another on April 15, 1988. Both follow-up cards provided opportunity to receive a second set of instruments (see Appendix C).

Treatment of Data

The data were analyzed by computer using an SPSS* program. The computer scoring program done for the DIT was done at the Center for the Study of Ethical Development at the University of Minnesota. Data on the DIT were sent from the Center as hard copies and via disks for addition to the computer data from the other instruments. Table 8 summarizes
how the data answered the research questions.

The forced choice PDP instrument was analyzed by classifying people into levels based on frequency of responses to each item that composed a level. McNemar's Chi-square test for equality of distributions was done between 3 subdivisions of DIT's P score and the 3 levels of the PDP.

The PPA and General Information data were analyzed with frequencies, means, modes, and ranges of variables. Chi-square statistical tests of significance was administered to determine if differences existed between variables and between service areas.
Table 8

Summary of Research Questions, Instruments, and Methods of Data Analysis

<table>
<thead>
<tr>
<th>Question</th>
<th>Instrument(s)</th>
<th>Data Analysis Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the moral reasoning levels of vocational teachers?</td>
<td>Defining Issues Test (DIT)</td>
<td>Means and Std. Dev. t-tests</td>
</tr>
<tr>
<td>What are the professional activities in which vocational teachers</td>
<td>Professional Development Practice (PDP)</td>
<td>Frequencies Means Modes Ranges</td>
</tr>
<tr>
<td>participate?</td>
<td>Profile of Professional Activities (PPA)</td>
<td></td>
</tr>
<tr>
<td>Do vocational teachers collectively exhibit patterns of involvement in</td>
<td>PPA</td>
<td>Rankings by percent</td>
</tr>
<tr>
<td>professional development activities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are moral reasoning levels of vocational teachers associated with any</td>
<td>DIT, PPA</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>identified pattern(s) of involvement in professional development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>activities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are moral reasoning levels of vocational teachers associated with their</td>
<td>DIT, PDP</td>
<td>McNemar's Chi-Square</td>
</tr>
<tr>
<td>professional development practices?</td>
<td></td>
<td></td>
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</table>
Table 8 (continued)

Summary of Research Questions, Instruments, and Methods of Data Analysis

<table>
<thead>
<tr>
<th>Question</th>
<th>Instrument(s)</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the moral reasoning levels associated with selected demographic variables?</td>
<td>DIT, General Information</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Are any identified pattern(s) of professional development activities associated with selected demographic variables?</td>
<td>PPA, General Information</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Are professional development practices associated with selected demographic variables?</td>
<td>PDP, General Information</td>
<td>Chi-Square</td>
</tr>
</tbody>
</table>
CHAPTER IV
FINDINGS AND DISCUSSION

The purposes in this study were to identify moral reasoning levels of vocational teachers, to describe their involvements in professional development activities, and to determine if associations exist between their moral reasoning levels and involvements in professional development. Demographic characteristics of service area, degree held, age, gender, marital status, certificate held, years of teaching experience, and perceived job security were studied for possible relationships to moral reasoning levels and involvement in professional development activities. The study was descriptive, exploratory and causal-comparative and used an established instrument to measure moral reasoning, "The Defining Issues Test" (DIT); an instrument to measure professional development practices, "Professional Development Practices" (PDP); and a questionnaire to attain self-reported information about involvements in professional development activities, "Profile of Professional Activities" (PPA).

The findings are based on analysis of data from a stratified random sample of 169 Ohio vocational teachers in five service areas. Most variables in this descriptive
study are nominal and ordinal measurements; therefore frequencies, crosstabulations, and Chi-square were primarily used to analyze the data. Means, standard deviations, and t-tests were used to describe and test for significant differences of the DIT.

The findings and discussion in this chapter are organized around the research questions. Answers to the first three questions provide descriptive information, while associations sought in the data are described in the last five questions. A discussion specifically relating to the review of literature follows the findings.

Research Question 1

What are the moral reasoning levels of vocational teachers?

As done in most studies, this researcher reports results of the DIT by use of only the P score. Descriptive statistics related to the stages and other indices of the DIT are reported in Appendix A. The P score can range from 0 to 95 and reflects the relative importance that subjects give to principled moral considerations, that is Stage 5 and Stage 6 items. Roughly, Rest's (1987) norm groups of Junior High students average in the 20s, High School students in the 30s, College students in the 40s, Graduate students in the 50s, and Moral Philosophers in the 60s.

The P score mean for the total group (n=130) is 36.5 with a standard deviation of 11.8. Rest (1987) indicates that most sample groups have standard deviations between 4
and 16.

T-tests on the P score mean between the total group and norm groups reported in Table 9 indicate that the total group was significantly different than any of the norm groups. The mean of the total group is between the Senior High and the College norm groups means, which are 31.0 and 43.2, respectively.

T-tests on the P score mean between each service area and the norm groups indicate significant differences (p < .05) for all pairs tested except Agricultural Education (Ag Ed) mean of 34.4 and Senior High mean of 31.0; the Business Education (Bus Ed) mean of 39.5 and the College mean of 43.2; and, the Marketing (Mrkt) mean of 38.2 and the College mean of 43.2. The Home Economics (H Ec) mean of 37.3 and the Trades and Industry (T&I) mean of 35.0 are both between the Senior High and College norm group means.

These empirical findings from the DIT suggest that the overall sample assigned a higher relative importance to principled moral considerations than did the Senior High norm groups, but not as high as the College norm groups. However, by service area, the Ag Ed service area sample appeared to assign a relative importance similar to the Senior High norm, while Bus Ed and Mrkt service areas appeared to assign a relative importance similar to the College norm.
Table 9

Statistical Analysis: t-test on the P score

Difference Between Service Area and Norm Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Statistic</th>
<th>Junior</th>
<th>Senior</th>
<th>College</th>
<th>Grads Phil/Sem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Ed</td>
<td>t-test</td>
<td>7.649</td>
<td>1.229</td>
<td>-3.065</td>
<td>-3.479</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>295.</td>
<td>295.</td>
<td>295.</td>
<td>295.</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.109</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>t-test</td>
<td>8.397</td>
<td>2.451</td>
<td>-1.033</td>
<td>-1.429</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.007</td>
<td>0.152</td>
<td>0.075</td>
</tr>
<tr>
<td>H Ec</td>
<td>t-test</td>
<td>9.977</td>
<td>3.400</td>
<td>-3.147</td>
<td>-3.992</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>299.</td>
<td>299.</td>
<td>299.</td>
<td>299.</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.001</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>Mrkt</td>
<td>t-test</td>
<td>8.241</td>
<td>2.192</td>
<td>-1.470</td>
<td>-1.870</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>287.</td>
<td>287.</td>
<td>287.</td>
<td>287.</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.014</td>
<td>0.069</td>
<td>0.030</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>t-test</td>
<td>6.682</td>
<td>1.698</td>
<td>-3.499</td>
<td>-4.177</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>304.</td>
<td>304.</td>
<td>304.</td>
<td>304.</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.043</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>Total</td>
<td>t-test</td>
<td>14.102</td>
<td>4.097</td>
<td>-4.953</td>
<td>-6.050</td>
</tr>
<tr>
<td></td>
<td>prob</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note. Alpha level ≤ .05.

When P scores were subdivided into thirds as recommended by Rest, 21 (14%) scores fell into the lower third (up to 27), 80 (56%) scores fell into the middle third (28-41), and 43 (30%) scores fell into the high third (42 and up). These subdivisions will be referred to in subsequent discussion and answers of the research questions
about associations.

At this point, it is noteworthy to discuss what the DIT, as a measure of moral reasoning, does and does not measure. At best, it alludes to the reasoning process through which a person decides the "moral" thing to do when given a dilemma and to the sense of "right" and "wrong" in a person. "Moral judgement scores are characterizations of the conceptual tools used by a person to make a judgement" (Rest, 1987, p.11). That is, measures of the DIT by themselves do not explain the actions a person takes in relation to his/her morals. For example, DIT measures do not express if certain moral values are sufficiently prized to result in action that is in accord with those values. DIT measures are, however, a reflection of an important component of moral action.

More specifically for this study, results of the DIT, when applied to one's involvement with professional development activities and the dilemmas that may occur, suggest that, at best, about 30% of the sample would give high relative importance to principled considerations in the moral reasoning processes needed to resolve such dilemmas. However, it does not provide information about whether a teacher is sensitive to the fact that a moral dilemma exists or to the extent to which a teacher values doing the "right" things in regard to professional development. As such, these findings represent only a beginning in the
understanding of how teachers morally act or participate in regard to professional development.

Research Question 2

What activities do vocational teachers participate in for professional development?

Two instruments, the PPA and the PDP, were used to answer this question (see Appendix B). Results of the PPA will be discussed first.

Profile of Professional Activities

The PPA provided a profile of a teacher's types of involvements and the amount of time spent on professional development from August 1985 through March 1988 in four categories of professional development activities: Colleges and Universities, Professional Associations, Non-degree In-service, and Personal Activities. Another section of the instrument provided data about: (a) the profile's similarity to past and anticipated future participation in professional development activities, (b) the perceived amount of personal resources used relative to those used by other teachers, and (c) the perceived support given by one's administrators. This section also provided a summary and verification of the profile by asking the teacher to rank order the categories by the time spent in each and by the contribution the categories make to his/her professional development. The estimated percent of total professional development activity time for each category was also requested.
Colleges and Universities Activities

Table 10 provides findings concerning involvements with degree activities by service areas. Forty-seven (28%) of the total sample were working on a degree during the time period of the profile. Of those, 29 (17%) were working on a Masters degree and 12 (7%) were working on a Bachelor's. Few teachers were working on other types of degrees. Using Chi-Square (alpha ≤ .05), no significant differences by service area were found.

Twenty-two (13%) of the total sample received a degree during the period of the profile. Of those, 12 (7%) received a Master's, 6 (4%) received a Bachelor's, 3 (2%) a 2-year degree, and 1 (1%) did not report the type of degree received. No significant differences were found between service areas.

Table 11 provides information about credit hours received from colleges and universities. Most people in the sample did not receive any credit hours during the most recent 2 1/2 year time period. In quarter credits, the range was 0 to 129, with a mean of 9.36 credits earned by the total sample. These findings indicate that a small portion of the sample received credits, but of those who did, a high amount of credits were earned.

When rank ordered against the other three categories (Professional Associations, Non-degree In-service, and Personal Activities) by time spent, 21% of the sample ranked
Table 10

Degree Involvements with Colleges and Universities

<table>
<thead>
<tr>
<th>Service Area</th>
<th>n</th>
<th>2-year BS</th>
<th>MS</th>
<th>MS+/PhD</th>
<th>No Response</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>HEc</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>1</td>
<td>7</td>
<td>29</td>
<td>17.4</td>
<td>3</td>
</tr>
</tbody>
</table>

When rank ordered by contribution to professional development, 24%, 14%, 14%, and 32% of the sample ranked
Colleges and Universities first, second, third, and fourth, respectively. It was not ranked by 16% of the sample. When compared with ranking by time, the percentages are similar. This likely means that those who spent their time in this category also viewed that it contributed to their professional development.

Professional Associations

Table 12 provides findings by service area of activities with professional associations. Of the sample, 156 (93%) belonged to one or more associations. The mean number of memberships was 3.10, the mode was 2, and the range was 0 to 9. Each affiliate was counted as a separate membership.

Findings about membership in specific professional associations to which the sample reported that they belonged are provided in Table 13. The National Education Association (NEA) and its state affiliate (OEA) had the highest percentage of membership with each association at about 65% of the sample. The American Vocational Associations (AVA) and its state affiliate (OVA) had the second highest percentage of memberships, each at about 40% of the sample. The lowest percentage of membership (34%) was found with subject matter associations. Higher memberships in NEA, AVA and their affiliates may be due to the support or pressures to belong by the teachers' school districts. Yet, in light of the usefulness that
Table 12

Profile of Activities with Professional Associations

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>f</th>
<th>%</th>
<th>M</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association membership(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>25</td>
<td>96.2</td>
<td>4.29</td>
<td>4</td>
<td>0-8</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>27</td>
<td>93.1</td>
<td>3.00</td>
<td>2</td>
<td>0-8</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>34</td>
<td>89.5</td>
<td>3.21</td>
<td>3</td>
<td>0-6</td>
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<tr>
<td>Mrkt</td>
<td>25</td>
<td>23</td>
<td>92.0</td>
<td>2.64</td>
<td>2</td>
<td>0-9</td>
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<tr>
<td>T&amp;I</td>
<td>49</td>
<td>47</td>
<td>95.9</td>
<td>2.76</td>
<td>2</td>
<td>0-9</td>
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<tr>
<td>Total</td>
<td>167</td>
<td>156</td>
<td>93.4</td>
<td>3.10</td>
<td>2</td>
<td>0-9</td>
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<td>Committee membership(s)</td>
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<tr>
<td>Ag Ed</td>
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<td>18</td>
<td>69.2</td>
<td>2.65</td>
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<td>0-9</td>
</tr>
<tr>
<td>Bus Ed</td>
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<td>20</td>
<td>69.0</td>
<td>2.41</td>
<td>0</td>
<td>0-9</td>
</tr>
<tr>
<td>H Ec</td>
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<td>22</td>
<td>57.9</td>
<td>2.24</td>
<td>0</td>
<td>0-9</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>18</td>
<td>72.0</td>
<td>3.05</td>
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<td>0-9</td>
</tr>
<tr>
<td>T&amp;I</td>
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<td>32</td>
<td>65.3</td>
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<tr>
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<td>65.9</td>
<td>2.46</td>
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<td>0-9</td>
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<td>2.16</td>
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</tr>
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<td>28</td>
<td>96.6</td>
<td>2.64</td>
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<td>0-5</td>
</tr>
<tr>
<td>H Ec</td>
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<td>31</td>
<td>81.6</td>
<td>1.95</td>
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<td>0-4</td>
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<tr>
<td>Mrkt</td>
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<td>21</td>
<td>84.0</td>
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<td>0-9</td>
</tr>
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<td>45</td>
<td>91.9</td>
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<tr>
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<td>2.30</td>
<td>2</td>
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<td>Letter writing at request of associations</td>
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<td>31.0</td>
<td>0.74</td>
<td>0</td>
<td>0-5</td>
</tr>
<tr>
<td>H Ec</td>
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<td>22</td>
<td>57.9</td>
<td>1.59</td>
<td>0</td>
<td>0-5</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>7</td>
<td>28.0</td>
<td>0.73</td>
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<td>0-4</td>
</tr>
<tr>
<td>T&amp;I</td>
<td>49</td>
<td>25</td>
<td>51.0</td>
<td>1.44</td>
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<td>0-8</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>83</td>
<td>49.7</td>
<td>1.36</td>
<td>0</td>
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</tr>
</tbody>
</table>
Table 12 (continued)

Profile of Activities with Professional Associations

<table>
<thead>
<tr>
<th>Activity</th>
<th>n</th>
<th>f&lt;sup&gt;a&lt;/sup&gt;</th>
<th>%</th>
<th>M</th>
<th>Mode</th>
<th>Range</th>
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<tr>
<td>Professional meeting attendance</td>
<td></td>
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<td></td>
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</tr>
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<td>Local</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>25</td>
<td>96.2</td>
<td>9.73</td>
<td>2</td>
<td>0-41</td>
</tr>
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<td>Bus Ed</td>
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<td>24</td>
<td>82.8</td>
<td>6.11</td>
<td>3</td>
<td>0-30</td>
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<td>H Ec</td>
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<td>0-28</td>
</tr>
<tr>
<td>Mrkt</td>
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<td>15</td>
<td>60.0</td>
<td>5.22</td>
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<td>0-22</td>
</tr>
<tr>
<td>T&amp;I</td>
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<td>0-30</td>
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</tr>
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<td>4.00</td>
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<td>0-9</td>
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<tr>
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<td>13</td>
<td>44.8</td>
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<td>0-9</td>
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<td>2.00</td>
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<td>0-6</td>
</tr>
<tr>
<td>T&amp;I</td>
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<td>28</td>
<td>57.2</td>
<td>1.85</td>
<td>0</td>
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<tr>
<td>Total</td>
<td>167</td>
<td>96</td>
<td>57.5</td>
<td>2.29</td>
<td>0</td>
<td>0-9</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>3</td>
<td>11.5</td>
<td>0.31</td>
<td>0</td>
<td>0-3</td>
</tr>
<tr>
<td>Bus Ed</td>
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<td>6.8</td>
<td>0.24</td>
<td>0</td>
<td>0-3</td>
</tr>
<tr>
<td>H Ec</td>
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<td>7.9</td>
<td>0.73</td>
<td>0</td>
<td>0-9</td>
</tr>
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<td>0.38</td>
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</table>
Table 13

Membership in Specific Professional Associations

<table>
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<th>Service Area</th>
<th>n</th>
<th>AVA</th>
<th>OVA</th>
<th>NEA</th>
<th>OEA</th>
<th>Subject Matter</th>
</tr>
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<tr>
<td></td>
<td></td>
<td>f</td>
<td>f</td>
<td>f</td>
<td>f</td>
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<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>17</td>
<td>65.4</td>
<td>19</td>
<td>73.1</td>
<td>18 69.2</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>7</td>
<td>24.1</td>
<td>8</td>
<td>27.6</td>
<td>17 58.6</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>11</td>
<td>28.9</td>
<td>14</td>
<td>36.8</td>
<td>17 58.6</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>4</td>
<td>16.0</td>
<td>5</td>
<td>20.0</td>
<td>18 72.0</td>
</tr>
<tr>
<td>T&amp;L</td>
<td>49</td>
<td>24</td>
<td>49.0</td>
<td>27</td>
<td>55.1</td>
<td>27 55.1</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>63</td>
<td>37.7</td>
<td>73</td>
<td>43.7</td>
<td>111 66.5</td>
</tr>
</tbody>
</table>

Professional associations can have for professional development, membership in all of these associations, particularly subject matter associations, should ideally be much higher.

Decisions related to membership can serve as a good example of a potential moral dilemma related to professional development. The high percentage of those belonging to at least one association but the lower percentages of those belonging to associations specifically related to their professions seems to reflect that some moral consideration is made in the decision to being a member. However, the extent to which a teacher may recognize that deciding to be a member involves moral consideration is beyond these findings.

Membership on a committee was reported by 110 teachers (66%), with a mean number of memberships being 2.5, the mode being 2, and the range being 0 to 9. Chairing of a
committee was reported by 90 (54%) of the sample, with a mean number of committees chaired being 1.6, the mode being 0, and the range being 0 to 9. These findings seem surprisingly high; they are likely to reflect work on all committees, including those that are not related to professional associations.

Reading of professional journals was reported by 148 (87%) of the sample, with the mean number of journals read being 2.3, a mode of 2, and a range of 0 to 9. If it is assumed that about 7% of the sample did not receive journals due to lack of membership in a professional association, only about 6% of the sample did not read journals that they had received.

Writing letters at request of an association was reported by 83 (50%) of the sample, with the mean number of letters written being 1.4, a mode of 0, and a range of 0 to 8. Though no significant differences between service areas were identified for any of the variables in this category of professional development, it appears that the Ag Ed service area was more active than others in letter writing, with a mean of 2.2 and a mode of 2. Bus Ed and Mrkt service areas reported writing the fewest letters.

Findings about attendance at professional meetings were divided into attendance at local, state, and national meetings. Local meetings were attended by 120 (72%) with the mean number of meetings attended being 7.3, with a mode
of 0 and a range of 0 to 41. State meetings were attended by 96 (56%) of the sample with the mean number of meetings attended being 2.3, with a mode of 0 and a range of 0 to 9. National meetings were attended by 11 (7%) of the sample with the mean number attended being 0.4, with a mode of 0 and a range of 0-9. As expected, fewer people attended state meetings and even fewer attended national meetings than local meetings. It should also be noted that 30% of the sample did not report attendance at any local meetings during the time period.

When rank ordered against the other three categories (Colleges and Universities, Non-degree In-service, and Personal Activities) by time spent, 8% of the sample ranked the Professional Associations category first, 20% ranked it second, 31% ranked it third, and 30% ranked it fourth. It was not ranked by 11% of the sample.

When rank ordered by contribution to professional development, 8%, 18%, 29%, and 29% of the sample ranked Professional Associations first, second, third, and fourth, respectively. It was not ranked by 16% of the sample. When compared with ranking by time, it appears that those who spent their time in this category also viewed that it contributed to their professional development.

The Professional Associations category was ranked first by the lowest percentage of the sample, both by time spent and by their usefulness for professional development. More
evidence that a moral dilemma exists for deciding to be a member when it is recalled that 94% of the sample belonged to at least one association, yet only 8% of the sample consider it first in its contribution to their professional development.

**Non-degree In-service Activities**

This category of the profile focused on in-service activities in which teachers participated other than those related to professional associations. These activities may or may not have provided some kind of credit, i.e. continuing education units, but they were not to have provided university credit hours. Teachers were requested to give the total number of in-services in which they participated during the period, the number of those required, the total hours spent in in-service, and to identify those topics most beneficial. They were requested to divide the in-service activities according to whether the school, the district, the state or the universities provided the activities.

Data needed for this category appear to have been too difficult or time consuming for the teachers to report, with several teachers leaving the category blank. Filling this part of instrument did require a great deal of reflection even to provide a reasonable estimate. Still some data have been included to give some description that may be considered in light of the ranking of this category to other
categories of the instrument.

When the school provided the in-service, the mean number of activities attended was 8.7, with a mode of 2, and a range of 0 to 80. Of the sample, 41 gave no responses. The most beneficial activities identified from the 81 who reported were subject matter related or generic teaching topics, such as discipline or classroom management.

When the district provided the in-service, the mean number of activities attended was 3.1, with a mode of 0, and a range of 0 to 9. Of the sample, 68 gave no responses. The most beneficial activities identified from the 47 who reported were generic teaching topics.

When the state provided the in-service, the mean number of activities attended was 2.4, with a mode of 2 and a range of 0 to 9. Of the sample, 80 gave no responses. The most beneficial activities identified from the 45 who responded were subject matter related topics.

When universities provided the in-service, the mean number of activities attended was 1.4, with a mode of 0 and a range of 0 to 9. Of the sample, 106 gave no responses. The most beneficial activities identified from the 33 who responded were subject matter related topics.

Again, the validity of the description of this section can be questioned because of the low response rate. However, of those who reported, a reasonable trend in the data from school through university provided in-service
appears to exist.

When rank ordered against the other three categories (College and Universities, Professional Associations, and Personal Activities) by time spent, 13% of the sample ranked the Non-degree In-service category first, 34% ranked it second, 28% ranked it third, and 16% ranked it fourth. Of the sample, 9% did not rank it.

When rank ordered by contribution to professional development, 9%, 29%, 28%, and 18% of the sample ranked Non-degree In-service first, second, third, and fourth, respectively. Of the sample, 16% did not rank it. When compared with ranking by time, it appears slightly more teachers spent the greatest amount of their time in this category than the amount that viewed it as the greatest contributor to their professional development.

Personal Activities

The personal activities category of the profile was divided into three sections that assist professional development: 1) evaluations, 2) personal/professional activities, and 3) personal activities. This category is discussed by those sections.

Evaluations. Table 14 provides frequencies of the type of evaluations that teachers indicated helped them grow professionally. In descending order, self-evaluation (77%); administrative evaluation (55%); student evaluations (47%); peer evaluations (43%); PRIDE, the state vocational
Table 14

Evaluations Useful for Professional Growth

<table>
<thead>
<tr>
<th>Service Area</th>
<th>n</th>
<th>Peer</th>
<th></th>
<th>Student</th>
<th></th>
<th>Self</th>
<th></th>
<th>Admin</th>
<th></th>
<th>PRIDE</th>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Ed</td>
<td>26</td>
<td>12</td>
<td>46.2</td>
<td>13</td>
<td>50.0</td>
<td>18</td>
<td>69.2</td>
<td>18</td>
<td>69.2</td>
<td>13</td>
<td>50.0</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td>Bus Ed</td>
<td>29</td>
<td>15</td>
<td>51.7</td>
<td>12</td>
<td>41.4</td>
<td>24</td>
<td>82.8</td>
<td>14</td>
<td>48.3</td>
<td>13</td>
<td>44.8</td>
<td>3</td>
<td>10.3</td>
</tr>
<tr>
<td>H Ec</td>
<td>38</td>
<td>17</td>
<td>44.7</td>
<td>23</td>
<td>60.5</td>
<td>31</td>
<td>81.6</td>
<td>19</td>
<td>50.0</td>
<td>14</td>
<td>36.8</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>Mrkt</td>
<td>25</td>
<td>8</td>
<td>32.0</td>
<td>8</td>
<td>32.0</td>
<td>20</td>
<td>80.0</td>
<td>13</td>
<td>52.0</td>
<td>12</td>
<td>48.0</td>
<td>2</td>
<td>8.0</td>
</tr>
<tr>
<td>T&amp;L</td>
<td>49</td>
<td>19</td>
<td>38.8</td>
<td>22</td>
<td>44.9</td>
<td>35</td>
<td>71.4</td>
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<td>55.1</td>
<td>17</td>
<td>34.7</td>
<td>6</td>
<td>12.2</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>71</td>
<td>42.5</td>
<td>78</td>
<td>46.7</td>
<td>128</td>
<td>76.6</td>
<td>91</td>
<td>54.5</td>
<td>69</td>
<td>41.3</td>
<td>14</td>
<td>8.4</td>
</tr>
</tbody>
</table>

evaluation process (41%); and other evaluations 14 (8.4%) were found to be useful.

These findings speak to the usefulness of helping teachers to help themselves by assisting and promoting self-evaluations. Slightly under half of the sample did not report administrative evaluation as useful and almost 60% did not report PRIDE as useful. As these are commonly occurring evaluations, such findings are disappointing. No Chi-square differences (alpha ≤ .05) were found between service areas.

Personal/professional activities. Eight activities gleaned from the literature as contributors to professional development compose this section. Teachers were given the opportunities to identify others.

In descending order by frequency, talking with educators (93%), talking with students (73%), talking with parents (52%), planning for professional growth (45%), working with classroom integrated student organizations
(35%), working on staff committees (34%), participating in research and surveys (26%), and other activities (10%) were found useful for professional development (see Table 15). Only two of these activities were found useful by about three quarters or more of the teachers: talking with other educators and talking with students. However, all of the identified activities were considered useful by at least one quarter of the sample. Such a finding indicates a great deal of variety in the activities that assist with professional development. No significant differences were found between service areas.

Personal activities. Findings from nine activities gleaned from the literature and from thoughts of the researcher composed this section. Teachers were given the opportunity to add other activities. In descending order, reading (83%), researching on your own for new knowledge (76%), family activities (68%), travel (54%), other work experiences (52%), sports/camping/outdoor activities (39%), arts and entertainment (32%), and political activities (12%) were found useful for professional development (see Table 16).

Reading, researching on your own for new knowledge, and family activities were the three activities with large enough percentages to warrant thoughts about how to enhance teachers use of these activities for professional development. As with the section about
Table 15

Contributions of Personal/Professional Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ag Ed n=26</th>
<th>Bus Ed n=29</th>
<th>H Ec n=38</th>
<th>Mrkt n=25</th>
<th>TSI n=49</th>
<th>Totals n=167</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking with educators</td>
<td>25 96.2</td>
<td>26 89.7</td>
<td>35 92.1</td>
<td>23 92.0</td>
<td>46 93.9</td>
<td>155 92.8</td>
</tr>
<tr>
<td>Talking with parents</td>
<td>15 57.7</td>
<td>15 51.7</td>
<td>22 57.9</td>
<td>15 60.0</td>
<td>20 40.8</td>
<td>87 52.1</td>
</tr>
<tr>
<td>Talking with students</td>
<td>19 73.1</td>
<td>20 69.0</td>
<td>29 76.3</td>
<td>20 80.0</td>
<td>33 67.3</td>
<td>121 72.5</td>
</tr>
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<td>Extracurricular work</td>
<td>15 57.7</td>
<td>14 48.3</td>
<td>25 65.8</td>
<td>14 56.0</td>
<td>25 51.0</td>
<td>93 55.7</td>
</tr>
<tr>
<td>Working with classroom integrated student organizations</td>
<td>13 50.0</td>
<td>11 37.9</td>
<td>18 47.4</td>
<td>5 20.0</td>
<td>12 24.5</td>
<td>59 35.3</td>
</tr>
<tr>
<td>Staff committee work</td>
<td>10 38.5</td>
<td>9 31.0</td>
<td>15 39.5</td>
<td>6 24.0</td>
<td>17 34.7</td>
<td>57 34.1</td>
</tr>
<tr>
<td>Research surveys participation</td>
<td>8 30.8</td>
<td>7 24.1</td>
<td>9 23.7</td>
<td>5 20.0</td>
<td>14 28.6</td>
<td>43 25.7*</td>
</tr>
<tr>
<td>Planning for professional growth</td>
<td>12 46.2</td>
<td>17 58.6</td>
<td>16 42.1</td>
<td>11 44.0</td>
<td>19 38.8</td>
<td>75 44.9</td>
</tr>
<tr>
<td>Other</td>
<td>4 15.4</td>
<td>2 6.9</td>
<td>4 10.5</td>
<td>3 12.0</td>
<td>4 8.2</td>
<td>17 10.2</td>
</tr>
</tbody>
</table>

personal/professional activities, a great deal of variety can be identified in the kind of activities useful to professional development. The reason for the low percentage related to political activities is not explainable, but it is an area of activity for teachers that certainly poses moral dilemmas. No significant differences were found by service area.

When rank ordered against the other three categories (Colleges and Universities, Professional Associations, and Non-degree In-service) by time spent, 48% of the sample ranked the Personal Activities category first, 24% ranked it
Table 16

Contributions of Personal Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ag Ed n=26</th>
<th>Bus Ed n=29</th>
<th>H Ec n=38</th>
<th>Mrkt n=25</th>
<th>T&amp;E n=49</th>
<th>Totals n=167</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Researching for new knowledge</td>
<td>22</td>
<td>84.6</td>
<td>19</td>
<td>65.5</td>
<td>31</td>
<td>81.6</td>
</tr>
<tr>
<td>Reading</td>
<td>22</td>
<td>84.6</td>
<td>21</td>
<td>72.4</td>
<td>34</td>
<td>89.5</td>
</tr>
<tr>
<td>Outdoor activities</td>
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<td>12</td>
<td>41.4</td>
<td>15</td>
<td>39.5</td>
</tr>
<tr>
<td>Community/Church activities</td>
<td>16</td>
<td>61.5</td>
<td>15</td>
<td>51.7</td>
<td>20</td>
<td>52.6</td>
</tr>
<tr>
<td>Arts and entertainment</td>
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<td>15.4</td>
<td>9</td>
<td>31.0</td>
<td>23</td>
<td>60.5</td>
</tr>
<tr>
<td>Family activities</td>
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<td>65.4</td>
<td>19</td>
<td>65.5</td>
<td>30</td>
<td>78.9</td>
</tr>
<tr>
<td>Other work experience</td>
<td>18</td>
<td>69.2</td>
<td>10</td>
<td>34.5</td>
<td>13</td>
<td>34.2</td>
</tr>
<tr>
<td>Political activities</td>
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<td>15.4</td>
<td>2</td>
<td>6.9</td>
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<td>2.6</td>
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<tr>
<td>Travel</td>
<td>11</td>
<td>42.3</td>
<td>15</td>
<td>51.7</td>
<td>28</td>
<td>73.7</td>
</tr>
<tr>
<td>Other activities</td>
<td>2</td>
<td>7.7</td>
<td>2</td>
<td>6.9</td>
<td>3</td>
<td>7.9</td>
</tr>
</tbody>
</table>

second, 16% ranked it third, and 3% ranked it fourth. Of the sample, 9% did not rank it.

When rank ordered by contribution to professional development, 44%, 25%, 13%, and 4% of the sample ranked Personal Activities first, second, third, and fourth, respectively. Of the sample, 14% did not rank it. When compared with ranking by time, it is likely that those who spent their time in this category also viewed that it contributed to their professional development.

In both rankings, The Personal Activities category had the highest percentages in the first rank. Findings about this category suggest that teachers consider personal
activities as most useful for professional development.

**Additional Findings of the PPA**

In order to gain a total perspective of professional development involvements for a teacher, each teacher was asked to compare his/her involvements as described during the period of the profile to his/her past and anticipated future involvements. When teachers compared their profiles to their past involvements, 21%, 61%, and 15% respectively ranked their profiles as high, average, and low. Of the sample, 3% did not respond. When teachers compared their profiles to their anticipated future involvements, 34%, 48%, and 16% respectively ranked their profiles as more, the same, and less. Of the sample, 3% did not respond.

These findings indicated that most teachers perceive their current involvement in professional activities as similar to their past involvements. It is encouraging to find that one-fifth of them see themselves as being more involved than in the past and one-third expect to be more involved in the future. It is possible that those who are nearing retirement are those who are reporting decreased participation in the future or in relation to their past involvements.

Teachers were also asked to identify the perceived support given to them by their administrators for involvements in professional development activities. This was deemed useful to the research because it seemed that
such support, or lack of such support, could influence involvement in certain activities described by the profile. Respectively, 10%, 37%, 30%, 18%, and 4% of the sample rated perceived support by administrators as very strong, strong, average, weak, and very weak. Of the sample, 1% did not report. No significant differences were found between administrative support and service areas or between both types of rankings of the four categories.

Findings about administrative support seem to suggest that it does not impact on the selection of activities that teachers become involved in for professional development. These findings, however, do not address the differences that administrative support may have to the total amount of time spent on professional development.

Another variable that the researcher viewed as a possible influence on a teacher's profile was the perceived amount of personal resources (time, money, planning, etc.) used. Respectively, 7%, 31%, 46%, 13%, and 2% of the sample rated the amount of personal resources used as high above normal, above normal, normal, below normal and way below normal. Of the sample, 1% did not respond. No significant differences were found between this variable and other variables.

**Professional Development Practices**

The second instrument used to ascertain what activities vocational teachers participate in for professional
development was "Professional Development Practices". It is a forced-choice, researcher developed instrument based on Kohlberg's moral reasoning levels and is designed to identify the practices of how teachers tend to select and, thus, participate in professional development activities. Teachers were classified into one of three levels of practice with an intent that those levels would match with the corresponding moral reasoning levels. The classification process is described in the Methodology.

Results of the classification indicate that 11 (7%), 84 (50%), and 64 (38%) of the sample were placed in Level 1, Level 2, and Level 3, respectively. No significant differences were found between the PDP level classifications and service area or other selected demographic variables. Significant differences were expected by the highest degree earned and by age, but none was found.

McNemar's Chi-square test of equality of distributions was run between collapsed classification levels of the PDP and collapsed divisions of the P score of the DIT. Levels 1 and 2 of the PDP were collapsed into a "not 3" level. This was justified because of the meaning of the P score, which is a measure of the extent to which a person uses Stages 5A, 5B, and 6. Thus, it was inappropriate to compare the distribution of Level 1 on the PDP and the lower third division of the P score and to compare the distribution of Level 2 of the PDP to the middle third division of the P
score. With the two lower divisions of both instruments collapsed, it was possible to compare the distributions of those who fell or did not fall into the upper third on both instruments. No significant differences were found between the distributions at the alpha .05 level.

This finding indicates that if one is classed as Level 3 on the PDP, s/he is also likely to have a P score in the upper third division, that is, a P score of 42 or above. The reverse situation is also likely. Thus, it appears the PDP can effectively distinguish between classifications Levels 1 or 2 (the "not 3 Level") and Level 3, but nothing can be said about the PDP's ability to distinguish between Level 1 or Level 2 classifications. Thus, it can be said of this sample that roughly, the 38% that were classified at Level 3 of practice on the PDP are likely to use principled considerations as they deal with moral dilemmas related to professional development.

Research Question 3

Do vocational teachers have patterns of involvement in professional development activities?

The answer to this question was sought by exploring the data for the emergence of patterns, or similarities of response between subjects. It was hoped that patterns could easily be recognized by the similarity of rank ordering of time spent in each of the four categories. Then, with the predominant patterns identified, those patterns could be
described by analysis of the profiles of the people in those patterns. Unfortunately, of the 24 possible permutations of the four categories, 22 were reported.

In order to collapse the data, it was necessary to consider the top ranked category as the predominant component of a pattern. Because the percent of time spent in the first ranked category could vary a great deal and thus potentially represent a variety of patterns, the highest percent of time involved was also considered as a means of identifying the primary component of a pattern. The methods of selecting the highest rank or the highest percent of time involved, as expected, produced similar results for classification purposes. Since there data were reported the teachers concerning the rankings, analysis of potential patterns centered around the rankings, not the highest percent of involvement.

Of the 35 (21%) of the teachers who identified the Colleges and Universities category as their first ranking of involvement by time, 16, almost half, ranked the Personal Activities category second, Non-degree In-service as third, and Professional Associations as last (see Table 17). Of the 14 (8%) teachers who identified Professional Associations as their first ranking of involvement by time, no pattern of choices for the other categories prevailed. Of the 24 (13%) teachers who identified Non-degree In-service as first, 14, over half, ranked Personal
Table 17
Predominate Patterns of Professional Activities as Defined
by Rankings of Time Spent in Activity Categories

<table>
<thead>
<tr>
<th>Rank</th>
<th>A (n=16)</th>
<th>B (n=14)</th>
<th>C (n=14)</th>
<th>D (n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Second</td>
<td>D</td>
<td>A, C, D</td>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>Third</td>
<td>C</td>
<td>B</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Fourth</td>
<td>B</td>
<td>A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. "A" is the Colleges and Universities category. "B" is the Professional Associations category. "C" is the Non-degree In-service category. "D" is the Personal Activities category.

Activities second, Professional Associations third, and Colleges and Universities as last. Of the 80 (48%) teachers who identified Personal Activities as first, 46, over half, ranked Non-degree In-service as second, and Professional Associations or Colleges and Universities as third or fourth.

These findings could be questioned as to how strongly they represent patterns, that is, groupings of similar responses from teachers. At best, these patterns should be considered rudimentary to identification of more clearly defined patterns of involvement in professional development.

The relative strength of the personal activities
category does stand out in these findings. Almost half of the sample ranked it first and it was ranked second in two of the other patterns. This category was ranked by 72% of the sample as either first or second. No other category combined in this manner was over 50%.

In summarizing the response to this question, strong patterns or groupings of similarities of teachers professional development activities were not found. However, some minor patterns according to similarities of rank ordering the categories were found.

Research Question 4

Are moral reasoning processes of vocational teachers associated with any identified pattern(s) of involvement in professional development activities?

In this study, the P score of the DIT is the measure of moral reasoning and patterns of involvement are identified by the top ranked category of the PPA as determined by relative time spent in that category of professional development. A chi-square test between the three subdivisions of the P score and top rank orders of each category of the PPA produced no significant differences in the proportions for the total sample or by service area. That is, no associations were found regarding this question. However, when the P score subdivisions were collapsed to two instead of three, those who scored 42 or above (representing a relative high importance given to principle moral considerations) and those who did not (representing a
relative average or low importance given to principled moral considerations) a significant difference was found (alpha ≤ .05) between how teachers compared their experiences as described in the PPA to their past involvements [Chi-square (2, n = 155) = 6.94, p = .031]. For those in the lower subdivision, more than expected described their profile as average and fewer than expected described their profile as high. The reverse was true of the upper subdivision.

Research Question 5

Are moral reasoning levels of vocational teachers associated with their professional development practices?

This question was answered under Research Question 2 when the PDP was first discussed because the findings were needed to support that instrument's validity. Those findings will be summarized here in relation to the question.

The McNemar's Chi-square test revealed that the PDP, the measure of professional development practices for this study, has produced a proportion of teachers classed into Level 3 and those not classed in Level 3 that is equal to the proportion of teachers who are in the upper third division of the P scores and those who are not in that division. This finding indicates that some association exists between higher moral reasoning levels and greater relative importance of principled considerations as related to professional development dilemmas.
Research Question 6

Are the moral reasoning levels of vocational teachers associated with selected demographic variables?

Chi-square statistics were used to test for differences between the DIT's three P score subdivisions demographic variables of service area, highest degree earned, years of teaching, years in current position, perceived job security, gender, marital status, number of children, and number of person's in the household. No significant differences were found, though some were expected, i.e. with highest degree earned. However, when the P score subdivisions were collapsed to two instead of three, as described in Research Question 4, one significant difference was found beyond the .05 level with the number of years teachers had been in their current positions [Chi-square (2, n = 158) = 9.87, p = .007]. For the lower subdivision, fewer teachers than expected were found with 4 to 8 years in their positions, and more than expected were found with 9 or more years in their positions. The reverse was true for the upper subdivision. This finding indicates that teachers with higher moral reasoning levels are not staying in positions for long periods of time. These findings seem best explained if one considers that it may be the higher moral reasoning level teachers, in contrast to average or lower moral reasoning teachers, that move into administration, change teaching positions more frequently, or leave education totally.
Research Question 7

Are any identified pattern(s) of professional development activities associated with selected demographic variables?

Chi-square statistics were used to test for differences between the patterns of professional development activities as classified by the top ranked category by time spent on the PPA and the same demographic variables listed in Research Question 6. No significant differences were found.

Research Question 8

Are professional development practices of vocational teachers associated with selected demographic variables?

Chi-square statistics were used to test for differences between the classified levels of the PDP and the same demographic variables listed in Research Question 6. Age and the number of years of teaching approached significance, but no differences were found, even when the two lower levels of the PDP were collapsed in a similar fashion to collapsing the P score subdivisions.

Hypotheses

When P scores were subdivided into thirds as recommended by Rest, 21 (14%) scores fell into the lower third (up to 27), 80 (56%) scores fell into the middle third (28-41), and 43 (30%) scores fell into the high third (42 and up). Thus, the hypothesis that vocational teachers have varying levels of moral reasoning was accepted.
Strong patterns or groupings of similarities of teachers professional development activities were not found. However, some minor patterns according to similarities of rank ordering the categories were found. Before accepting the hypothesis that teachers have patterns of group similarities of involvement in professional development activities, further research is needed.

A chi-square test between the 3 subdivisions of the P score and top rank orders of each category of the PPA produced no significant differences in the proportions for the total sample or by service area. Thus, the hypothesis that vocational teachers with higher moral reasoning levels are involved differently in professional development activities (as defined by the patterns) than those with lower moral reasoning levels was not confirmed.

Chi-square statistics were used to test for differences between the patterns of professional development activities as classified by the top ranked category by time spent on the PPA and the same demographic variables listed in Research Question 6. No significant differences were found. Thus, the hypothesis that the demographic variables would be related to teachers' involvements in professional development activities was rejected.
Discussion

This part of the chapter focuses on discussion of the findings as they relate to the literature review. Before beginning the discussion, the theoretical framework that was established through the review is capsulized.

The framework for this study was built upon the stance that teachers must be viewed as professionals in today's society. That is, regardless of whether teaching meets rigid criteria of being a profession, practicing teachers are being held accountable for actions that would characterize them as professionals. Tyler (1978), Brown (1980), Mertens and Yarger (1988), Griffin (1986), and Howey, et al. (1985) have expressed that teachers are professionals in that they (a) perform complex tasks and make informed judgments grounded in a specialized knowledge base, (b) recognize moral significance and obligation in their actions, and (c) work out appropriate answers for individual situations.

With the view of the teacher as a professional, as opposed to a routine worker, implications for the education of teachers were then considered. Griffin (1986), Tyler (1978) and Rubin (1978) were cited to support that (a) the goal of educating professional teachers is not just the development of highly specific skills, but also of how professionals perform and what internal resources are used, and (b) such goals can only be achieved through lifelong
learning, which includes effective pre-service and in-service education.

After these views were established, in-service education as a component of the lifelong professional development process for teachers was discussed. The focus of the writing was placed on teacher characteristics as variables in in-service programming. Utilizing a matrix by Yarger and Galuzzo (1983) to review research about in-service education, it appeared that teacher variables were weakly accounted for in in-service programming, and when they were, they seemed to be "surface" variables related to enhancing participation and perceptions of the experiences. Further, the literature supported that it is appropriate and effective to account for the more complex individual characteristics of teachers, e.g., learning styles, values, developmental levels, and growth states, as in-service education is planned and implemented, particularly if the in-service is for professionals.

This study was designed to add to the knowledge base about in-service programming for teachers as professionals by investigation of one of teachers' more complex characteristics, their moral reasoning levels. Placed in the context of adult developmental theories which describe higher stage (level) teachers as having characteristics which are more professional (Witherall and Erickson, 1978; Harvey, Hunt, and Schroeder, 1961; Sprinthall and
Sprinthall, 1983a), how moral reasoning levels of teachers relate to selection of and participation in professional development activities was deemed to be a useful contribution to literature about professional development.

When considering the findings in this study, some discrepancies can be found between the ideal view of the teacher as a professional (as expressed in the literature review) and the "real world" view of teachers. If it is accepted that functioning at higher developmental stages is needed to be an effective professional, the fact that less than one-third of the teachers assigned a relative high importance to principled moral considerations as shown by their P scores is discouraging. Further, the mean P score of the teachers was lower than the College norm group and low for adults. The strength of teachers' codes of ethics as professionals (Tyler, 1978) or that teachers see great moral significance and obligations in their professional actions (Brown, 1980) could be questioned.

In contrast to the lack of professional characteristics as illustrated by the P score findings, it appears that teachers seek empowerment (Mertens and Yarger, 1988) in selecting and participating in professional development activities. This can be evidenced by teachers' tendency to participate in and perceive as beneficial personal/professional activities, which are activities over which teachers have greater amounts of control.
In light of the review concerning the goals of educating professional teachers, it appears that teachers perceive themselves as becoming increasingly involved in lifelong learning in formal and informal ways. This is seen in that one-fifth of the teachers see themselves as being more involved than in the past and that one-third plan to be more involved in the future.

Findings about the P score and results of the PDP also relate to the goals of educating professional teachers. By the associations that exist between the P score and PDP levels, there is indication that those with higher moral reasoning levels utilize higher moral reasoning when dealing with dilemmas of professional development involvements. Thus, goals of teaching related to increasing the moral reasoning levels of teachers are likely to also increase more professional characteristics in teachers as they make professional development decisions.

Findings in this study also support findings from other studies about the current status of in-service education. In the ITES study (Yarger et al., 1979) one-quarter of the sample considered in-service education to be good or excellent. By considering that only about 14% of the teachers in this study ranked Non-degree In-service activities first by time spent and by benefit to professional development, respondents affirm that few persons consider in-service education to be good or
excellent.

In that same study Yarger (1979) concludes that more personalized and individualized forms of in-service are needed. Given the relative high importance that teachers placed on the Personal Activities category, the relative lower importance assigned to the more formal and controlled activities, and the wide variety of activities seen as useful to professional development, results of this study support Yarger's conclusion.

The apparent rejection (low rankings) of professional activity categories that generally are more formal and planned also support conclusions by Rubin (1978) and Howey and Vaughn (1983). Rubin has expressed that the educational and social values that teachers embrace have received little attention and Howey and Vaughn have noted that little attention is paid to learning styles or the stages of development of the in-service participants. Both of these views may explain these rejections.

Unlike the ITES study in which the majority of teachers reported involvement in staff development activities less than once a year, the mode of participation for non-degree in-service activities in this study was 4 when school, district, state, and university provided in-service activities were combined. Keeping in mind that this section of the study had a low response rate by teachers, the data may reflect more participation than what was actually done
by teachers. Both studies, however, show very low participation in planned activities.

Through results of the PDP some knowledge about the reasons for participating in professional development activities can be interpreted. That is, about one-third of the teachers have likely based participation on moral principles or higher levels of moral reasoning, whereas, two-thirds of the sample have likely based participation on more ego centered or social reasons or lower levels of moral reasoning. This interpretation of the PDP results supports the finding from the ITES study that most teachers participate in in-service because it could help them do their jobs better.

Finally, results of this study support that developmental theory as an acceptable framework for the study of professional development and in-service education. The DIT is based upon cognitive and moral developmental theory and has provided useful findings in several studies. Since the DIT was found to be associated with the PDP, which is also based upon cognitive and moral developmental theory but specifically relates to professional development practices, credence is provided for the use of developmental theory.

Floden and Feiman (1980) have recognized that developmental theories provide ways of determining likely effects of teacher education programs, that is,
developmental theories have diagnostic value. From a diagnostic stance, the ideal or higher levels of moral reasoning for teachers as professionals has not been attained by the majority of teachers in this sample. Further, because an assumption of developmental theory is that behavior can, in part, be determined and predicted from an individual's stage of development (Floden and Feiman, 1980), an inference can be made that a majority of teachers' professional development involvements are not based on higher levels of moral reasoning.
CHAPTER V
SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Professional development activities and in-service education of teachers are being focused on as a result of many report recommendations for improving the nation's teaching force. Unfortunately, the body of research and literature concerning these activities is viewed as being in its infancy and tends to focus on characteristics of the in-service activities and contextual factors, with not much known about how the characteristics of teachers impact upon the successful outcome of such activities. In the context of developmental theories, this study has added to the body of research about the impact of teachers' characteristics through investigating one characteristic, teachers' moral reasoning processes, and possible associations of that characteristic with their processes of selection and participation in professional development activities.

Summary
This descriptive, exploratory, and causal-comparative study used: a survey technique to collect demographic data and data about involvement of teachers in professional development activities from August, 1985 through March, 1988; a researcher developed forced choice instrument to
identify practices related to selecting activities; and an established questionnaire, the Defining Issues Test (DIT), to ascertain data about the moral reasoning processes of teachers. Answers to eight research questions about description and associations were sought.

The total data producing sample of 169 sets of instruments from a stratified random sample of 370 Ohio vocational teachers in five service areas was received and analyzed. The demographic characteristic of gender was the only significant difference found between service areas. As expected, Agricultural Education, Marketing, and Trades and Industry service areas had more men and Home Economics and Business Education had more women.

Three research questions were answered which related to the sample's involvement in professional development activities, their professional development practices of selecting activities, and their moral reasoning processes. Five questions about possible associations in the data guided analyses. The research questions were:

What are the moral reasoning levels of vocational teachers?

What are the professional development activities in which vocational teachers participate?

Do vocational teachers, collectively, exhibit patterns of involvement in professional development activities?
Are the moral reasoning levels of vocational teachers associated with any identified pattern(s) of involvement in professional development activities?

Are the moral reasoning levels of vocational teachers associated with their practices of selecting professional development activities?

Are the moral reasoning levels of vocational teachers associated with the selected demographic variables?

Are any identified pattern(s) of professional development activities associated with the selected demographic variables?

Are the professional development practices associated with the selected demographic variables?

Data about involvement in professional development activities came from the 3-page Profile of Professional Activities (PPA). The respondent provided information, a profile, about four categories of his/her professional activities involvement and then compared the profile to his/her past and anticipated future involvement. Information about perceived support of the profile from administration and by use of personal resources was also sought.

Analyses of data from the PPA were based on the four categories of Colleges and Universities, Professional Associations, Non-degree In-service, and Personal/Professional Activities. Involvements of teachers
in each category were descriptively reported and patterns, or groupings in similarities of teachers' responses were assessed.

Findings from the Colleges and Universities category of involvement revealed that about one-third of the sample had been working on a degree (28%) or had received a degree (13%) during the time period. Though the mode of participation was 0, 21% of the sample ranked this category as the category in which they spent most of their professional development time. A similar percentage also viewed it as the contributing the most to their professional development. These findings suggest that degree activities are important components of systems of professional development.

Findings from the Professional Associations category revealed a high percentage of the sample belonging to at least 1 association (93%) with a mode of belonging to 2 associations when each affiliate was counted. Association memberships that vocational teachers would be likely to maintain were lower, i.e. National Education Association and affiliates at about 65% and the American Vocational Association and affiliates at about 40%. Subject matter related associations had the lowest percentage of memberships (34%).

Other findings concerning involvements in professional associations were:
1) About two-thirds of the sample reported being a committee member.

2) About half reported being a committee chair.

3) Journals were read by 87% of the sample with a mode of 2 per month. It is likely that 6% of the sample received, but did not read, a journal.

4) About 50% of the sample reported writing a professional letter(s) when requested by a professional association.

5) Respectively, the percentages for attending local, state, and national meetings were 72%, 56%, and 7%. The mean number of meetings attended were 7.3, 2.39, and 0.4, respectively, with a mode of 0 at all levels.

Only 8% of the sample reported the Professional Association category as the category in which they spent the most of their professional development time. A similar percentage reported it as being the most useful of the 4 categories to their professional development.

Findings about the Non-degree In-service category were deemed not be completely accurate since many teachers did not respond to the section. However, the findings were in accord with what could be expected, that is, the participation as measured by the mean number of meetings attended decreased in order from school provided, district provided, state provided, to university provided inservices.
When ranked against other categories by the amount of time spent, Non-degree In-service was ranked first by 13% of the sample. A lower percentage of teachers (9%) ranked it as the highest contributor to their professional growth.

Findings from the Personal Activities category of the profile were in three sections: usefulness of evaluation, useful personal/professional activities, and, useful personal activities. Findings about this category were:

1) Self-evaluation was the most useful type of evaluation for professional development for about three-fourths of the sample. Other types of evaluations that were useful for about half of the sample were administrative, student, peer, and the state vocational evaluation process, in descending order.

2) Of the personal/professional activities, talking with other educators and students was identified by three-fourths or more of the teachers as useful to their professional development. All eight of the activities in this section were identified as useful to 25% or more of the audience, indicating a great variety in the kinds of activities that can be useful. Besides the two listed above, those activities were talking with parents, extracurricular work, working with classroom-integrated student organizations, staff committee work, participation in research and surveys, and planning for professional growth.
3) Of the personal activities, reading and researching on your own for new knowledge were reported by more than three-fourths of the sample as being useful to their professional development. Also attesting to the variety of activities that can be useful, over 25% of the sample also reported usefulness of family activities, travel, other work experiences, outdoor activities, and arts and entertainment. Last in terms of those who marked it useful to professional development was political activity at 12%.

The Personal Activities category of the instrument was ranked first in time spent (48%) and in usefulness to professional development (44%). The importance of this category to professional development of this sample is further realized by the findings that over three-fourths of the sample ranked it either first or second of the four categories.

The profiles reported from The Profile of Professional Activities, which covered the most recent 2 1/2 years, was average for 61% of the sample. About one-fifth of the sample reported increased activity during this time. About half anticipate being similarly active in the future and one-third anticipate becoming more active. The portion of the sample reporting less involvement than in the past and in the future may be close to retirement.

The perceived administrative support for the reported profiles was mostly classed as strong or average. The
perceived personal resources that were allocated to professional development when compared to other teachers was mostly above normal or normal.

After description of involvement in each of the four categories was completed, exploration of the data to identify patterns, or similarities of responses of teachers, was sought. Some evidence of patterns did exist, though the patterns were not inclusive of a large portion of the sample. The patterns of professional development were established by considering the category that a teacher ranked first in time spent as the predominant part of a pattern and then looking at the order of rankings of the other three categories.

Using this method, the most frequent pattern of involvement in professional activities was through the category of Personal Activities (48%). Of the 80 teachers in this category, over half of them ranked Non-degree In-service second. The second most frequent pattern had Colleges and Universities activities first (21%). Almost half of the 35 teachers in this pattern ranked Personal Activities second, Non-degree In-service as third, and Professional Associations last. The third most frequent pattern started with Non-degree In-service (13%). Personal Activities was ranked second, Professional Associations third, and Colleges and Universities last by over half of this 24 in this group. The Professional Association pattern
represented 8% of the sample and their rankings of the other categories did not group at all. The relative high importance of the Personal Activities category is also confirmed by these patterns.

Development of the PDP, the instrument used to determine practices of selecting activities, was done by validating six statements about professional development practice that reflected Kohlberg's six stages of moral reasoning development. From 15 pairs of items reflecting comparison of two stages, each respondent selected one item from each pair that most represented his/her practice regarding professional development participation. Tallying the responses given in each level, represented by responses to two stages, was the method used for classifying teachers into 1 of 3 levels that were intended to be comparative to Kohlberg's levels of Preconventional, Conventional, and Postconventional levels of moral reasoning. Results of the PDP placed 7% of the sample in Level 1 (Preconventional), 50% in Level 2 (Conventional), and 38% in Level 3 (Postconventional). PDP data for 5% of the sample were incomplete, thus, they were not classified.

Findings from Professional Development Practices (PDP) were statistically compared to the findings of the Defining Issues Test (DIT) using McNemar's Chi-square test for the equality of distribution and no significant differences were
found. This finding supports the thinking that the PDP is likely to be useful for identifying teachers who give greater principled consideration to the making of professional development decisions. Further, the findings suggest that a little over one-third of the sample were likely to have used morally principled considerations when confronted with thinking about moral dilemmas related to professional development.

Results of the DIT, also based on constructs closely related to Kohlberg's theory, revealed a sample mean P score of 36.5, which is the relative importance that is given to principled considerations. This P score, which can range from 0 to 95, was between the mean P score of a High School norm group (31.0) and a College norm group (43.2). T-tests revealed significant differences with both groups. However, when t-tests were done by service area, the Agricultural Education service area and the High School norms were not significantly different; and, the Business Education and the Marketing service areas were not significantly different from the College norm.

Groups of persons who have graduated from college tend to have P scores in the 50s and those in college and most adults in the 40s (Rest, 1984). When divisions of the P scores were made according to recommendation of the developer, James Rest, for comparison to the PDP, about one-third of the sample fell into the upper third P score.
subdivision, 42 and up, indicating that they assign a relatively high importance to principled moral considerations. Results of the DIT indicated that vocational teachers collectively use principled moral considerations relatively less than adults in general when faced with moral dilemmas.

The last five research questions of the study were questions of associations between each of the instruments and with demographics. Associations that were found have already been discussed.

The descriptive components in this study lead to the most important conclusions. However, as this has been an exploratory study, the lack of associations should not discourage further research concerning the relationship of morality to professional development participation.

Conclusions

Teachers have clearly emphasized the value of the category of Personal Activities by spending most of their time in those activities and by ranking them of first importance in terms of contribution to professional growth. By looking at the top ranked items of the three sections described in this category, "self-evaluation", "talking with other educators", and "reading", as well as by the wide variety of responses to the types of activities considered beneficial, the importance of this category seems to be related to desire for autonomy or control over one's own
professional development. These same findings suggest that there are many ways that teachers develop professionally beyond the "traditional" routes provided for them.

Teachers seem to spend their professional development time in areas that are most useful to them. While this conclusion may not be earthshaking, a reverse conclusion would not have been desirable. A corollary to this conclusion is that teachers need to perceive that an activity is useful to them before they will spend time doing it.

Professional associations, while they serve many purposes, do not seem to be perceived as a contributor to professional development by teachers. Reasons for participation and memberships are likely to be for other reasons and for some teachers, may represent a moral dilemma. Yet, professional associations have the wherewithal to be perceived as important to professional development through their journal publications and through meetings.

As about 20% of the teachers reported increased participation when compared to their past involvement and 33% reported they anticipate becoming more involved in the future, a trend of increasing participation is likely. This would not be surprising in light of recent reform in this state's certification processes which require greater participation in structured professional development
activities. Regardless of what might explain these findings, the apparent trend is encouraging.

Though moral reasoning levels of vocational teachers may be slightly lower than the general adult population, it seems that one-third of them could be expected to assign a relative high importance to principled moral considerations when dealing with moral dilemmas, including dilemmas related to professional development participation. If, as contended by definition in this study, higher moral reasoning is one indicator of being a professional, two-thirds of vocational teachers do not exhibit this professional characteristic as measured by the DIT.

Implications

This research has several implications for providers of professional development activities, including pre-service and in-service providers. For all providers, schools, districts, states, and universities, new and creative structures of programming that focus on individuals instead of group characteristics are needed in order to utilize with greatest effectiveness the personal/professional involvements of teachers. These programs need to be accountable more for the fact that a teacher is learning than for what a teacher learns. 'Helping teachers to help themselves' should be central to programming and accountability measures. It supports the view of in-service as growth enhancement instead of remediation. Supporting
mechanisms for self-evaluation, allowing teachers to form their own study groups with their own goals, and giving credit for reading are a few examples of what could be done.

Specific programming that would develop within individuals the characteristics that are associated with being a professional should be part of pre-service and in-service education. Efforts should be made to raise the moral reasoning levels of teachers as well as other cognitive levels. Lifelong learning of teachers as individuals should be enhanced by programs that develop appropriate skills and values for such a pursuit.

Individualized programming will not work for all vocational teachers, particularly if they are at lower levels of moral reasoning. However, if such programming also maintains accountability to learn, an increased valuing of professionalism as a result of increased autonomy and control may also be an outcome of in-service activities.

Professional associations are not serving appropriately the professional development needs of most of their memberships. These associations should also be part of providing activities that would enhance the autonomy and control of the individual in the learning process.
Recommendations for Future Research

The following recommendations are made based on the findings of this study.

1) Moral reasoning as it relates to selection and participation in professional activities should be studied further. Interview techniques would be appropriate for attaining more in-depth and accurate information.

2) An instrument that effectively and efficiently describes a teacher's involvement by self-reporting would be of great use to furthering research related to professional development and in-service education. Redesign and refinement of the Profile of Professional Activities may serve this purpose.

3) The Professional Development Practices instrument warrants further revision as a research tool for the field.

4) Moral dilemmas developed in the format of the DIT that relate specifically to professional development issues could be useful for research.

5) Patterns of professional involvement is worth continued pursuit. If patterns were identified, in-service programming could benefit by designing programs based on those patterns.

6) Other components of moral action should be investigated as they relate to professional development participation.
APPENDIX A

RESULTS OF THE DEFINING ISSUES TEST
Table 18

Descriptive Statistics of the DIT for the Total Sample and Service Areas

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Stage2</th>
<th>Stage3</th>
<th>Stage4</th>
<th>Stage5A</th>
<th>Stage5B</th>
<th>Stage6</th>
<th>A</th>
<th>H</th>
<th>P</th>
<th>D</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag Ed (n=27)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>3.463</td>
<td>7.381</td>
<td>25.581</td>
<td>12.515</td>
<td>3.615</td>
<td>4.333</td>
<td>1.059</td>
<td>1.852</td>
<td>34.441</td>
<td>25.534</td>
<td>0.201</td>
</tr>
<tr>
<td>Bus Ed (n=17)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>3.615</td>
<td>3.589</td>
<td>6.908</td>
<td>5.803</td>
<td>11.403</td>
<td>3.236</td>
<td>1.519</td>
<td>2.185</td>
<td>12.818</td>
<td>6.725</td>
<td>0.190</td>
</tr>
<tr>
<td>H Ec  (n=31)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrkt  (n=19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>3.105</td>
<td>4.422</td>
<td>7.040</td>
<td>5.221</td>
<td>10.400</td>
<td>2.879</td>
<td>1.927</td>
<td>2.653</td>
<td>12.770</td>
<td>8.216</td>
<td>0.148</td>
</tr>
<tr>
<td>T&amp;I   (n=34)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>3.733</td>
<td>8.850</td>
<td>22.439</td>
<td>11.853</td>
<td>5.256</td>
<td>3.886</td>
<td>1.492</td>
<td>2.489</td>
<td>34.992</td>
<td>23.683</td>
<td>0.712</td>
</tr>
<tr>
<td>TOTAL (n=130)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

RESEARCHER DEVELOPED INSTRUMENTS

AND PILOT DATA
PROFILE OF PROFESSIONAL ACTIVITIES

DIRECTIONS: On this form are four categories of professional growth and involvement. The purpose of this form is to provide a profile of your professional growth activities over the last two academic years plus this year, that is, from August 1985 to the present. Please supply the information to the best of your knowledge.

REMEMBER, THIS IS FOR AUGUST 1985 TO THE PRESENT.

Colleges & Universities

1. How many credit hours did you earn during this time? 
   ___________ quarter hours ___________ semester hours

2. Are you currently working for a degree?  yes ___ no ___
   If yes, what degree? ___________ Associate ___________ Bachelor's 
   ___________ Master's ___________ Ph. D./Ed. D.

3. Have you received a degree during this time?  yes ___ no ___
   If yes, what degree? ___________ Associate ___________ Bachelor's 
   ___________ Master's ___________ Ph. D./Ed. D.

Professional Associations

4. Please check the professional organizations in which you hold membership:
   American Vocational Association ___ Others: [Give name(s)]
   Ohio Vocational Association ___
   National Education Association ___
   Ohio Education Association ___

5. Number of professional journals you read regularly: 

6a. Number of times you have chaired a committee or have held an office in an organization: .................................

6b. Total number of hours spent to fulfill responsibilities of these positions: .................................

7a. Excluding those in item 6, the number of times you have been a committee member: .................................

7b. Total number of hours spent to fulfill responsibilities of these positions: .................................

8. Number of professional association meetings you attended:
   TOTAL NUMBER OF 
   TYPE NUMBER HOURS IN SESSIONS
   local: ..............................................
   state: ...............................................
   national: .......................................... 

9. Number of times you have written a letter to request support for your subject matter, for example, to legislators or school board members:
   a) When encouraged by a professional association: ..............................................
   b) Out of personal initiation: .............................................
### Non-degree Inservice

10. Please complete the following chart to indicate inservice activities in which you have participated other than those related to professional associations that may or may not have provided continuing education units. (Note: Any activity that gives you college credit should be part of Item 1.)

<table>
<thead>
<tr>
<th>PROVIDER</th>
<th>TOTAL NUMBER</th>
<th>NUMBER REQUIRED</th>
<th>TOTAL HOURS SPENT</th>
<th>TITLE/SUBJECT MOST BENEFICIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>school</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>district</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>state</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>university</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Personal Activities

11. Which of the following evaluations have helped you grow professionally? (Check as many as apply.)

- peer
- student
- self
- administrative
- other, identify

12a. Checkmark the personal/professional activities in which you have participated that have contributed specifically to your professional growth:

- talking with other professional educators
- talking with parents
- talking with students
- extracurricular work
- work with classroom integrated student organizations
- school related staff committee work
- participating in educational research projects and surveys
- planning for your professional growth
- other, identify

12b. Average number of hours you have spent per week on Items 11 and 12a during the schoolyear: 

13a. Checkmark the personal activities in which you have participated that have contributed specifically to your professional growth:

- researching on your own for new knowledge
- general reading
- personal involvement in sports/camping/outdoors
- community/church
- arts and entertainment
- family life/parenthood/marriage
- other work experience
- political activity in general
- travel
- other, identify

b. Average number of hours per week spent in these activities that have contributed specifically to your professional growth: 

et cetera

14. This profile of my involvement with professional growth over the last 2 years is: ___ high ___ average ___ low.

15. In the next five years, my involvement in professional activities is likely to be: ___ more ___ less ___ the same as now.

16. The support given to me for professional growth from administrators is: ___ very strong ___ average ___ weak ___ very strong

17. I consider the amount of personal resources (money, time, planning, etc.) that I use for professional growth to be: ___ high ___ above ___ normal ___ below ___ very normal above normal normal normal

After reviewing what you have just completed about the four categories of professional involvement, complete the following chart.

<table>
<thead>
<tr>
<th>CATEGORY A: College and University Activities</th>
<th>CATEGORY B: Professional Association Activities</th>
<th>CATEGORY C: Non-degree Inservice Activities</th>
<th>CATEGORY D: Personal/Professional Growth Activities</th>
</tr>
</thead>
</table>

18. Rank order the categories by the amount of time you have spent in each, with "1" being the greatest amount of time. Then, indicate the approximate proportion of 100% time you have devoted to professional development activities for each category. Finally, rank order the categories by their contribution to your professional development, with "1" being the greatest contributor.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>RANK BY TIME SPENT</th>
<th>% OF TOTAL INvolvement</th>
<th>RANK BY CONTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL = 100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PILOT RESULTS OF THE
PROFILE OF PROFESSIONAL ACTIVITIES INSTRUMENT

(The instrument was piloted by 15 vocational teachers.)

DIRECTIONS: On this form are four categories of professional growth and involvement. The purpose of this form is to provide a profile of your professional growth activities over the last two academic years plus this year, that is, from August 1985 to the present. Please supply the information to the best or your knowledge.

REMEMBER, THIS IS FOR AUGUST 1985 TO THE PRESENT.

Category A: College and University Activities

1. Are you currently working for a degree?
   (2) yes (13) no
   If yes, what degree?
   Assoc (1) Bachelor's
   (1) Master's (1) Ph. D./Ed. D.

2. Have you received a degree during this time?
   (2) yes (13) no
   If yes, what degree?
   Assoc (2) Bachelor's
   (1) Master's (1) Ph. D./Ed. D.

Category B: Professional Associations

3. Number of memberships (count all affiliated organizations, i.e., Ohio Vocational Association counts once and American Vocational Association counts once. Do not count professional honoraries or fraternities.
   (Number of memberships: 4 5 6 7 9 NR)
   (Number of responses: 6 1 4 2 1 1)

4. Are you subject-matter certified by a professional association? (10) yes (10) no (5 were confused by the question.)

5. Number of professional journals you read on a monthly basis: (2) 0 (4) 1 (4) 2 (5) 3 or more (1 NR)

6. Number of times you have been a committee member:
   (4) 0 (1) 1 (3) 2 (7) 3 or more

7. Number of time you have been a board member:
   (13) 0 (0) 1 (0) 2 (2) 3 or more
8. Number of professional association meetings you attended:

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>local</td>
<td>0</td>
</tr>
<tr>
<td>state</td>
<td>2</td>
</tr>
<tr>
<td>national</td>
<td>0</td>
</tr>
</tbody>
</table>

9. Number of times you have written a letter to request support for your subject matter, for example, to legislators or school board members:

a) When encouraged by a professional association:

<table>
<thead>
<tr>
<th>Encouraged by PA</th>
<th>Total</th>
<th>Number Consumed</th>
<th>Hours</th>
<th>Beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4)</td>
<td>0</td>
<td>(1) 1</td>
<td>2</td>
<td>3 or more</td>
</tr>
<tr>
<td>(5)</td>
<td>2</td>
<td>(6) 3 or more</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) Out of personal initiation:

<table>
<thead>
<tr>
<th>Initiation</th>
<th>Total</th>
<th>Number Consumed</th>
<th>Hours</th>
<th>Beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8)</td>
<td>0</td>
<td>(2) 1</td>
<td>2</td>
<td>3 or more</td>
</tr>
</tbody>
</table>

Category C: Activities Provided for Non-degree Credit

10. Please complete the following chart to indicate activities in which you have participated that have provide continuing education units (CEU's) besides those related to professional associations.

<table>
<thead>
<tr>
<th>PROVIDER</th>
<th>TOTAL NUMBER</th>
<th>NUMBER REQUIRED</th>
<th>TOTAL HOURS SPENT</th>
<th>TITLE/SUBJECT SPENT MOST BENEFICIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>school.........</td>
<td>(1-5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>district.......</td>
<td>(0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>state..........</td>
<td>(0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>university....</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(6 wrote they had no activity and 3 did not respond at all.)

Category D: Personal Activities

11. Which of the following evaluations have helped you grow professionally? (Check as many as apply.)

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>peer</td>
<td>9</td>
</tr>
<tr>
<td>student</td>
<td>8</td>
</tr>
<tr>
<td>self</td>
<td>13</td>
</tr>
<tr>
<td>administrative</td>
<td>6</td>
</tr>
<tr>
<td>PRIDE</td>
<td>2</td>
</tr>
<tr>
<td>other, identify</td>
<td></td>
</tr>
<tr>
<td>advisory committees</td>
<td></td>
</tr>
</tbody>
</table>

12. Checkmark the other activities in which you have participated that have contributed specifically to your professional growth:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>talking with other professional educators</td>
<td>15</td>
</tr>
<tr>
<td>talking with parents</td>
<td>12</td>
</tr>
<tr>
<td>talking with students</td>
<td>11</td>
</tr>
<tr>
<td>extracurricular work</td>
<td>9</td>
</tr>
<tr>
<td>work with classroom integrated student</td>
<td>7</td>
</tr>
<tr>
<td>organizations</td>
<td></td>
</tr>
<tr>
<td>school related staff committee work</td>
<td>8</td>
</tr>
<tr>
<td>participating in educational research projects and surveys</td>
<td>7</td>
</tr>
</tbody>
</table>
( 9) planning for your professional growth
(10) researching on your own for new knowledge
(12) general reading
( 6) personal involvement in sports/camping/outdoors
(11) community/church
( 5) arts and entertainment
( 6) family life/parenthood/marriage
(12) other work experience
( 1) political activity in general
( 7) travel

13. This profile of my involvement with professional growth over the last 2 years is:
(8) high (6) average (1) low

14. In the next five years, my involvement in professional activities is likely to be:
(6) more (2) less (7) the same as now

15. The support given to me for professional growth from administrators is:
(11) very (3) strong (1) average (0) weak (0) very strong weak

16. I consider the amount of personal resources (money, time, planning, etc.) that I use for professional growth to be:
(4) high (6) above (4) normal (1) below (0) way above normal normal below normal

After reviewing what you have just completed about the four categories of professional involvement complete the following chart.

CATEGORY A: College and University Activities
CATEGORY B: Professional Association Activities
CATEGORY C: Non-degree Inservice Activities
CATEGORY D: Personal/Professional Growth Activities

17. Rank order the categories by the amount of time you have spent in each, with "1" being the greatest amount of time.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st--</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2nd--</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3rd--</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>4th--</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

(1 person's response was not readable.)
18. Rank order the categories by their contribution to your professional development, with "1" being the greatest contributor.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st--</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2nd--</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3rd--</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>4th--</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

(1 person's response was not readable.)

Thank You!

Patterns from rank by time spent:

ABCD (3); ABDC (1); ADBC (1); CBAD (1); CBDA (1);
CDAB (1); DACB (1); DBCA (3); DCBA (2)

Patterns from rank by contribution:

ABCD (1); ABDC (2); ACDB (1); ADBC (2); BACD (1);
BADC (1); BCDA (1); CABD (1); DBCA (1); DCAB (2);
DCBA (1)
PROFESSIONAL DEVELOPMENT PRACTICES

Directions: For each pair of statements below circle the letter that best describes your practices.

A. I tend to participate in those professional development activities that meet my personal and professional needs.
B. I tend to participate in professional development activities that an administrator tells me I should.

A. I tend to participate in those professional development activities that meet my personal and professional needs.
B. I tend to participate in those professional development activities that are viewed as important by the professionals in my field.

A. I tend to participate more often in those professional development activities that help me meet my obligations as a teacher.
B. I tend to participate in professional development activities that an administrator tells me I should.

A. I tend to participate more often in those professional development activities that help me meet my obligations as a teacher.
B. I tend to participate in those professional development activities that are viewed as important by other professionals in my field.

A. I tend to participate in those professional development activities that meet my personal and professional needs.
B. I tend to participate in professional development activities because I believe it is my legal and moral responsibility.

A. I tend to participate more often in those professional development activities that help me meet my obligations as a teacher.
B. I tend to participate in professional development activities because I believe it is my legal and moral responsibility.

A. I tend to participate more often in those professional development activities that help me meet my obligations as a teacher.
B. I tend to participate in professional development activities because each teacher has the responsibility to be the best she/he can be in order to improve our society.

-continue-
A. I tend to participate in professional development activities that an administrator tells me I should.
B. I tend to participate in professional development activities because I believe it is my legal and moral responsibility.

A. I tend to participate in professional development activities that an administrator tells me I should.
B. I tend to participate in professional development activities because each teacher has the responsibility to be the best she/he can be in order to improve our society.

A. I tend to participate in those professional activities that are viewed as important by other professionals in my field.
B. I tend to participate in professional development activities because I believe it is my legal and moral responsibility.

A. I tend to participate in those professional activities that are viewed as important by other professionals in my field.
B. I tend to participate in professional development activities because each teacher has the responsibility to be the best she/he can be in order to improve our society.

A. I tend to participate in professional development activities because I believe it is my legal and moral responsibility.
B. I tend to participate in professional development activities because each teacher has the responsibility to be the best she/he can be in order to improve our society.

A. I tend to participate in those professional development activities that meet my personal and professional needs.
B. I tend to participate more often in those professional development activities that help me meet my obligations as a teacher.

A. I tend to participate in professional development activities that an administrator tells me I should.
B. I tend to participate in those professional activities that are viewed as important by other professionals in my field.

Thanks for your "voice"!

If you would like a letter of commendation sent to your administrator, write the person’s name and address below:


Together, we can make a difference!
STAGES AND LEVELS OF ITEMS USED ON PROFESSIONAL DEVELOPMENT PRACTICES INSTRUMENT

Preconventional Level A, Stage 1: Punishment and obedience

Kohlberg (1981) describes a person in this stage as doing "right" in order to avoid punishment or because of an authority's power over him/her.

Selected Item: I tend to participate in professional development activities that an administrator tells me I should.

Preconventional Level A, Stage 2: Individual instrumental purpose and exchange

Kohlberg (1981) describes a person in this stage as doing "right" in order to serve one's own needs or interests while recognizing others also have their own needs or interests.

Selected Item: I tend to participate in professional development activities that meet my personal and professional needs.

Conventional Level B, Stage 3: Mutual interpersonal expectations, relationships, and conformity

Kohlberg (1981) describes a person in this stage as doing "right" in order to meet the need of being a good person as perceived by self and others. Caring for others and belief in rules are important reasons to do "right".

Selected Item: I tend to participate in professional development activities that are viewed as important by other professionals in my field.

Conventional Level B, Stage 4: Social system and conscience

Kohlberg (1981) describes a person in this stage as doing "right" in order to keep the social system from breaking down and that a person has obligations that must be met.

Selected Item: I tend to participate in professional development activities that help me meet my obligations as a teacher.
Postconventional and Principled Level C, Stage 5: Prior rights and social contract or utility

Kohlberg (1981) describes a person in this stage as doing "right" in order to meet the obligations of one's social contract which s/he has freely entered upon with concern for that laws are rationally based.

Selected Item: I tend to participate in professional development activities because each teacher has the responsibility to be the best s/he can be in order to improve our society.

Postconventional and Principled Level C, Stage 6: Universal ethical principles

Kohlberg (1981) describes a person in this stage as doing "right" in order to, as a rational being, meet his/her commitment to valid universal moral principles.

Selected Item: I tend to participate in professional development activities because I believe it is my legal and moral responsibility.
**GENERAL INFORMATION**

Please checkmark or write in the appropriate information.

1. Please provide the last six digits of your social security number:  

2. 

<table>
<thead>
<tr>
<th>Degree(s) Held:</th>
<th>Content Area:</th>
<th>Year Degree Obtained:</th>
<th>Approximate Grade Point Average (4.0 scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>no degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 yr. degree</td>
<td>in _ _ _ _ _ _</td>
<td>19 _ _ _ _ _ _ _ _</td>
<td></td>
</tr>
<tr>
<td>Bachelor's</td>
<td>in _ _ _ _ _ _</td>
<td>19 _ _ _ _ _ _ _ _</td>
<td></td>
</tr>
<tr>
<td>Master's</td>
<td>in _ _ _ _ _ _</td>
<td>19 _ _ _ _ _ _ _ _</td>
<td></td>
</tr>
<tr>
<td>Ph.D./Ed.D.</td>
<td>in _ _ _ _ _ _</td>
<td>19 _ _ _ _ _ _ _ _</td>
<td></td>
</tr>
</tbody>
</table>

3. Current Service Area:  

- Agricultural Education  
- Business Education  
- Home Economics  
- Marketing Education  
- Trades and Industry

4. Teaching certificate: Please checkmark below the type of certificate you are using in your current position. Circle other types that you currently hold:  

- 1 yr. temporary  
- 4 yr. provisional  
- 8 yr. provisional  
- permanent

In the space provided, list subjects and grade levels that you are certified to teach. Check the current subject(s) you teach.

<table>
<thead>
<tr>
<th>Subject(s) and Grade Level(s)</th>
<th>Subject(s) and Grade Level(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Total number of years teaching: ...........................................

6. Number of years in current position: ...........................................

7. Number of years in first position if different than current one: ...........................................

8. Number of years anticipated to remain in teaching: ...........................................

9. Number of teachers in school: ...........................................

10. Number of teachers in department: ...........................................

   Give department name: 

11. (Check one)  

   Current position is located in Joint Vocational School: ...........................................
   Current position is located in High School: ...........................................
   Current position is located in Other: ...........................................

   If other, identify: 

12. Maximum number of lessons to prepare for a day: ...........................................

    Number of periods taught per day: ...........................................

13. My job is:  

    ___ very secure ___ secure ___ insecure ___ very insecure

14. Age: ...........................................

15. Gender: ...........................................

    ___ male ___ female

16. Current marital status:  

    ___ married ___ never married ___ divorced ___ widowed

17. Number of children: ...........................................

18. Number of persons living full-time in current household: ...........................................
PILOT RESULTS OF THE RESEARCHER DEVELOPED INSTRUMENTS

COMMENT SHEET

(The instruments were piloted by 15 vocational teachers.)

How long did it take you to complete the forms?

______ minutes (Range 13 to 30 minutes; Mode of 25 minutes)

If these forms were sent to you in the mail along with another instrument that would take about 30 - 40 minutes to complete, would you be likely to complete them without any incentive other than knowing you were making a professional contribution?

(9) yes (6) no

Rank order incentives listed below according to the their likely impact on your completion of these forms, with "1" being the most important.

____ A lottery ticket for a $200 drawing where the odds are based on the number of respondents. (about 1 in 400)
1st (2); 2nd (1); 3rd (1); 4th (1); 5th (4)

____ Two lottery tickets for two $100 drawings.
1st (1); 2nd (1); 3rd (0); 4th (5); 5th (1)

____ A small token of appreciation, such as a notepad, included in the packet.
1st (7); 2nd (2); 3rd (1); 4th (1); 5th (1)

____ Two dollars included in the packet.
1st (0); 2nd (3); 3rd (6); 4th (0); 5th (1)

____ A letter of commendation for participation to be sent to your administrator.
1st (3); 2nd (3); 3rd (2); 4th (1); 5th (2)

Would you be willing to refer back to your records or past calendars to provide more accurate information?

(11) yes (4) no
Besides comments that you have written on the forms themselves, do you have other thoughts or feelings that would be useful to collecting information with these forms?

If so, please state them here. Use the back side if necessary.

(Three commented that they did not like the forced choice instrument. One said I thought you were "playing a mind game with me".)

(Explaining the specific usefulness of the survey would increase response.)

Please write your name here only if you want a letter sent to your administrator. (7 requests) Thanks again!
March 9, 1988

Dear Teacher,

In the next few years, professional development activities for teachers in the state of Ohio will become a major method for maintaining and enhancing the quality of education. If these activities are to be successful, the "voice" of teachers must be a guide for planning and implementation. Teachers must be listened to via their individual opinions, their representatives in administration and in professional associations, and through their responses to research that builds an objective body of knowledge for decision making.

This study will have a representative sample of all vocational teachers in Ohio. By responding to these forms today, you will help insure that the data collected from this sample will provide meaningful results.

Please respond to the 3 instruments and comment sheet in this packet. Note the time you begin and complete the forms so that you can respond appropriately on the comment sheet. Also, if a particular item is unclear or you believe the information could be obtained more easily in another way, please make note of it on the forms after you have completed all forms and noted your time.

A notepad and pencil are enclosed as a small token of appreciation for taking time to complete these forms. If you would like a letter of thanks for your participation in this study of professionalism to be sent to your administrator, please provide the information needed to do so on the comment sheet.

Thanks. Your involvement is a significant part of this study.

Sincerely,

[Signature]
Mike Loyd
Lecturer

College of Home Economics
March 15, 1988

Dear Vocational Educator,

You have been selected to participate in a professional development study. Your name has been drawn from a list of Ohio's vocational teachers according to your service area. You have a very important task as your responses will represent not only you, but all other Ohio vocational teachers whose names were not selected.

The enclosed packet of materials requires about 40-50 minutes of your time. We are asking you to complete the questionnaires and return them in the stamped and addressed envelope. All information provided to us will be kept confidential and only reported as grouped data.

This research is needed to better understand vocational teachers' practices regarding professional development activities. It is a timely study because now, more than ever, professional development and life long learning are critical to successful and effective teaching of today's youth. Thus, inservice activities are receiving priority. Evidence of this can be seen by the recent formation of five regional "Vocational Education Personnel Development" (VEPD) Centers. Research such as this study is one way to insure that teachers' "voices" are heard as these centers develop inservice activities. Remember, you are the "voice"!

A token of appreciation for your assistance has been enclosed (a Post-It pad). If you would like a letter of commendation for your professional contribution to be sent to your administrator, please provide the needed information on the questionnaire. Further, if you enclose a self-addressed envelope, we will share with you an abstract of the study upon completion.

Your response is important to us. Thank you for taking time from your busy schedule to recall and reflect upon your experiences. (Questions? Call Mike Loyd at 614-292-4487.)

Sincerely,

Mike Loyd
Vocational Teacher Educator

R. Kirby Barrick
Director
Return Address:

Ohio State University
Department of Home Economics Education
347 Campbell Hall
1787 Neil Avenue
Columbus, OH 43210-1295
Phone 614-292-4407

First Follow-up:

April 1, 1988

Dear (Teacher's Name),

Recently a packet of materials was sent to you. If you have completed and returned them, thank you. If not, please do so as soon as you can. Without your completed responses, results of the research cannot represent the correct response from teachers. For me, this means my efforts over the last few months will be meaningless. Your response will be personally appreciated by me and can be a professional contribution to the improvement of educational activities in Ohio.

If you have not received the materials or have misplaced them, or if you have questions, please call me at the number on the other side of this card.

Sincerely, Mike Lloyd

Second Follow-up:

Again, thank you for participating!

Each person's response is needed!

Just as a sentence is nonsense when a letter is missing, so it is with research when responses are missing.

Your response to materials recently sent to you are critical to my interpretation of the research. Responses from teachers are the only means of getting the needed information.

If you have misplaced or did not receive the materials, or if you have questions, please call me at the number on other side of this card. If it is impossible for you complete the forms by May 1st, please return them incompletely in the envelope that was provided to you. Thank you for your time and energy.

Sincerely,

Michael Lloyd
REFERENCES


